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How many Psychiatric Patients in Prison?

JEREMY COID

Summary: The paper compares the prevalence of psychiatric morbidity amongst sentenced prisoners and in the general population. Major psychosis was no more common in the majority of studies of criminal populations. Although prisoners have a higher level of neurotic symptomatology, this was mainly found to be secondary to imprisonment itself. Long term imprisonment was not found to be a precipitant of severe psychiatric morbidity or intellectual deterioration, and prisoners adopt elaborate coping mechanisms which may themselves be protective. However, there is a higher prevalence of mentally handicapped and epileptic prisoners, and doctors in the Prison Medical Service have to cope with frequent, serious behavioural problems. Prisons appear to be a particularly important area for future psychiatric research.

Prisons have to cope with a considerable number of mentally abnormal inmates, and in 1977, an editorial in the *British Medical Journal* documented the growing resentment of Prison Medical Officers towards the National Health Service for what they saw as its failure to take up responsibility for its patients. Two years later, in 1979, a second editorial in the *British Medical Journal* described the uncertainty that exists as to the allocation of responsibility, and what should be done about it. In the future these problems could be further compounded by difficulties in the Special Hospitals (Dell 1980; Department of Health & Social Security 1980), and there are fears that the creation of Secure Units will do little to ease them (Bluglass 1978). If this is an accurate forecast then political intervention may ultimately be needed to reduce the numbers of mentally abnormal persons in prison and force psychiatric hospitals to play a larger part in their care. However, it is by no means clear how many there are, and more importantly, whether their numbers are changing. It is also possible that doctors in the Prison Medical Service have merely become more aware of a problem that has always been present, and that the gross overcrowding that currently exists (Home Office 1979) has inevitably made their workload larger and the pressures more acute.

How many prisoners are mentally ill can only be answered by a large scale survey over an extended period, and, as yet, no such study exists. Consequently, it is the purpose of this review to examine what evidence is available and to see whether prisons contain higher levels of psychiatric morbidity than the general population.

Court cohorts

Gunn (1977a) has stated that the best way to determine the level of psychiatric disturbance in a criminal population is to examine Court cohorts. There are two reports of surveys over a four and five year period of all convicted felons dealt with by the Court of General Sessions, New York. Each defendant pleading guilty or finally convicted was given a psychiatric examination in a clinic attached to the Court, staffed by full time psychiatrists and psychologists from Bellvue Hospital. Bromberg & Thompson (1937) described 9,958 examinations, 1932-35, and Messinger and Apfelburg (1961) an unspecified number between 1953-57. Both reports showed a surprisingly low level of serious psychiatric morbidity, with 1.5% psychotic in the first study, and the proportion "rarely exceeded 1%" in the second. Similarly, during the first period, only 2.4% were found to be mentally handicapped, and this was "usually at the 2% level" in the second. Despite their vintage, and the imprecise descriptions of the second study, no other authors have examined as many subjects since, or appear to have studied representative Court cohorts. Furthermore, no other workers have diagnosed mental handicap using a reliable instrument (WAIS) administered by a trained psychologist.

The two studies differ in finding 6.9% and "less than 1%" of offenders suffering from "psychoneurosis", but this resulted from a change of diagnostic criteria. This same factor partially accounted for the rise in psychopathic disorder from 6.9% to 24.9%, although Messinger & Apfelburg also believed that men rejected from the armed services returned in large

numbers to the population pool during World War II, and that changes in drug legislation had resulted in more addicts appearing in this Court than in the lower ones as previously.

Prison surveys

A literature search was carried out for studies that have measured the prevalence of psychiatric morbidity in prison populations over this century. A considerable number of retrospective studies, and those with non-random sampling procedures, have been excluded, and the findings from the remaining 11 are summarised in Table I. Methodology can be seen to vary considerably, so that the Table is somewhat restricted for accurate comparison. Furthermore, there are differences in the lengths of sentence being served by different populations, although some authors have attempted to obtain a representative cross-section.

