4. Planning Treatment Programs in Secure Psychiatric Facilities

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ABSTRACT. An approach to planning treatment programs in secure psychiatric institutions is advocated in this chapter. At an institutional level, this approach, called Program Development Evaluation (PDE), utilizes a step by step empirical process to attain measurable objectives relevant to specific institutional problems. An example of a PDE effort is described in which the frequency and type of specific patient problems were measured in an institutional population by staff survey; these data were then used to identify clusters of patients who shared similar problems; the clusters, in turn, were used to allocate patients to various ward based programs. The nature of the problems possessed by a particular patient cluster determined the focus of the relevant ward program. In this scheme, patient assessment data are used first to assign patients to wards and then to identify treatable problems to be addressed in off-ward programming. With respect to an individual patient, the PDE approach entails constructing a theory to explain the patient’s offense history and current behavior from assessment data and then using this theory to guide an intervention. Common patient problems identified in the survey were social withdrawal, institutional management problems, anger, life skills deficits, work problems, positive schizophrenic symptoms, anxiety, depression, criminal lifestyle, substance abuse, and sexual problems. A literature review is presented that identifies promising assessment measures and treatment interventions for each of these patient problems, as well as methods for ensuring the integrity of treatment programming.

SOMMAIRE. Ce chapitre est consacré à une méthode de planification des programmes thérapeutiques dans les établissements psychiatriques à sécurité maximale. Cette méthode porte le nom d’évaluation de la conception des programmes (Program Development Evaluation, PDE). Au niveau de l’établissement lui-même, cette méthode repose sur un procédé empirique graduel pour atteindre des objectifs mesurables qui se rapportent étroitement aux problèmes spécifiques identifiés au sein de l’établissement. Dans le cadre d’un exemple rapporté ici, cette méthode (PDE) consiste à évaluer la fréquence et la nature des problèmes des patients hospitalisés par le biais d’un sondage soumis aux membres du personnel; les données recueillies sont alors utilisées pour identifier des groupes de patients aux prises avec les mêmes problèmes; ces données permettent par la suite d’affecter les patients à des unités spécifiques. La nature des problèmes d’un groupe donné de patients détermine l’orientation du programme implanté dans l’unité. Grâce à ce procédé, les données portant sur l’évaluation des patients permettent en premier lieu de les affecter aux unités pertinentes et en deuxième lieu d’identifier les problèmes curables qu’il est possible d’aborder hors-unité. Au niveau individuel, cette méthode entraîne, à partir des données d’évaluation, l’élaboration d’un théorème visant à expliquer les antécédents criminels du patient et son comportement au sein de l’établissement puis l’exploitation de ladite théorie à des fins d’intervention. D’après les données du sondage, les problèmes que les patients ont en commun sont les suivants: retrait social, problèmes d’adaptation à l’institution,
INTRODUCTION

Secure psychiatric facilities provide assessment, treatment, custodial care, and perimeter security for mentally ill offenders and psychiatric patients thought to be dangerous to others. In various jurisdictions, these facilities are operated by health departments, corrections, or jointly by both departments. Although these facilities vary in the types of clientele they serve, the following categories of admission are common:

1. Court referrals include persons who: (a) have been referred before their adjudication in order to determine their fitness for trial and/or the applicability of the insanity defense; (b) have been referred post-trial for an assessment of treatability and dangerousness; or (c) have been referred for treatment and containment following a finding of unfitness for trial or of not guilty by reason of insanity.

2. Prison referrals are inmates who have been transferred from the criminal justice system because of mental illness.

3. Psychiatric hospital referrals are patients who have been transferred because of unmanageability in less secure settings.

4. Programmatic referrals are persons who have been admitted from the corrections or mental health system for specialized treatment services. These admissions differ from the others in that they are discretionary on the part of the secure institution and require the patient’s consent.

Although some secure psychiatric institutions accept referrals directly from the community, particularly of former patients, such facilities are in the main “second stage” institutions embedded in a larger forensic/mental health/correctional system.

The purpose of this chapter is to describe an approach to planning effective rehabilitation programs in secure psychiatric settings. The primary reason for providing this description is our belief that the lack of effective planning in secure psychiatric facilities has resulted in a dearth of treatment programs known to be effective (e.g., Quinsey, 1981). Before describing and illustrating an approach to planning and implementing treatment programs in these settings, an outline of some of the obstacles to program development inherent in these institutions must be described.

PATIENT HETEROGENEITY

Although patients in these institutions are overwhelmingly male, they share few other characteristics. In terms of length of stay, they vary from being admitted for a one month period of observation to being hospitalized for 20 or more years. In terms of intelligence, they vary from the severely developmentally handicapped to the intellectually gifted. With respect to psychiatric symptomatology, they may be completely asymptomatic within the institution, very high functioning character disorders, severely debilitated chronic schizophrenics, or exhibit any of a variety of other sorts of psychiatric problems. Some patients are difficult management problems because of their assaultiveness, some are chronically litigious, and some are model institutional citizens.

TENSION BETWEEN TREATMENT AND SECURITY

Because of the potential for violence or escape in these facilities, internal and perimeter security must be maintained. Staff who are responsible for security often have very different attitudes towards patients and the institution than staff who are responsible for treatment. Security concerns can and do override treatment programs and there is a continuing danger of polarization between these different staff groups. Security precautions easily become more pervasive over time in response to actual incidents or imagined possibilities (Rice, 1985).
ISOLATION

Secure psychiatric institutions are typically built in isolated areas. This isolation causes severe difficulties in staff recruitment, problems in maintaining effective liaison with referring facilities, and usually means that patients are extremely isolated from their families and communities.

POOR CONTROL OVER ADMISSIONS AND DISCHARGES

Secure psychiatric facilities typically have no discretion with respect to court referrals. Because court decisions are based on legal criteria, patients who are referred may or may not be treatable and may or may not be suitable for a particular institution. With respect to transfers from other facilities, the amount of discretion exercised by the receiving institution depends upon the relative political power of the two institutions. Where the secure receiving facility is weak, it becomes a dumping ground for patients who are a nuisance elsewhere.

Discharge decisions may or may not be made by institutional staff. Frequently, release decisions are the responsibility of a board of review that is independent of the institution. In such cases, the institutional staff may find themselves caring for patients that they believe should be elsewhere or discharging patients who they believe are a danger to the community. With respect to transfers to other institutions, the success of such efforts once again depends on the relative political clout of the two facilities.

DIFFICULTY OF DECISIONS

Release decisions are based in large part upon the perceived risk of future violent behavior. It is well known that the prediction of longterm dangerousness is extremely difficult (e.g., Monahan, 1981; Quinsey, 1984; Quinsey & Maguire, 1986; Steadman & Cocozza, 1974; Webster & Dickens, 1983; Wormith & Goldstone, 1984). Even the evaluation of clinical change is problematic in the peculiar environment of most secure institutions. Institutional patient behavior is, perhaps by reason of this peculiarity, neither a good predictor of post-release behavior in the community (Quinsey & Maguire, 1986; Rice, Quinsey, & Houghton, 1990) nor discharge from the institution (Rice, Quinsey, & Houghton, 1990). It has been found that clinical staff in maximum security psychiatric institutions show low agreement amongst themselves in their appraisals of the dangerousness of their patients (Quinsey & Ambtman, 1979; Quinsey & Maguire, 1986), of their treatability, and as to which treatment programs would be most suitable for them (Quinsey & Maguire, 1983).

Part of the cause as well of the effect of these difficulties is a failure to develop coherent and cogent rationales for the types of treatment offered in secure settings. The types of assessments given patients are frequently unrelated to the selection and evaluation of particular interventions (Quinsey & Maguire, 1983; Rice & Quinsey, 1986), a problem observed in clinical practice more generally as well (Hayes, Nelson, & Jarrett, 1987). The manner in which a particular treatment is supposed to reduce a patient's propensity to commit further antisocial behaviors is often unspecified. With few exceptions, available interventions are not varied enough and too general to do justice to the heterogeneity of the patients in secure institutions. A further and related cause of these problems is the failure of these institutions to prioritize their goals of incapacitation, treatment of psychopathology, and intervention to reduce the likelihood of future antisocial behavior either as general policies or in individual cases (Quinsey, 1977).

In view of these deficiencies in treatment programming, it is little wonder that there is disagreement among institutional staff about which treatment programs are most suitable in a particular case and profound pessimism about treatment in general (Quinsey & Maguire, 1983). It cannot be expected that a secure institution can develop realistic and convincing admission and discharge criteria until conceptual progress is made in the intervention area.