The initial impression is that prisons have a higher level of psychiatric morbidity than both Court cohorts and the general population. However, the diagnostic subcategories must be examined more closely. In addition, it is the U.S. studies that show the highest proportion of psychotic individuals, probably reflecting different diagnostic practices (Cooper *et al* 1972). Neither the Oklahoma survey (James *et al* 1980), which diagnosed 5% of prisoners schizophrenic, nor Glueck's (1918) findings of 5.9% dementia praecox in Sing Sing, include a description of their diagnostic criteria. Only five studies used standardise procedures; the Diagnostic Statistical Manual (American Psychiatric Association 1968) in Tennessee (Jones 1976), Feighner *et al*'s (1972) Criteria in Missouri (Guze 1976), and the International Classification of Disease (WHO 1974) in Perth (Bluglass 1967), Winchester (Faulk 1976), and the South East (S.E.) prisons survey (Gunn *et al* 1978). None found the levels of psychotic illness higher than in the general population.

The wide range of mentally handicapped prisoners (1-45%) reflects a particularly diverse selection of criteria. Some studies based the diagnosis on a psychiatrist's impression at interview, and whether available case notes contained relevant information such as school reports and psychometric testing. The Wakefield (Roper 1950, 1951) and Perth (Bluglass 1967) studies employed the more reliable method of testing their subjects with Ravens Progressive Matrices, and included the Mill Hill in the latter survey, showing higher percentages of 45% and 14.2% of prisoners were of subnormal intelligence. The Belfast survey (Robinson *et al* 1965) considered 24% of their sample of low intelligence, but used a less reliable method of obtaining information from the local Special Care Authority on whether subjects had ever received

their consideration. It is possible that adverse social circumstances in these subjects' earlier years had influenced whether they had been considered for special educational care, and this may have been a simultaneous contribution to their later criminality. Only the Court cohorts used the most reliable assessment procedures, finding no higher a proportion of mentally handicapped subjects than the approximate figure of 2.5% that would be expected from general population surveys (Taylor 1977).

Only the Perth (Bluglass 1967), Missouri (Guze 1976), and New York (Novick *et al* 1977) studies provided data on the number of epileptics, showing a higher than expected 1%, 1%, and 2% respectively amongst male prisoners (Gunn 1977b). Gunn (1981) has estimated the number of epileptics in British prisons to be $\frac{1}{2}$ - $1\frac{1}{2}$ times that of the general population. However, the findings of a higher prevalence of epileptic and mentally handicapped individuals indicates an important area for future study.

Research into delinquent behaviour persisting into adulthood has confirmed the association with socio-economic deprivation in childhood and has shown that such offenders are likely to have had lower I.Q.'s as children, and both poor classroom behaviour and academic results at school (West 1982). These associations are clearly not direct ones, but involve family influences, additional stresses in competition for jobs, etc, as predisposing factors to criminal behaviour (Woodward 1955). Prins (1980) has suggested that it is this IQ difference found in delinquent populations which has in itself predisposed them getting caught. In addition, the more severely handicapped can be more easily led by others, and sometimes provoked into outbursts that result in criminal behaviour, particularly when their low intelligence is associated with an organic disorder making them impulsive and unpredictable. Their understanding of right and wrong may actually be impaired, but as Shapiro (1969) has suggested, this is not necessarily related to IQ level. Prins stresses the vulnerability of mentally handicapped individuals in the community and their sensitivity to changes in the social environment, particularly the loss of supporting and supervising family members. Their lack of skills in interpersonal interactions can result in difficulties from otherwise harmless intentions. Furthermore, their expression of sexuality may be naive, primitive or unrestrained, which may partially account for a high proportion of sexual offences in the backgrounds of those compulsorily detained, (Shapiro 1969, Tutt 1971).