Ultimately, in our view, the goal of treatment planning is to develop a system that can use assessment information to construct a theory of a particular patient's antisocial behaviors. This theory can then be used to select appropriate interventions and relevant evaluative criteria. Obviously, such an enterprise can only be launched in an incomplete manner at present because there is simply not enough substantive knowledge. Nevertheless, after a discussion of a method for the development of effective treatment programs, we review what appear to us to be the most promising treatments available to date for the problems most commonly observed among persons in secure treatment facilities.
PROGRAM DEVELOPMENT EVALUATION

Program Development Evaluation (PDE) offers an incremental method to develop programs that does not depend upon having all of the right answers at the outset (Gottfredson, 1984). In PDE, the identification of a problem leads to the formulation of measurable goals. A theory is developed to account for the existence of the problem and to determine what measurable intermediate outcomes or objectives must be sought in order to reach the goal. Interventions are chosen to reach these objectives on the basis of the theory. Factors are identified that facilitate or impede attainment of the objectives and planning is undertaken to develop a strategy that capitalizes on opportunities or circumvents obstacles. A strategy specifies benchmarks (decisions or actions necessary to move forward), implementation standards (quality control or fidelity of intervention measures), and tasks (a specification of who will do what when). Thus, the PDE approach at the institutional level parallels our approach to designing interventions for individual patients.

PDE is a cybernetic process which uses information from measurement and evaluation to cycle a project through: problem specification, goal setting, developing a theory of action, setting objectives, choosing an intervention, analyzing organizational constraints and opportunities, and developing benchmarks. PDE is, therefore, a theory driven feedback system which can produce incremental knowledge. A particular strength of the approach is its attention to the internal integrity or quality control aspects of an intervention (cf., Gendreau & Ross, 1987). Using this approach, an institution has a real possibility of learning from failure rather than unknowingly repeating errors for the indefinite future.

The emphasis on theory in PDE encourages program implementers to look to the research literature for already developed theory, programs, and measurement systems (cf., Jones, 1987). As it is now, a striking feature of secure hospitals is their parochialness; these institutions tend not to adopt relevant findings from either the psychiatric/psychological or correctional literatures. This failure to adopt new and more effective practices is a feature of the mental health system more generally as well; Backer, Liberman, and Kuchnel (1986) have identified both barriers to adoption of more effective practices and some methods of overcoming these obstacles in the general field of mental health.

In this chapter we follow a PDE approach. First, we identify institutional and organizational problems; from these problems and a theory about them we formulate goals and initial objectives. This approach is illustrated with a detailed example from one institution, followed by promising programs and measurement systems that could be adopted by a secure psychiatric institution in implementing a PDE system.

PROBLEM IDENTIFICATION

Problem identification is the first step in PDE. This is particularly important in the present context because secure psychiatric institutions typically have only indirect or incomplete information about the problems presented by their clientele. Without an accurate understanding of the type and frequency of patient problems, appropriate assessment and treatment techniques cannot be identified from the literature, developed in the institution, or prioritized in a rational manner. As will be demonstrated below, problem identification leads naturally to effective treatment program planning. These plans, of course, are designed to overcome institutional barriers to effective intervention, such as patient heterogeneity and security concerns.

The two studies described here were an attempt to group patients according to the types of problems they had as rated by staff in two maximum security treatment settings. Both studies employed a version of the Patient Problem Survey developed by Quinsey, Cyr, and Lavallee (1988). The survey asked staff to report, for each patient, on a large number of individual problems. Problems were of many types (interpersonal, antisocial, symptomatic), and referred to difficulties exhibited in the community or within the institution. A multifaceted approach, combining clinical experience and judgment with factor analysis, was taken in exploring the underlying structure of the problem data. Another multi-faceted approach involving a wide variety of cluster analytic techniques was used in determining how patients could be organized into clinically homogeneous groups.

The Patient Problem Survey was developed (Quinsey et al., 1988) at the Philippe Pinel Institute, a French speaking maximum security psychiatric institution operated by the Quebec Ministry of Social Affairs. The institution has 260 beds
organized into 15 self-contained units. Patients were primarily male and are referred: (a) from the courts for psychiatric assessment or for treatment having been found unfit for trial or not guilty by reason of insanity, (b) from the federal penitentiary system having been found mentally ill or for special rehabilitation programs, or (c) from other psychiatric facilities because of security considerations. A more detailed description can be found in Beliveau (1980).

The questionnaire was completed for each of 212 adult male patients by three staff from three different disciplines (e.g., nurse, psychiatrist, psychologist) on each of the 15 units. A detailed description of the sample is available in Quinsey et al. (1988). A consensus procedure was used and each item was marked present, absent, non-applicable, or unknown for each patient. Staff consulted the patients' clinical files when necessary.

After the data were collected at Pinel, the questionnaire was modified slightly (adding an intellectual ability variable), translated into English and given in a second study to staff at another maximum security institution (Rice & Harris, 1988). The maximum security (Oak Ridge) division of the Mental Health Centre, Penetanguishene, housed male patients on eight 35 bed wards organized into 4 administrative units. Patients were referred to this second institution from the same sources as the Pinel Institute except that Oak Ridge received fewer patients from corrections and more from less secure psychiatric facilities. A more detailed description of the institution can be found in Quinsey (1981), and demographic data on the patient population can be found in Harris and Rice (1986).

At Oak Ridge, some wards and units made admission decisions based on diagnostic criteria while others had admission criteria reflecting the absence of institutional problem behaviors and regular attendance at work. This lack of unified organizational goals resulted in some patients not meeting the admission criteria for any ward. At the time of the study, senior staff sought a new organization with more equitable allocation of clinical resources, patient recruitment from new sources, fewer beds and more program/office space. The questionnaire was completed for each of the 189 inpatients using the same procedure as at Pinel. Because the focus was on problems that were particularly evident, all survey data were coded as present or absent before analysis (i.e., missing data were recoded as absent).

**PROBLEM FREQUENCIES**

The primary results of the two studies are shown in Table 1 where the proportion of patients for whom each problem was endorsed is shown. As can be seen, the most commonly endorsed community problems were Anger (70 & 79% for Pinel and Oak Ridge patients, respectively), Marital/family problems (68 & 71%), Anxiety (45 & 66%), Unemployment (73 & 63%), Poor use of leisure time (62 & 54%), and Crazy talk (43 & 61%). The problems most often noted in the institution were Anxiety (65 & 66%), Impulsivity (42 & 59%), Lack of consideration for others (50 & 47%), Poor use of leisure time (51 & 53%), Anger (42 & 52%), and Crazy talk (46 & 48%).

There were clear differences in problem frequency as a function of diagnosis, but the strength of the relationship was far from perfect. There were several problems that were not diagnosis-specific, and many of the most frequently endorsed problems were not true psychiatric symptoms. A good example of this is provided by the problems labelled “Depression.” Although fewer than 10% of the patients received an official hospital diagnosis of bipolar disorder or depressive disorder, 37% and 44% of the Pinel subjects and 56% and 34% of the Oak Ridge subjects were noted to have been depressed in the community and institution, respectively.

The generality of these findings across institutions and across diagnoses is strongly supported by a striking correspondence between the above reported staff-identified problems exhibited in the community by maximum security psychiatric patients and self-reported problems of newly admitted federal penitentiary inmates (Zamble & Porporino, 1988). In descending order of frequency, inmates reported as significant problems: fights with wives or girlfriends, money problems, conflicts with friends, dissatisfaction with current lifestyle, police or parole inquiries or restrictions, loneliness or depression, work problems, drugs and/or alcohol abuse, unemployment or lack of suitable employment, and lack of future directions or goals. The major discrepancies here are in the expected absence of psychiatric symptoms in the inmate sample and parole restrictions in the patient sample.

Because an important goal of the present study was to apply data to program design for maximum security patients, a multi-faceted approach was taken to an examination of how individual
problems grouped together. Using a combination of *a priori* judgments as to how individual problems would or should group together in real patients, and a varimax factor analysis (Norusis, 1985), a final set of problem scales was constructed to answer the question about which problems went together in the clinical presentation of forensic patients. Problem scale membership for individual problems is shown in Table 1 and the final list of problem scales and overall alpha coefficients (calculated for the two subject groups separately) are shown in Table 2. Clearly, this method of scale construction resulted in impressive internal consistencies for almost all scales. Of course, not all problems were retained for inclusion in higher order problem scales—particularly those that pertained to offenses. The failure of the offense items to contribute to the problem scales may well relate to the inadequacies of official recording practices, particularly their insensitivity to the rate at which crimes are committed (e.g., Chaiken & Chaiken, 1984). Interestingly, this method of scale construction produced results resembling those identified by other investigators using quite different methods. For example, Montgomery, Shadish, Orwin, and Bootzin (1987) used principal components analysis to extract five classes of problems measured by four psychiatric

<table>
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<th>( r )</th>
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<td>45</td>
<td>30</td>
<td>.16</td>
<td>IM</td>
</tr>
<tr>
<td>4. Affective Problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Depression</td>
<td>44</td>
<td>34</td>
<td>.40</td>
<td>D</td>
</tr>
<tr>
<td>b) Mania</td>
<td>19</td>
<td>10</td>
<td>.72*</td>
<td>–</td>
</tr>
<tr>
<td>c) Anxiety</td>
<td>65</td>
<td>66</td>
<td>.24</td>
<td>SW</td>
</tr>
<tr>
<td>d) Anger</td>
<td>42</td>
<td>52</td>
<td>.44</td>
<td>IM</td>
</tr>
<tr>
<td>5. Adjustment Problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Poor room care</td>
<td>32</td>
<td>33</td>
<td>.61*</td>
<td>LS</td>
</tr>
<tr>
<td>b) Poor self care</td>
<td>35</td>
<td>32</td>
<td>.47*</td>
<td>LS</td>
</tr>
<tr>
<td>c) Meds noncompliance</td>
<td>22</td>
<td>23</td>
<td>.60*</td>
<td>–</td>
</tr>
<tr>
<td>d) Noncompliance rules</td>
<td>44</td>
<td>33</td>
<td>.33</td>
<td>IM</td>
</tr>
<tr>
<td>e) Insolence</td>
<td>40</td>
<td>32</td>
<td>.43*</td>
<td>IM</td>
</tr>
<tr>
<td>f) Manipulation</td>
<td>37</td>
<td>32</td>
<td>.32</td>
<td>IM</td>
</tr>
<tr>
<td>g) Property destruction</td>
<td>14</td>
<td>6</td>
<td>.44*</td>
<td>IM</td>
</tr>
<tr>
<td>h) Stealing</td>
<td>3</td>
<td>4</td>
<td>–</td>
<td>IM</td>
</tr>
<tr>
<td>i) Poor use of leisure time</td>
<td>51</td>
<td>53</td>
<td>.08</td>
<td>SW</td>
</tr>
<tr>
<td>j) Inactivity</td>
<td>27</td>
<td>56</td>
<td>.66*</td>
<td>LS</td>
</tr>
<tr>
<td>k) Physical self abuse</td>
<td>9</td>
<td>10</td>
<td>–.11</td>
<td>–</td>
</tr>
</tbody>
</table>

Note. Reliability coefficients were calculated for the OR population only.
Scales: PS = Positive Schizophrenic Symptoms; CL = Criminal Lifestyle; LS = Life Skill Deficit; SW = Social Withdrawal; IM = Institutional Management Problems; D = Depression; SA = Substance Abuse.

*p < .05.

rating scales: two reflecting psychotic symptomatology, and one each reflecting level of functioning, hostility, and social withdrawal.

The test-retest correlations for each problem, based on the data from 18 Oak Ridge subjects who had moved to a different unit 6 months later, are also shown in Table 1. In many cases, the correlations were low and often statistically nonsignificant. In the case of problems observed in the institution, this may not be surprising in that the instructions referred questionnaire respondents to two completely different time periods. However, for problems reported in the community, the two questionnaire administrations re-
Table 2. Problem Scales with Number of Items (N), Test-Retest Reliabilities (r) and Internal Consistency Scores (α) for Pinel (PP) and Oak Ridge (OR) Subjects, Separately

<table>
<thead>
<tr>
<th>Scale</th>
<th>N</th>
<th>r</th>
<th>OR</th>
<th>PP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Positive Schizophrenic Symptoms (PS)</td>
<td>9</td>
<td>.94</td>
<td>.87</td>
<td>.82</td>
</tr>
<tr>
<td>2. Criminal Lifestyle (CL)</td>
<td>4</td>
<td>.58</td>
<td>.66</td>
<td>.68</td>
</tr>
<tr>
<td>3. Lifeskill Deficit (LS)</td>
<td>10</td>
<td>.44</td>
<td>.81</td>
<td>.50</td>
</tr>
<tr>
<td>4. Social Withdrawal (SW)</td>
<td>10</td>
<td>.50</td>
<td>.72</td>
<td>.70</td>
</tr>
<tr>
<td>5. Institutional Management Problems (IM)</td>
<td>13</td>
<td>.57</td>
<td>.81</td>
<td>.87</td>
</tr>
<tr>
<td>6. Depression (D)</td>
<td>2</td>
<td>.46*</td>
<td>.46</td>
<td>.59</td>
</tr>
<tr>
<td>7. Substance Abuse (SA)</td>
<td>2</td>
<td>.67*</td>
<td>.67</td>
<td>.61</td>
</tr>
</tbody>
</table>

*Pearson rs.

ferred to exactly the same period of time in the patient’s history, and for some items, such as prior criminal behavior, we expected near perfect reliabilities.

Test-retest correlations were computed for the problem scales (the sum of the endorsed items from each scale) and these are also shown in Table 2. The substantial improvement in correlations between those for individual items and those for the higher order problem scales lends some support to the validity of the problem identification procedure and to the conclusion that the problem scales reflect the underlying structure of the phenomena under study. Interestingly, the individual problems and problem scales that showed the largest test-retest correlations were those that corresponded to classical psychiatric symptomatology that might have been expected to show low temporal stability, while problems often thought to reflect more permanent personality characteristics (such as criminality) showed the lowest test-retest stability.

PATIENT/SUBJECT CLUSTERS

The Oak Ridge study was, in part, stimulated by a general reorganization of the maximum security division and the need to develop a coherent treatment model for wards and units according to treatment-relevant problem types. This task was made difficult by several factors. First, some treatment-relevant problems overlapped others. For example, patients of differing intellectual abilities may have required life skills training, or patients requiring different levels of security precautions might have required heterosocial skill training. Second, the number of wards in the new organization was not determined. Third, some senior staff hoped to actively recruit patients from new sources (such as federal corrections) but it was unclear how such recruits should be incorporated into the existing patient population. Fourth, most planners agreed that at least one ward should be set aside to house admissions and patients on short term assessments. Thus, the authors had the opportunity to apply empirical techniques to the practical problem of assigning patients to wards and organizing treatment efforts.

As in the previous section, a multifaceted approach to the identification of patient subgroups was employed. Cluster analyses were used and a variety of techniques and distance metrics were compared. In every case, the input data for the cluster analysis was each Oak Ridge patient’s score on each of the seven problem scales plus his score on the intellectual deficit variable. The successive application of several cluster analytic techniques yielded a final seven-cluster solution (K-means; Wilkinson, 1986) shown in Figure 1. This figure shows the patient clusters with the relative score for each on the problem scales. Thus the cluster with the lowest score on a problem scale received a relative score of 0% and the cluster with the highest received a relative score of 100%. Problem scales are plotted in order of their relative contribution to the final solution. It was of interest that the highest F statistic yielded by the cluster analysis was for the problem scale having to do with problems most evident within the institution. The scale that made the smallest statistically significant contribution was criminal lifestyle and the F ratio for substance abuse was not statistically sig-
Figure 1. Relative problem scale scores for seven K-means clusters for the Oak Ridge population. Problem scales shown in order of contribution to the final cluster solution.

Significant. Examination of Figure 1 shows several interesting patterns: Good Citizens had low scores in all problem areas while Social Isolates, Institutional Management Problems, and Institutionalized Psychotics had maximal scores in several problem areas; and Personality Disorders, Psychotics, and the Developmentally Handicapped showed maximum scores on only one or two problem scales.

In order to examine the generality of these results, a single cluster analysis (Ward’s method with unstandardized euclidean distances) was applied to the 212 Pinel subjects. The relative scores for each of seven clusters on the seven problem scales (the intellectual ability variable was not included in the Pinel survey) are shown in Figure 2. The figure shows that some clusters were nearly identical to those in the final Oak Ridge solution.
Figure 2. Relative problem scale scores for seven clusters (using Ward's method) for the Pinel population.

Thus, both subject populations have Good Institutional Citizens, Institutionalized Psychotics, Institutional Management Problems, and Personality Disorders. The Pinel population, however, had an additional cluster of personality disorders which we labelled Personality Disorders II, and clusters that we named Nonpsychotic Social Isolates and Depressives.