Gunn (1974) has suggested that early adverse social conditions and environmental factors in the lives of certain prisoners may have led to an excess prevalence of both epilepsy and to their anti-social behaviour. The

TABLE I
Prison surveys of psychiatric illness

Author	Location	Sample	Procedure	Findings
Glueck (1918)	Sing Sing Prison, USA	608 males consecutive receptions	Clinical interview	Dementia Praecox 5.9%, M-D psychosis 0.3%, Paranoid 0.4%, CNS Syphilis 2%, Psychopathy 18.9% "Intelligence of a 12 years old American child or below" 28%.
Roper (1950, 1951)	Wakefield Prison, UK	1,100 males consecutive mixed sentences	Clinical interview Ravens Progressive Matrices.	Subnormal 45% Neurotic 12% Psychopathic 8%
Robinson <i>et al</i> (1965)	Belfast Prison Northern Ireland	566 males consecutive mixed sentences	Clinical interview. Case Records	Alcoholism 55.6% Subnormal 24%
Bluglass (1966)	Perth Prison, Scotland	300 males every 4th reception	Clinical interview Mill Hill & Matrices	Psychotic 1.9%, Epileptic 1%, Alcoholism 11.2%, Subnormal 14.2%
Faulk (1976)	Winchester Prison, UK	72 males, consecutive releases, mixed sentence	Clinical interview	Psychotic 3% Alcoholic & personality disorder 75%, Previous psychiatric treatment 40%
Jones (1976)	Tennessee State Penitentiary, Nashville, USA	1,040 males entire population	Screened for previous illness, case notes. DSM II Diagnosis	Psychotic 4% Subnormal 2.3% Drug & Alcohol Dependence 2.2% Personality Disorder 5.5%
Guze (1976)	Missouri Probation Board, USA	223 males Parolees and Flat-timers	Clinical interview Feighners criteria	Sociopathy 78% Alcoholism 54% Anxiety neurosis 12% Drug dependence 5% Schizophrenia 1% Epilepsy 1% Subnormal <1%
	..	66 females	..	Sociopathy 68% Alcoholism 47% Hysteria 41% Drug dependence 26% Anxiety neurosis 11% Depression 1% Subnormal 6% Schizophrenia 1.5%
Novick <i>et al</i> (1977)	New York City Correctional facilities, USA	1,400 prisoners 1,300 male, 120 female Consecutive receptions	Primary care study. Routine examination	Drug abuse 16% Psychiatric disorder 13% Alcohol abuse 5% Seizure disorder 2%
Washbrook (1977)	Winson Green Prison, Birmingham, UK	1,800 males Entire population on 3 occasions	Clinical interview	Average 9.2% estimated "in need of psychiatric care"
Gunn <i>et al</i> (1980)	South East Prisons Survey UK	106 males Random sample. 3 security grades	Clinical interview 10 Maudsley-trained psychiatrists. ICD diagnosis	Personality disorder 22%, Alcoholism 13% Neurosis 9%, Drug dependence 3%, Affective disorder 1%, Schizophrenia 1%
James <i>et al</i> (1980)	Oklahoma Prison, USA	174 males. Stratified sample	Clinical interview. Self-report score	Personality disorder 35% Schizophrenia 5%

condition itself may further exacerbate their social difficulties, and psychological problems may lead to anti-social reactions. In a number of individuals the brain dysfunction itself may result in both the ictal phenomena and anti-social behaviour.

However, despite the high prevalence of these two subgroups in the prison surveys, the Court cohorts failed to show a difference as compared with surveys of the general population. It is possible that this reflects the non-random placement of prisoners with a low I.Q. in certain institutions by the prison authorities. Alternatively, this discrepancy could be accounted for by the important possibility that the criminal process operates unfairly at the Court stage, increasing the likelihood of a mental handicapped individual or epileptic receiving a prison sentence.