INSTITUTIONAL APPLICATION AT OAK RIDGE

The problem scales reflected important characteristics, some of which could be used to determine ward placement for patients. It was recommended that ward placement be determined by overall level of functioning (intellectual and life
skills deficits), institutional management problems, social withdrawal, and the presence of active positive schizophrenic symptoms because these had obvious implications for security and for the compatibility of the patient clusters. For example, a ward appropriate for socially withdrawn patients would have very different programs than one for patients who presented institutional management problems. On the other hand, some individual problems had important treatment implications not reflected in the above scales (e.g., histories of antisocial behavior reflected in offense type, substance abuse, family problems, etc.). This observation led to the first recommendation: Problems that had management and security implications should form the basis for the planning of ward programs, and for patients' ward assignments. It was also recommended that clinical departments offer treatments for which patients would be eligible regardless of their living area. These treatments should focus on problems that were not relevant in determining ward or unit assignment.

Although there was agreement that clinical units and departments should be organized in this fashion, it was still unclear how to assign patient clusters to wards. However, it was then noted that the problem scales associated with the seven clusters corresponded to a $2 \times 2 \times 2$ table in which the 3 dimensions were: whether the patient exhibited low versus average or higher level of functioning, whether the patient presented institutional management problems or not, and whether the patient was actively schizophrenic or not. For the purpose of this $2 \times 2 \times 2$ scheme, level of functioning was indexed by life skills and intellectual deficit together, so that the scheme incorporated four of the first five problem scales. Thus, Good Citizens ($n = 51$) were high functioning patients who were not management problems and not actively psychotic. Social Isolates ($n = 35$) were high functioning patients who were not management problems but were psychotic, socially withdrawn, and depressed. The Personality Disorders ($n = 32$) were high functioning, nonpsychotic patients who were management problems and had criminal lifestyles. The Institutional Management Problems ($n = 23$) were low functioning, psychotic patients who exhibited problems in almost all areas but especially in institutional management. The Institutionalized Psychotics ($n = 11$) were very low functioning, withdrawn, and actively psychotic, but did not present management problems, while the Psychotics ($n = 22$) were high functioning, but actively psychotic, and did present management problems. Finally, the Developmentally Handicapped ($n = 15$) were low functioning, nonpsychotic patients who presented moderate management problems.

It was important to note, however, that this $2 \times 2 \times 2$ relationship could not be the new map for the institution. The sizes of the clusters meant that clinically compatible patient clusters would have to share a ward. This led to the second major recommendation about how wards and units should be organized—allowing for a separate admission ward, a separate ward for contractually arranged referrals from corrections, and the closure of one ward to be converted to offices and program space. Also shown are some of the ward program features suggested. It was then clear that three units could be organized into three pairs of programmatically compatible wards: (a) The Social Management Unit concentrating on the treatment of fairly high functioning criminal offenders; (b) The Rehabilitation Unit, offering maximum privileges, and the least security and concentrating on the treatment of psychiatric patients not presenting serious security concerns within the institution; and (c) The Behavior Therapy Unit with two different token economy programs concentrating on the treatment of the most psychiatrically disturbed patients.

The third major recommendation to come from this research was a simple decision process to assign patients to appropriate wards (see Figure 3). Though simple, this decision tree had powerful implications: First, it largely determined the patient characteristics to be assessed (and, indeed the specific assessments to be used) by the admission unit, and greatly expanded its focus from the more traditional diagnostic questions. Thus, the major dimensions on which patients on the admission wards should be assessed would include intellectual and life skills functioning, institutional management problems, psychotic symptomatology, and social withdrawal. In considering each dimension, staff on the admission unit would use the best available existing instruments in helping to make the necessary decisions. The assessments might include self-report measures, staff questionnaires and role play tests. The adoption of standardized measures would be expected to yield reliable determinations of a patient's status on each dimension. In addition, use of the decision tree prioritized the elements of the determination of
Figure 3. A decision tree to be used to assign Oak Ridge patients to wards and units.
patient ward assignment with security considerations (institutional management problems) first: level of functioning (life skills and intellectual ability) and interpersonal problems (social withdrawal) intermediate; and psychotic symptomatology last.

Cross validation is the next step in establishing the reliability and usefulness of this reorganization. The identification and emphasis on other problems would certainly yield a very different structure (e.g., Duffee & Clark, 1985). Finally, if the present institution were to successfully alter its patient selection, assessment and treatment efforts, a markedly different data structure would inevitably result even if the same study were to be replicated in the near future.

GENERAL/INTAKE ASSESSMENT

In order to assign Oak Ridge patients to wards, a number of assessment issues must be addressed shortly after admission. As discussed above, the PDE approach yielded the simple decision tree in Figure 3 that prioritizes several security/living area issues relevant to the Oak Ridge Patient Problem Survey results. Because intake assessment issues would undoubtedly be somewhat different if a similar study were conducted with another population, the following discussion serves primarily as an example of the kind of treatment-relevant intake assessment procedure that would be required in a secure psychiatric facility.

It should be noted at this point that, under ideal conditions, a major focus of assessment in such a facility would be problem-specific. That is, most assessments would operate in an intimate way with specific treatment efforts. Thus, in the discussion of individual problems and problem groups below, assessment issues are addressed with each problem separately. Fortunately, there exists a considerable technology that can be used to conduct individualized evaluations of treatment progress. Goal attainment scaling (e.g., Kiresuk & Lund, 1978; Lewis, Spencer, Haas, & DiVittis, 1987) permits the analysis of group data even though each patient may have different treatment goals. It should also be noted that the following discussion does not address some assessment issues that are routine in secure psychiatric facilities. Because this paper is about treatment, discussion of such forensic issues as fitness to stand trial (Roesch, Webster, & Evans, 1984), for example, are beyond its scope.

HISTORICAL INFORMATION

There is little doubt that a detailed and careful history is an essential step in designing and planning treatment (Quinsey & Earls, 1990). Typical psychiatric histories concentrate on the recency and severity of psychiatric symptomatology and may fail to record some of the most essential clinical information. That is, in a maximum security treatment institution, many management and treatment issues will involve the frequency and severity of violent behavior rather than symptomatology alone. Thus, in compiling such a history, staff must take care to systematically address a number of topics for each treatment candidate: childhood adjustment, family background, educational and employment history, psychiatric history, criminal history, adult social adjustment, and so on. Historians need to pay considerable attention to the details of any violent or dangerous behavior, including sex, number and characteristics of victims; victim injury; modus operandi; apparent motives; method of apprehension, and so forth. Such details are often crucial in planning treatment efforts and making subsequent placement and supervision decisions (Quinsey & Earls, in press). Although the patient can be a valuable informant, whenever possible, historians should obtain independent information and not rely solely on the patient's report. Other sources can include court transcripts, police reports (including crime scene data and autopsy results), interview and questionnaires completed by family members, and police "rap sheets." For patients transferred from other institutions because of violent or unmanageable behavior, detailed information about the antecedents, topology, and consequences of recent violence are necessary. Again, reports that accompany such patients often refer to some vaguely described "acting out" and are useless in planning treatment interventions.

One example of the value of such a careful history-taking effort is the Problem Identification process (Quinsey, Chaplin, Maguire, & Upfold, 1987) described in the sexual problem behavior section below. In such a process, patients and therapists use the history and offense information to develop a causal theory about the dangerous behavior resulting in the patient's admission. If sufficiently articulated, such a theory can be used to identify and organize individual treatment targets and interventions. Such a plan can also help to ensure that patients and staff share clinical
goals, and can avoid some of the staff-patient bickering and litigiousness characteristic of some secure psychiatric institutions.

WARD ASSIGNMENT

As was shown in Fig. 3, ward assignment at Oak Ridge depends upon deciding whether the patient exhibits institutional management problems, high or low institutional level of functioning, social withdrawal, and/or positive schizophrenic symptomatology. It is likely that similar procedures would be required at any secure treatment facility.

1. Management problems

As discussed below, routine clinical records are likely to underestimate the actual frequency of such problems. Thus, combined with prospective recording of behaviors such as assaults (e.g., Harris & Varney, 1986) and detailed information from a referring institution, some simple paper and pencil assessments such as the Social Performance Survey Schedule (Lowe & Cautela, 1978) and the Overt Aggression Scale (Yudofsky, Silver, Jackson, Endicott, & Williams, 1988) can be useful in identifying candidates in need of specific behavioral analyses of their problematic institutional behaviors.