Although the conceptual basis of diagnosing neurotic illness varies widely, no survey has exceeded the approximate figure of 12% expected from studies of patients who consult their General Practitioners (Clare & Davies 1979). In contrast, the high level of neurotic symptoms and the effect of imprisonment itself on their incidence will be considered below. However, it is interesting to observe that in one survey of neurotic disorders (James *et al* 1980), the authors considered that twice as many subjects required treatment as the subjects themselves did.

To conclude, some reservations must be made in basing conclusions on recorded levels of psychiatric morbidity at the 1 or 2% level, especially when certain authors (Faulk 1976, Guze *et al* 1978) are actually referring to figures based on one or two subjects. Criminal populations do show high levels of psychopathology as compared with the general population, but this excess is based primarily on the finding of alcoholism, drug dependence and personality disorder. However, the strong suggestion that the mentally handicapped and epileptics may be more likely to be imprisoned than the general population is clearly a disconcerting finding, which questions the adequacy of their care and supervision in the community.

Primary care

Prison statistics for England and Wales (Home Office 1982) show that large numbers of inmates (particularly females) report sick and that many are given treatment, but there is little indication of their rates or of the specific problems involved. Shepherd (1974) has estimated that from a population of 15,000 persons at risk in the community, 14% should consult their General Practitioner at least once for a condition diagnosed as, largely or entirely, psychiatric in nature. Unfortunately, there is little information concerning the proportion of psychiatric morbidity in this country's prisons that is treated at the primary stage of health care.

Fortunately, the North American literature provides a better source of data on primary care in prisons, dating from the beginning of this century. Anderson (1919) paints a vivid picture of the serious and varied pathology found in New York's penal institutions at the time of the first world war. Half the inmates in 11 institutions were considered to have nervous and mental disorders, although up to half the diagnosed inmates were described as "psychopathic" or "feeble minded". Nevertheless, this paper suggests that the poor physical health of the inmates may have contributed to their psychiatric morbidity.

The rate of physician-consultations in a Minneapolis City County Workhouse was three times the rate expected for males of comparable age (Derro 1978), and the diagnosis of acute physical illness was 3.2 times higher than expected in the Tennessee Penitentiary (Jones 1976). The frequent musculo-skeletal and traumatic complaints reflected a high level of violence in the institutions, but in addition, reflected what was considered to be an exaggerated concern of certain inmates for their physical health, and in others, a somatisation of situation-related depression.

Clearly, several factors have to be put into perspective before these high levels of physician-consultation, and minor psychiatric morbidity at the Primary Care stage, can be entirely accepted. Anderson's survey emphasises the fact that prisoners tend to be drawn from segments of the general population with the highest prevalence of both physical and psychiatric morbidity. Furthermore, their lifestyles in the community frequently involve the abuse of drugs and alcohol, and in prison there is the risk of violence, particularly in the U.S. institutions. A proportion of psychiatric morbidity secondary to these factors would be expected. In addition, it is essential not to forget that both the stress of imprisonment itself and the inmate subculture are a major influence.

Psychiatric morbidity in response to imprisonment *Coping mechanisms and minor neurotic reactions*

Prisoners adopt elaborate mechanisms for coping with imprisonment, and certain neurotic conditions are at times either indistinguishable from these processes, or else are profoundly shaped by them. However, it is striking that most inmates show a remarkable resilience to even the longest sentences in terms of overt psychopathology.

Cohen & Taylor (1972) made a sociological study of long term imprisonment that has now become a classic. Their study lacked a control group, and the subjects studied were an almost unique group of men whose offence had merited their detention in the maximum security wing of Durham Prison. Nevertheless, their work was seminal in that it compared the coping

mechanisms seen in other severe environmental conditions, particularly in sensory deprivation, and following natural disasters. In their conclusions, the authors described five different conceptual frameworks for understanding the methods that prisoners actually adopt for coping, based on the types of crimes committed, personality factors, and the inmates previous experience of institutionalisation. Undoubtedly their major achievement lay in a description of the long term prisoner's concept of time and strategies for dealing with it.