2. Level of functioning

Considerable effort has gone into the development of instruments to assess a psychiatric patient's community adjustment (Lehman, 1983; Wallace, 1986), but there are only a few instruments designed to generate a functional assessment of an institutionalized psychiatric patient's condition that have demonstrated acceptable psychometric properties. Among the best of these appears to be the Specific Level of Functioning Assessment Scale or SLOF (Schneider & Streuning, 1983) which yields scores in a number of subareas: physical functioning, personal care skills, interpersonal relationships, social acceptability, activities, and work skills. The AAMD Adaptive Behavior Scale (ABS) has also been demonstrated to possess some desirable psychometric properties (Nihira, Foster, Shellhaas, & Leland, 1975) and provides assessment in several different subareas: independent functioning, physical development, economic activity, language development, numbers and time, domestic and vocational activity, self-direction, and responsibility. The ABS has been used with both psychiatric patients and mentally retarded individuals (Nihira, Foster, & Spencer, 1968). Depending on the particular functioning skills that were relevant to ward assignment decisions, all or parts of these scales could be incorporated into an initial intake assessment. A simple assessment of intellectual ability such as the vocabulary subscale of the Wechsler Adult Intelligence Scale (Pattich, 1973) may also be useful at this initial stage.

3. Social withdrawal

Other parts of the scales described above (e.g., Interpersonal Relationships from the SLOF and Socialization and Withdrawal from the ABS) are more relevant to the separate evaluation of patients' social functioning, especially withdrawal. In addition, the positive behavior subscale of the SPSS (Lowe & Cautela, 1978), the Social Avoidance and Distress Scale (Watson & Friend, 1969), and the Socialization Level Scale (Aumack, 1962) could be used to determine which patients should be assigned to a ward specifically designed for socially withdrawn patients. These latter scales are discussed further in later parts of this chapter.

4. Schizophrenic symptomatology

In any psychiatric institution, diagnosis is likely to be regarded as critical to initial treatment planning. Although it could be argued that the problem-relevant assessments, discussed separately below with the individual problem sets, will be more useful in designing treatment and more sensitive to changes that result from treatment, some kind of diagnostic statement may still be required. The available evidence supports the use of such structured diagnostic systems as the Schedule for Affective Disorders and Schizophrenia (SADS) and the Research Diagnostic Criteria (RDC, Spitzer, Endicott, & Robins, 1978), over traditional diagnostic procedures.

However, as discussed below, diagnostic criteria alone are not the best choice for instruments to be used for treatment planning and evaluation because such instruments are designed to yield stable classifications rather than scores sensitive to treatment effects. Thus, some additional assess-
ment of the severity of schizophrenic symptoms would be useful. Lukoff, Liberman, and Nuechterlein (1986), for example, have reviewed the literature relevant to this issue and concluded that an expanded version of the Brief Psychiatric Rating Scale (BPRS, Overall & Gorham, 1962) can be used to generate a psychotic index (comprised of unusual thought content, hallucinations, conceptual disorganization, and other symptoms) that is easily administered, has acceptable psychometric properties, and is sensitive to treatment.

WARD PROGRAMS

In the previous section we described an empirical approach to the classification of patients in secure treatment institutions. In making recommendations about the assignment of patients to wards, the authors also recommended specific programs for several wards. Three ward token economy programs were recommended. The particular token economy programs required for the patient clusters labelled Institutional Management Problems, Psychotics, and Social Isolates are different, but the recommendation was motivated by an overwhelming body of evidence supporting the use of token economy programs in institutions. In this section, we will review some of the evidence favoring the use of token economies; then we will discuss some problems associated with program implementation as a partial explanation for the fact that, despite this evidence, token economy programs have declined in popularity.

Token economy programs (TE's) have been shown to improve and maintain many of the adaptive and prosocial behaviors of patients exhibiting a variety of problems in a variety of institutional settings (Kazdin, 1977, 1982; Kazdin & Bootzin, 1972). In secure psychiatric institutions, TE’s have been shown in a small number of studies to improve the self-care and interpersonal behavior of patients compared to the preprogram baselines (Lawson, Greene, Richardson, McClure, & Padina, 1971; McNamara & Andrasik, 1977; Quinsey & Sarbit, 1975). TE’s have also been shown to improve self care/life skills and social adjustment of neurologically impaired patients (Eames & Wood, 1985; Murphy, 1976), institutionalized adolescents and delinquents (Altcshison & Green, 1974; Barkley & Hastings, 1976; Jesness, 1975; Santogrossi, O'Leary, Romancyk, & Kaufman, 1973; see also Davidson & Seidman, 1974), and disruptive retardates (e.g., Sanford, Elzinga, & Granger, 1987). In addition, TE’s have been shown to produce improvements in academic performance, work, life skills, and interpersonal behavior in several studies conducted in correctional settings (Ayallon & Milan, 1979; Bassett, Blanchard, & Kosland, 1975; Milan & McKee, 1976; see also Musante, 1975).

The largest body of work on TE's has been conducted with chronic psychiatric patients. Beginning with the pioneering work of Ayallon (Ayallon & Haughton, 1962; Ayallon & Michael, 1959), TE programs have been shown to lead to improvements in self help behaviors, attendance at other programs, work, compliance, length of hospital stay, and recidivism (Gripp & Magaro, 1971; Hersen, Eisler, Smith, & Agras, 1972; Maley, Feldman, & Ruskin, 1973; Miller & Dermer, 1979; Rybolt, 1975; Steffy, Hart, Craw, Torney, & Marlett, 1969; Woods, 1971; see also Milby, 1975). In most cases, the TE was shown to be more effective than a typical custodial hospital routine. In addition, token reinforcement procedures have also been effective in reducing the symptomatic verbal behavior of schizophrenic patients and increasing appropriate speech (e.g., Wincez, Leitenberg, & Agras, 1972).

By far the most comprehensive evaluation of a TE for psychiatric patients is that of Paul and Lentz (1977). That remarkably careful study leaves little doubt about what a TE can accomplish and little question that the specific contingency management procedures employed were responsible for most of the important program-related gains. Paul's social learning approach yielded improvements in institutional adjustment, symptomatic behaviors, discharge rate, length of hospitalization, and recidivism, as well as reductions in the need for psychiatric medication. Paul's study also demonstrated the cost effectiveness of the TE compared to custodial care, and documented a considerable technology of program implementation and staff selection, training, and performance monitoring.

Other researchers have also contributed to a considerable technical literature on issues pertaining to behavioral assessment (Allen & Magaro, 1971; Maley, Feldman, & Ruskin, 1973; Woods, Higson, & Tannahill, 1984) and data recording (Milby, Willcutt, Hawk, MacDonald, Whitfield, 1973), staff attitudes, training, and supervision (Bassett & Blanchard, 1977; Elder, Liberman, Rapport, & Rust, 1982; Milby, Pendergrass, & Clarke, 1975; Patterson, 1976), institutional orga-
nization (Pollard, Merkel, & Obermeyer, 1986), and economic factors (Milby, Clarke, Charles, & Willcutt, 1977; Ruskin & Maley, 1972; Gripp & Magaro, 1974). There is also a literature addressing the issues of what to do about individuals whose behavior does not respond (Kazdin, 1973; Milan, 1976) and when a TE might be contraindicated (Hersen, 1979; Zeldow, 1976).

As has been pointed out by others (e.g., Kazdin, 1977), many program evaluation issues remain unresolved with respect to TE programs. However, many of these have little relevance to staff considering whether to implement a token economy program in a secure psychiatric setting. As an example, consider the issue of treatment generalization. Although the work of Paul and Lentz (1977) clearly established the possibility of generalization of TE reinforced behaviors to extraprogrammatic environments, many TE evaluations fail to find evidence of such generalization (e.g., Rice, Quinsey, & Houghton, in press). Of course, such failures do not mean that a TE program should be rejected, because no evidence of such generalization has ever been found for any other hospital milieu. A requirement that all program related changes persist in other environments is clearly to impose an unreasonably high treatment standard; for example, no one would seriously consider abolishing neuroleptic drug treatment simply because drug-induced treatment effects dissipate after drugs are withdrawn or because many patients stop taking medication after release from hospital. Failure to obtain generalization in behavioral programming should prompt efforts to obtain it by, for example, individualizing the program, removing reinforcement for frequently exhibited problem behaviors, and systematically increasing the delay between performance and consequences (Kazdin, 1973).

A related point is that, whether or not a TE program alone produces generalization (and lowered recidivism), program managers require a system to monitor patient behaviors, enforce reasonable rules and regulations, make security-related decisions, and apply consequences to patient behaviors. Because TE programs can provide such a system, they have few serious rivals as ward programs in a secure psychiatric institution (Quinsey, 1981). Of course, as discussed in the previous section, a TE program is compatible with many other forms of treatment, including drugs and psychotherapy.