One method of adapting to the environment is the development of prison subculture. This has been described as a compensation for the total institutional environment (Wulbert 1965) in which inmates acquire a set of values and norms, which are opposed to those of the prison staff and administration, enabling them to retain their sense of self-esteem and autonomy (Sykes 1958, Sykes & Messinger 1960). The degree to which prisoners are assimilated, or 'prisonised', is affected by psychiatric morbidity, yet clinical studies do not appear to have looked at this process. For example, Clemmer (1958) showed that variables such as intelligence, type of offence, and personality variables, especially leadership qualities, would determine whether an inmate would be assimilated into the subculture by acceptance as a member of one of the small groups of friends that comprised it. Prisoners perceived as mentally abnormal and sex offenders were the most likely to be excluded, yet these are only the most extreme examples of a complex network that requires further research.

It remains unclear to what extent the more common neurotic conditions will affect assimilation into prison sub-culture, and to what extent "prisonisation" serves as a protective mechanism preventing further symptoms. Some prison staff see the process of institutionalisation as a sign of adaptation, (Clemmer 1958, Zingraff 1975). However, one study (Goodstein 1979) compared institutionalised inmates with those who rejected the formal norms and entered into the sub-culture, finding that the latter group had a smoother transition back into the community, with no difference in the rate of reoffending at six month follow-up. This supports the hypothesis that "prisonisation" may act as a protective mechanism for certain individuals.

Reviewing the psychological effects of imprisonment, McKay *et al* (1979) emphasised the lack in this field of methodologically rigorous and conceptually sound research. Furthermore, the authors were unable to find any correlation between long-term periods of imprisonment and a decline in performance on standardised tests of intelligence and other psychometric measures. The most severe reported stress had

resulted from the deprivation of relationships with the outside world, rather than the privations of prison life itself. This was confirmed by Richards (1978) study in which few long-term prisoners saw incarceration as a fundamental threat to their mental health. For these men, the development of self-reliance was seen to be the major coping strategy. Sapsford (1975) found that much apparent apathy was actually accounted for by age, and that long-term prisoners did maintain an interest in the outside world. However, by studying samples from three key points along the scale of sentence, he found five changes over and above the ageing effect:—

- (i) Changes in the perspective of future time.
- (ii) Greater tendency to talk and think about the past.
- (iii) Increased introversion and less interest in social activities.
- (iv) Some did become extremely institutionalised, with dependence on routine and inability to make trivial decisions.
- (v) A reduced involvement with the outside world, although this last finding was an inevitable effect of their situation.

Studies designed to relate personal characteristics with minor psychiatric morbidity in prisoners have found age and marital status are related to the levels of stress they experience. The Tennessee survey (Jones 1976) found that men below the age of 25 years and above 45 years has the highest scores on the Omnibus Stress Questionnaire, together with those widowed and divorced, and men who had attained lower standards of education. The study found overall levels of reported distress in prisoners to be 3.6 times higher than the general adult US population in a study using the same criteria. Similarly, the S.E. prisons survey (Gunn *et al* 1978), which used the General Health Questionnaire, found that approximately one third of their English sample could be considered psychiatric "cases". This result is somewhat higher than the 20% expected from patients who consulted their G.P.'s in an English urban study (Goldberg & Blackwell 1979), although both prisoners and patients showed a considerable fall in their scores over a period of time. The most interesting question posed by these results is whether processes such as "prisonisation" contribute further to the falls in stress (and scores on questionnaires) experienced by prisoners, in addition to the natural fall that would be expected over a period of time.