Given the overwhelming case favoring the adoption of a TE within any institution and especially in a psychiatric facility, it is remarkable that there are fewer TE programs currently than there were a decade ago and certainly fewer are now in existence than one might expect (e.g., Boudewyns, Fry, & Nightingale, 1986). Why have token economies fallen out of favor in institutions? There is now a considerable literature that addresses the conceptual, political, and administrative difficulties that may be anticipated by any program director intent upon the implementation of a TE program.

One reason has to do with the lack of interest by behavior therapists in schizophrenia. Bellack (1986) noted several mistaken beliefs that have contributed to the fact that schizophrenia has ceased to be a major area of interest for behavior therapists: the belief that the disorder exists only as an overgeneralized label; the belief that, because the disorder has a biological base, the only adequate treatment is medication; and the belief that the disorder is too severe for behavior therapy. Bellack (1986) also notes that there is considerable evidence that these beliefs are unfounded (c.f. Harding et al., 1987a, 1987b), and that behavioral techniques represent potent treatments for schizophrenic patients.

Other writers have identified several characteristics of institutions that militate against successful implementation of a TE. Laws (1974) described a variety of conflicts between behavioral principles and customary institutional/bureaucratic practices that were responsible for the demise of a TE in a secure psychiatric institution. It is clear that many institutional policies and practices exist, not for the benefit of patients, but for the convenience of staff. Indeed, Hersen (1976) pointed out that the real goals of institutional staff and administrators are often antithetical to those of TE programs. For example, decisions about staff assignment, patient placement, and security precautions can no longer be made arbitrarily and subjectively once a TE has been implemented; administrators and staff are likely to resist the loss of this form of control.

It is also clear that ward staff in most psychiatric institutions are unsuited in orientation and training to work effectively in TE programs. Hall and Baker (1973) noted that the effectiveness of a TE program can be destroyed if only a tiny fraction of the staff do not carry out program duties. Indeed, in customary institutional practice, ward staff behavior is inconsistent with effec-
tive behavioral treatment because it reinforces deviant and dependent patient behavior and extinguishes or punishes independent behavior. There are few convincing reports that any amount of training (in the form of lectures, workshops, and practice sessions) has ever been successful in turning custodially oriented ward staff into effective TE program operators. Indeed, Laws (1974) asserted that ward staff should not operate a TE and instead behaviorally trained staff should be specifically hired. Finally, most program managers do not have effective control over the contingencies that apply to the behaviors of ward staff because program managers lack direct line authority, sufficient information about specific staff behaviors, or because union contracts and civil service regulations preclude effective contingency management. We will return to the issue of ward staff training and the issue of arranging appropriate contingencies for staff behaviors later in this chapter.

Finally, Repucci and Saunders (1974) identified one other impediment facing clinicians considering the implementation of a TE: that of language. Briefly, behavioral terminology represents a double-edged sword. The meanings of some terms (such as "contingency") appear to remain elusive to institutional staff despite concerted training endeavors. Because staff never grasp the concept, their performance is never truly contingent. On the other hand, some terms (such as reward, punishment, time out, etc.) have everyday meanings, and though staff may learn the technical, behavioral meaning of them, their understanding and, consequently, their program performance, inexorably drift back to an everyday (and behaviorally inappropriate) use of the terms.

In conclusion, the overwhelming evidence of the effectiveness of token economy programs demands that clinicians planning therapeutic efforts in secure treatment institutions seriously consider implementing token economies alone or in conjunction with other treatments. However, there is little doubt that considerable difficulties will face any clinician who proposes to implement a token economy program in an existing institution using staff who are already accustomed to a traditional custodial environment. Ideally, one would seek a new organization with newly selected and trained staff (Paul & Lentz, 1977). Personal contact between institutional staff and program innovators, outside consultation, and persuasive evidence of program success may contribute to success in implementing a token economy within an existing organization (Backer et al., 1986). Indeed, token economy programs that enhance the effectiveness of more traditional medical treatments (e.g., drugs) may more readily find institutional acceptance (Agras, 1987).

In a review of token economy programs in closed settings, Milan (1987) also concluded that there is considerable evidence to recommend the use of behavioral approaches to rehabilitation with juvenile and adult offenders especially when steps are taken to promote generalization to the community. Milan also noted the lack of behavioral work published since 1980, especially in institutions for mentally disordered offenders, and also attributed this dearth to a host of professional, political, and administrative barriers to effective programming. Milan finally concluded that the retreat of behaviorists from closed institutions renders such places "behavioral psychology's final frontier of application, research and theory" (Milan, 1987, p. 219).

Although token economy programs were specifically recommended for only three of the seven Oak Ridge wards, it may well be that simple token economies would also be useful on some or all of the remaining wards, even if they were only thought of as providing a systematic set of rules for the benefit of both patients and staff. Instead of, or perhaps in addition to a token economy, we also suggested that one of the wards be run by patient government (for the Good Institutional citizens) or staff-patient government (for the Personality Disorders). Therapeutic communities, discussed further below, usually rely heavily on patient government.

Finally, with respect to ward programs in general, there has been a concerted research effort to identify the characteristics of effective psychiatric programs. This effort (Collins, Ellsworth, Casey, Hickey, & Hyer, 1984; Ellsworth et al., 1979) has employed measures of effectiveness based on self-reported and family-reported community adjustment. However, the relative contributions of pretreatment variables and program characteristics could not be compared because these two classes of variables were analyzed with separate sets of change scores. Perhaps for this reason, the results of these studies are not as informative as one might like; for example, whether the ward program was behavioral was not a variable. Some variables that were strongly related to outcome defy easy explanation (e.g., lack of a separate T.V. room, a mixture of acute and chronic patients). It does appear, however, that program
effectiveness was related to the stability of ward staff shift assignment, sensible medication practices, environments that encouraged patient activity and social interaction, and was negatively related to an overemphasis on ward order and staff control. Of perhaps more interest, however, were some of the variables that were not related to outcome. Thus, conventional wisdom to the contrary, number of patients, staff/patient ratio, whether the ward had a qualified psychiatrist, proportion of nurses with degrees, years of mental health experience of the staff, and the diagnostic composition of the ward’s patients were all variables that were unrelated to program effectiveness. Although the authors urge caution in the interpretation of these results, this large-scale research effort provides good grounds for a shift of attention away from the usual kinds of program/administrative concerns (such as number and qualifications of staff) towards issues of program design and integrity. We will return to this topic in the last section of this chapter.

PROBLEMS AND RECOMMENDED TREATMENT FOR MAXIMUM SECURITY POPULATIONS

In the next section of this chapter, we review the literature regarding the most promising assessment and treatment approaches for the problems found to be most common in the two maximum security populations studied in the previous section. In view of the similarity in problem frequencies among Oak Ridge and Pinel patients, it is very likely that the same problems would be found to be common in other secure treatment populations.

The problems selected for discussion below were those which were observed in 25% or more of one or both of the populations studied. There were some specific offense types (murder, nonfamily, and nonsexual violent crime) which, although common, did not fall into any problem scale, and did not suggest any obvious specific treatment targets. These problems are not discussed further.

There were some additional problems which, although frequent, did not fall into any problem scale. Anger in the community was one such problem. Because of the high frequency of this problem, and because of a relatively separate treatment literature, we have discussed the assessment and treatment of anger (both in the community and in the institution) on its own. Unemployment and difficulties at work while in the community were two other problems which, although frequent, did not fall into any problem scale. We have chosen to discuss work problems as a topic on its own. Health problems were relatively frequent in one of the populations, but are not discussed further. Family and marital problems were also extremely common and did not fit into any of the problem scales. However, because most secure psychiatric institutions admit patients from large geographical areas, conducting marital and family therapy while a person resides in the maximum security setting is extremely difficult. Therefore, although there are many studies that point to the effectiveness of family therapy with psychiatric and correctional populations (especially those employing behaviorally oriented approaches), they are not discussed further here. Interested readers should consult recent literature reviews on the use of family therapy with psychiatric and offender populations (e.g., Gendreau & Ross, 1987; McFarlane, 1983).

There were also a few other frequent problems that did not fall into any problem scale, that are discussed along with treatments relating to problems within one of the problem scale areas because the treatments we would recommend for those problems are the same as the treatments we would recommend for problems that fall into that particular problem scale. Thus, problems with money management, housekeeping, and use of community resources are discussed under the heading of life skills deficits.

Anxiety was a very frequently observed problem both within the institution and in the community. Although it fell within the social withdrawal problem scale, we discuss anxiety separately because of the large body of literature on that topic.