Behavioural disorder in response to imprisonment

An impassioned review on the effects of imprisonment emphasised that the character of certain penal institutions is responsible for a substantial amount of

behavioural disorder (Newton 1980). In support of this, Sylvester *et al* (1977) found a homicide rate per victim of 74.4 per 100,000 in a U.S. prison study, compared to a national rate of 9.4 for the same year. Furthermore, studies of suicide in U.S. and European prison populations show higher rates than in the general population (Danto 1973). Prison statistics for England and Wales show that the number of female prisoners who kill themselves is very small, so that their rates cannot be accurately assessed (Home Office 1982). However, if the number of male suicides are compared to the average daily population in custody, an annual rate of 43 per 100,000 is obtained for the five year period, 1976-80. From mortality statistics (Office of Population consensus and Surveys 1978-82), for males aged 15-74 years in the general population, the average rate for the same period was 13.5 per 100,000, indicating that the risk amongst male prisoners was over three times as high. It can be argued that suicide reportage may be more accurate in a penal institution than in the community. However, prison statistics suggest there is a smaller proportion of prisoners in the older age groups who have the highest rates of suicide amongst the general population.

Reiger (1971) found that suicide was most likely to occur during the earliest period of incarceration, and Federal prison populations, where inmates served longer sentences, showed lower rates than in the general population. Three main types of suicidal behaviour have been described:—

- (i) Shortly after reception—particularly in individuals with no significant criminal history; those with a rigid moral self-image; and those convicted of murder, or a publicised sex offence.
- (ii) After a longer period of imprisonment—in subjects with a slow persistent feeling of futility and hopelessness who have no communication with the outside world, and are isolated from other inmates. They usually have a long previous criminal record, so that the prison staff are uninterested, sometimes subtly encouraging the behaviour with a view to “one less hardened criminal”.
- (iii) Anti-social personality—behaving in a such way as to manipulate others by using less lethal methods such as wrist-cutting and glass-swallowing. However, they can be goaded by others into the suicidal act, or they may be successful by accident (Danto 1973).

Self-mutilation is a classical example of a behavioural disorder that can become almost *de rigeur* for certain penal institutions. However, it is also found repeatedly in certain profoundly disturbed individuals, in particular certain habitually violent male prisoners who find it relieves the mounting tension they regularly

experience (Bach-Y-Rita 1974). A study by Virkkunen (1976) compared a group of these “prison cutters” to “non-cutters” with a similar personality disorder. The “cutter” showed more outbursts of rage, fighting, drug abuse, tattooing and other varieties of self-destructive behaviour, and appeared particularly affected by incarceration and the relative absence of stimuli. In contrast, self-mutilation can become part of the subculture of certain institutions, and many clinicians practising in these settings will experience “epidemics”. A study in an Ontario Training School for chronically delinquent girls aged 12-17 years found that one episode was necessary for identification with the inmate subculture (Ross & Mackay 1979). 86% of girls cut themselves whilst incarcerated in this particular institution, whereas none had done so before.

Reviewing the North American literature, Newton (1980) estimated that 30-45% males and 6-29% of female prisoners engage in regular homosexual activity. High numbers of male prisoners have been reported to be subjected to sexual assault, and in one institution it was claimed that every male of short stature received a proposition within hours of reception. Victims who reported assault tended to be white, from rural backgrounds and frequently claiming that their aggressors had been black. The author quoted a random survey in New York State prisons, in which 28% of prisoners claimed they had been the targets of some form of sexual aggression. Only one subject actually reported homosexual rape, but the methodology clearly contained scope for exaggeration. However, almost half the incidents involved multiple aggressors, and perhaps most importantly, a high level of violence inflicted upon the victim.

Severe psychopathology in response to imprisonment

The relationship between imprisonment and the development of major psychiatric illness is even less clear. Underlying personality disorder is a theme that runs through the few studies that have been carried out, and it is interesting to note that Guze's (1964) small series of male prisoners with conversion symptoms were all sociopaths—mainly alcoholics or drug addicts—who had a high incidence of anxiety neurosis, previous suicidal attempts and psychiatric hospitalisation. The majority of prisoners who develop a psychosis in prison are also found to have had previous hospital admissions, usually for the same illness, (Thurrell *et al* 1965, Cormier 1973) and their symptoms are typical of the functional psychosis from which they suffer. However, there may be a difference between these “psychoses in prison” and the rarer “prison psychoses” (Arboleda-Florez 1980). Jaspers (1972) drew on the experience of early German authors in prison settings as his major source for the description

of Pathogenic Psychogenic Reactions in which two terms are described:—

- (i) pure precipitation of psychosis—where the content has no meaningful connection with the experience, and the psychosis could have occurred without the trauma.
- (ii) reaction proper—where the content is meaningfully connected with the experience, and the reaction would not have occurred without it.