Finally, although poor conversational skills within the institution was a problem that fell into the life skills scale, we have chosen to discuss it in the section on social withdrawal because the most popular treatment programs for social withdrawal include training of conversational skills. Similarly, we have chosen to discuss poor use of leisure skills under the heading of life skills deficits even though it fell into the social withdrawal problem scale.

We now proceed with a discussion of specific assessment and treatment strategies for the problems commonly observed in maximum security settings. As much as possible, we have concentrated on reviewing treatment strategies applied
in secure treatment settings. However, as discussed in the introduction, there is a dearth of treatments that are known to be effective in secure facilities. In such cases, we have reviewed literature from other settings. Such reviews were not intended to be exhaustive and reflect our evaluation of the applicability to secure facilities and overall quality of the relevant literature. The order in which problems and recommended treatments are discussed is based on the ease of explication and does not reflect the frequency or importance of problems identified in the surveys.

SOCIAL WITHDRAWAL

Under this heading, we will discuss the following problems: Social withdrawal, assertion deficits, conversational skill deficits, unpopularity, and shyness. These were common problems among the two maximum security patient populations examined earlier in this paper. Among psychiatric patients in general, social isolation has been shown to be very strongly related to impairment in social functioning (Qualls, Justice, & Allen, 1980). Moreover, poor social functioning and poor interpersonal skills, especially socially inadequate behavior as opposed to overly assertive behavior, have been shown to be related to poor post-release outcome (Curran, Miller, Zwick, Monti, & Stout, 1980; Wilber & Biggin, 1976).

There have been many theories about the causes of social withdrawal, shyness, and unassertiveness. Social withdrawal is one of the major symptoms of schizophrenia in many diagnostic systems. Accordingly, any of the treatments for schizophrenia should lessen the amount of withdrawal. However, neuroleptic drug treatments, which have been successful in treating positive symptoms of schizophrenics, have been much less successful for negative psychotic symptoms such as social withdrawal (Liberman, Massel, Mask, & Wong, 1985).

On the other hand, there is evidence that token economy programs, as discussed earlier in this chapter, can be effective for both positive and negative psychotic symptoms. To ameliorate social withdrawal, the program should include consequences for social interaction such as initiating conversation, answering when spoken to, and participating in activities.

According to social learning theories (e.g., Be lance, 1983), people exhibit social withdrawal because they lack the behavioral skills required to converse socially, to make friends, or to act assertively. Other people have the skills but suffer from social anxiety and choose not to use them. Others argue that the deficit is more of a cognitive nature involving deficiencies in decoding skills such as reading and interpreting social cues, decision skills such as searching for possible responses and evaluating each, and encoding skills such as deciding how to get an intended message across to others (Liberman et al., 1985; McFall, 1982). Most would acknowledge that problems in any or all of the above areas could be involved in an individual case, and that one of the first tasks is to assess the patient and gather more specific information about that person's social deficits.

According to a social learning model, behavior is determined largely by the situation rather than the person. A person might exhibit socially inadequate behavior in one situation, or set of situations, but not in another. By contrast, according to a trait model, social inadequacy refers to a general, underlying personality characteristic. Although the available evidence suggests there are some problems with both views (McFall, 1982), there is certainly evidence that socially skilled persons exhibit different social behaviors in different social situations (Trower, 1980). Thus, another important aspect of assessing socially inadequate behavior involves sampling a person's behavior in various situations. Socially inadequate behavior has been examined in three general areas: making social conversation in everyday friendly social encounters, interacting socially with members of the opposite sex, and speaking up for oneself and asserting one's rights in situations where another person is trying to infringe on those rights. Of course, within each general area, a more in-depth assessment could further refine the specific situations that are problematic for an individual and the specific skills that are lacking.

There are many scales that have been designed to measure social adjustment in psychiatric patients (see reviews by Weissman, 1975; Weissman, Sholomskas, & John, 1981). However, most of these scales encompass all aspects of a patient's social functioning, such as functioning in occupational roles, marital roles, parental roles, and so on, and are too broad to be helpful in identifying specific treatment targets for socially withdrawn patients, or even for deciding whether the patient's social problems have to do with social withdrawal or with other problems of social interaction, such as excessive anger or overassertive behavior.

There are, however, a few simple assessment measures that may be helpful in deciding whether
a patient has sufficient social inadequacies to warrant specific treatment interventions, and, if so, whether the treatment should be targeted at general social conversation situations, heterosocial situations, or assertion situations. Of the many measures that have been developed for shy or socially withdrawn persons (Glass & Arnkoff, 1989), some are particularly suited for use in secure treatment settings. The Social Performance Survey Schedule (Lowe & Cautela, 1978) has been shown to be reliable and valid and has been used with psychiatric patients (Miller & Funabiki, 1984; Monti, 1983). The scale gives separate scores for positive social behaviors such as "Has eye contact when speaking" and "Talks readily to people (s)he hasn't met before" and negative social behaviors such as "Insults others" and "Threatens others verbally or physically." Poor scores on the positive social behaviors indicate problems relevant to treatment for social withdrawal, whereas poor scores on the negative social behaviors indicate problems more relevant for treatment of inappropriate anger or institutional management problems. The scale can be used as a self-report measure, can be completed by clinical staff who know the patient well, or can be completed by an interviewer after a carefully structured interview with the patient concerning his or her social behavior (Monti, 1983). The Social Avoidance and Distress Scale (Watson & Friend, 1969) was designed to measure deliberate avoidance of social situations, as well as the experience of discomfort or fear in such situations. This self-report scale has shown to have adequate psychometric properties and could be helpful in determining whether or not a patient was a suitable candidate for treatment of social withdrawal, although a more in-depth assessment would be required to determine more specific areas of deficits. The Socialization Level Scale (Aumack, 1962) was designed to measure the degree of social isolation of psychiatric patients and was validated on adult male psychiatric patients, with the ratings being performed by psychiatric aides. The scale has proven to be useful as a screening device for selecting candidates for a social skills program that targeted both conversational skills and assertion skills (Helzel & Rice, 1985; Rice, 1983).

Other simple rating scales that have been found to be useful in screening for socially withdrawn patients are the Social Contact and Communication subscales of the Ellsworth (1971) MACC Behavior Adjustment Scale (Helzel & Rice, 1985; Rice, 1983). These scales, developed and validated on hospitalized psychiatric patients, cover such topics as taking part in back and forth conversation, having friends on the ward, and socializing rather than spending time alone.

Another major assessment method for selecting treatment candidates for social skills treatments for socially withdrawn patients as well as for persons with a wide variety of other social behavior problems are improvisational techniques that sample a person's behavioral repertoire (Goldfried & D'Zurilla, 1969; McReynolds & De Voge, 1978) by having the person role-play simulated real-life interactions. Although there has been much debate about the external validity of role-play assessments (e.g., Bellack, Hersen, & Lamparski, 1979; Hall, 1978; Heimberg, Harrison, Goldberg, Desmarais, & Blue, 1979; Helzel & Rice, 1985; Higgin, Frisch, & Smith, 1983; Kern, 1982; Kern & Macdonald, 1980; Williams, 1981), the evidence in general supports their use, especially when steps are taken to improve their validity (Kern, Miller, & Eggers, 1983; Merluzzi & Biever, 1987). Farrell, Curran, Zwick, and Monti (1984) provide good generalizability and validity data for the Simulated Social Interaction Test, a role-play measure of psychiatric patients' responses in situations which include an expression by another for desire for heterosexual contact, interpersonal warmth, interpersonal loss, positive feedback, and confrontation. This test might help to determine whether or not a treatment for socially withdrawn behavior was appropriate as well as help a clinician decide amongst various treatments.

The literature leaves little doubt that the treatment of choice for socially inadequate behavior among psychiatric patients is social skills training. Social skills training refers to a variety of techniques that have been employed to change a person's social behavior in particular social situations. The training always involves behavioral components (usually including modelling, role-playing, feedback, and coaching). Sometimes a game format has been employed in order to make the sessions more fun (Foxx, McMorrow, Bittle, & Fenton, 1985; Quinsey & Varney, 1977b). In addition, anxiety reduction components are sometimes included. Some argue that changing perceptions and cognitions should also be part of the training and thus include cognitive components, while others do not. Although social skills training approaches have been used for a wide variety of problems and a wide variety of populations, we will concern ourselves here with social skills training programs relevant to psychiatric patients in
secure facilities with deficits in general conversational skills, heterosocial skills, or assertive skills.

It should be noted that there is much overlap among these three areas of social skills training, and an individual patient may exhibit deficits in one or more areas. Nevertheless, we will try to examine the literature relevant to each area separately.