It may be of importance that Jaspers believed psychopaths to have an innate and persistent constitutional “preconditioning factor” predisposing them to such reactive psychotic states. Interestingly, Lanzkron (1963) described a high incidence of psychopathic disorder among a group of subjects who had developed a post-homicidal psychosis.

Arboleda-Florez (1980) has emphasised a further distinction within the “prison psychoses”, that is, between post-homicidal psychotic reactions (PHPR) and the Ganser Syndrome. He regards the P.H.P.R. as a true psychogenic psychosis in which details of the crime are remembered typically in horrifying detail, whereas in the Ganser syndrome they are typically forgotten. However, little is gained from attempting to elucidate the influences of imprisonment, as the review published by the Canadian Solicitor Generals Office (McKay *et al* 1979) showed that the Ganser syndrome has been described in prisoners awaiting trial, already sentenced, and just prior to being released. Furthermore, it is by no means restricted to prisoners.

The Ganser syndrome continues to attract considerable interest among psychiatrists, out of proportion to the number of cases described, and Scott (1965) has pointed out that it is now rare in prison practice. Clearly, an estimate of the overall prevalence of psychogenic psychoses in prison populations is more important, and could provide insight into their aetiology, if the problematic overlap between “pure precipitation” and “reaction proper” could be overcome.

Conclusion

This review has failed to find a higher incidence of psychotic illness in the published studies of criminal populations. Neurotic illnesses were not diagnosed more frequently, but instruments measuring neurotic symptoms in prisoners record a higher proportion with raised levels than in the general population. A substantial fall in the mean level over time suggests that imprisonment itself may primarily account for this finding. However, there is a strong suggestion that epileptics and the mentally handicapped are exposed to a higher risk of imprisonment than the general population, bringing with it the inevitable conclusion that their care and supervision in the community are

inadequate. Furthermore, the severe behavioural problems confronting medical officers in penal institutions have been highlighted that are both a response to these environments and another feature of their patient’s disturbance.

Certain reservations must be made when reconsidering the studies reviewed here. Many important conclusions have been drawn from the two Court cohorts, both of which were carried out some years ago and were poorly described. Furthermore, their samples were taken from New York City where rates of criminal behaviour are unlikely to be representative of the U.S.A. as a whole. Amongst the numerous methodological problems of the prison surveys, the small number of subjects frequently studied cannot be under-emphasised. A survey of several hundred prisoners is necessary before an accurate impression of major psychotic illness can be gained. No surveys have been carried out over prolonged periods, and cannot hope to answer the most important questions of whether legal and administrative changes can influence the number of mentally abnormal offenders being received into prisons. These would not be complete without taking into account unsentenced prisoners on remand and their subsequent disposal.

The need for further research into the psychiatric problems of prisoners, some of which are outside the usual experience of General Psychiatry, is clear. Gross abnormalities of personality development and current functioning are found in a substantial number of prisoners, yet little is understood of these conditions and their relationship to other sorts of psychiatric morbidity. Further progress in this field might go some way to finding alternative forms of management, and would weaken the “radical” argument against even the existence of conditions, such as personality disorder, which continues to have an important influence over criminology (Taylor *et al* 1973).

As the prison population grows, and in England and Wales it has recently attained its highest level ever, prisons and Prison Medical Officers must inevitably cope with larger numbers of mentally abnormal offenders, along with the proportional increase in behavioural disorder. There is evidence that they are already coping with more than their share of epileptics and the mentally handicapped.

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