GENERAL CONVERSATIONAL SKILLS

In one of the earliest studies of the effects of social skills training on psychiatric inpatients (Gutride, Goldstein & Hunter, 1973), patients who exhibited minimal social behavior were shown appropriate videotaped models and then role played initiating or continuing conversations. Compared to control patients who received another treatment, social skills subjects increased social skill as rated on a post-course conversation with a coached confederate. There have been many further studies of the effects of conversational skills training with psychiatric inpatients, mostly chronic schizophrenics. Brady (1984) reviewed the literature on controlled outcome studies of social skills training for chronic schizophrenics, almost all of which reported positive results in role-play measures of social skills on immediate posttests, and mostly positive results on follow-ups done 6-10 months later. In one such study (Monti, Fink, Norman, Curran, Hayes, & Caldwell, 1979), 30 psychiatric hospital in- and outpatients participated in a social skills training program, a control treatment, or a no-treatment control condition. The social skills training consisted of 10 one-hour sessions on topics such as initiating conversations and giving and receiving compliments and criticism. The patients who had received the social skills training showed improvement on most of the self-report, observational, and in vivo measures both at the end of treatment and on a 10 month follow-up, while control group patients did not. The follow-up results also showed improvements in self-reported social relationships.

Bellack, Turner, Hersen, & Luber (1984) provided chronic schizophrenics in a day hospital program either with the regular program or with the same program supplemented by comprehensive social skills training. While both groups showed immediate post treatment improvement, the patients treated in the regular program maintained or lost their gains while patients who received social skills training maintained their gains or continued to improve on most measures. In a study with male inpatient schizophrenics, social skills training that included many cognitive components was compared to a control treatment (Liberman, Mueser, & Wallace, 1986). Two years after discharge, patients treated with social skills training had better social functioning, spent less time hospitalized, and had fewer symptomatic relapses. In one of the few controlled studies of the effects of social skills training in a maximum security hospital (Rice, 1983), the training increased patients’ social skills on role-play tests, but there was no evidence of transfer onto the ward, nor evidence that the effects persisted on a 1 month follow-up. It appeared that the contingencies in effect in the ward environment of the security hospital did not support the behaviors patients learned in the training sessions. Further research has suggested that maximum security psychiatric patients who are the most shy and withdrawn benefit most from social skills training, while overassertive patients benefit least (Rice & Quinsey, 1980).

Although social skills training has definitely been the most popular treatment for problems of social withdrawal in psychiatric patients, other treatments have also been tried. In a comparison of systematic desensitization and social skills training, social skills training was found to yield superior results (Marzillier, Lambert, & Kellett, 1976). Social withdrawal in psychiatric outpatients has also been treated with good results using cognitive techniques without behavioral components (Lucock & Salkovskis, 1988).

Most of the studies reported in this section have focussed on chronic schizophrenics. However, social skills training has also been found to decrease social anxiety and increase social interaction for other persons described as shy (Christoff, Scott, Kelley, Schudt, Baer, & Kelly, 1985; Haynes-Clements & Avery, 1984). It should be considered for all patients in secure institutions who are socially withdrawn.

HETERO SOCIAL SKILLS

In the studies mentioned above, the focus has been on the development of conversational skills in general. For some persons, interactional skills with persons of the opposite gender are a specific concern. For example, heterosexual male sex offenders need to know how to interact with women if they are to adopt acceptable sexual behavior patterns. The focus of heterosocial skills training has
been on learning to make appropriate conversation with women, determining whether the woman is interested in a dating relationship, developing dating relationships, and handling rejection. Sometimes, the programs have focused on heterosocial anxiety and have emphasized treatment of physiological components of anxiety by teaching muscle relaxation, diaphragmatic breathing, and so on. Other programs have emphasized cognitive treatments involving covert modeling and rehearsal, cognitive restructuring, and coping skills. Yet others have focused on building skills by using role-playing, performance feedback, coaching, self-observation, and modeling. In a review of all of the above approaches, Jaremko (1983) recommended that all three components be included. Few studies of heterosocial skills training have involved institutionalized or formerly institutionalized populations. In one study (Urey, Laughlin, & Kelly, 1979) two socially deficient male psychiatric ex-patients were taught how to make social conversation with females, and showed improved skills on a role-played conversation with a female confederate. Whitman and Quinsey (1981) taught sex offenders in a maximum security hospital more appropriate ways of interacting with females. Compared to control subjects who received sex education, patients who received heterosocial skills training showed increased skillfulness on heterosocial role-plays. Both of these studies employed primarily behavioral skills training components and cognitive or stress reduction components. Although many assessment techniques mentioned earlier in this section have been used in conjunction with heterosocial skills training, the Situation Questionnaire (Heimberg, Harrison, Montgomery, Madssen, & Sherfey, 1980) is one of the few psychometrically sound instruments that have been specifically designed for use in heterosocial skills training programs.

ASSERTION

In the general conversational skills and heterosocial skills sections, the emphasis has been on learning how to develop friendships and interact more frequently with others. In this section, we discuss studies that have emphasized the expression of negative feelings, standing up for one's rights, and making and refusing requests. There is considerable overlap between the studies in this section and those discussed above, inasmuch as many assessment instruments and treatment programs have included both conversational skills and the expression of negative feelings under the rubric of either social skills training or assertion training. Studies of instruments designed to measure assertiveness have shown assertiveness to be a multidimensional concept, and to have considerable situational specificity (Furnham & Henderson, 1984; Henderson & Furnham, 1983). In particular, these investigators found support for the notion that positive situations (giving and receiving compliments, etc.) were different from negative situations (making requests or refusals, giving negative feedback, etc.). Although they found that most self-report assertion questionnaires include some items reflecting both positive and negative situations, most concentrate on negative assertion. Of the various self-report assertion measures, we have found the Rathus Assertiveness Schedule (Rathus, 1973) or a simplified (requiring grade 6 level reading ability) version (McCormick, 1984) to be most useful in our maximum security setting (Harris & Rice, 1984). The scale has fared well in comparisons of self-report measures of assertion, and contains many more items pertaining to negative rather than positive situations (Furnham & Henderson, 1984; Henderson & Furnham, 1983). The items sample multiple dimensions such as complaining about poor service, saying no to salesmen, and asking for silence in a movie theatre. As in other scales, most items refer to rather mild provocations with nonintimate others. A factor analysis of the scale yielded factors that might be helpful in deciding upon specific treatment targets (Nevid & Rathus, 1979). Behavioral role-play tests of assertion include the Behavioral Assertiveness Test (Eisler, Hersen, & Miller, 1973; Eisler, Hersen, Miller, & Blanchard, 1975) which was designed for use with psychiatric patients and the Behavioral Social Skills Assessment (Castles & Glass, 1986) which was designed for mentally retarded adults. There are also measures of cognition that have been developed for assertion situations and that measure self-efficacy and problem-solving ability (Castles & Glass, 1986; Golden, 1981). Because the different types of measures (self-report, role-play, etc.) do not always agree, it is recommended that multiple assessment types be used.

There is some evidence that unassertive behavior is causally related to the offenses that bring some individuals into secure psychiatric hospitals. Murderers or attempted murderers who score high on the Overcontrolled Hostility (OH) subscale of the MMPI have been found to be less assertive than low OH murderers or attempted
murderers, non-person offenders, and community normals (Quinsey, Maguire, & Varney, 1983). It has been argued that high OH individuals are exploited by spouses, co-workers and peers, and that over time, these frustrations summate and lead to extremely violent acts (Megargee, Cook, & Mendelsohn, 1967). In a related vein, it has often been noted that mentally disordered firesetters seem to be passive and shy individuals who set fires as a nonverbal expression of anger and revenge (Harris & Rice, 1984). In support of this notion, arsonists in a maximum security hospital were found to be less assertive than other patients (Harris & Rice, 1984).

There have been several studies that have demonstrated positive effects of assertion training with psychiatric patients (Field & Test, 1975; Hersen & Bellack, 1976; Longin, 1975; Percell, Berwick, & Beigel, 1974). There have also been reports of successful assertion training programs with male arsonists in a maximum security setting (Rice & Chaplin, 1979) and with prison inmates (Marshall, Keltner, & Marshall, 1981). There have, however, also been negative results in a prison setting (Cyr & Borque, 1982) and suggestions that highly assertive behavior can lead to negative staff ratings and to unpopularity with peers in institutional settings (Longin, 1975; Rice & Josephowitz, 1983). The results suggest that careful attention must be paid to the on-ward environment to ensure that assertive behavior will be reinforced. There are no controlled outcome studies relating improved assertion skills in negative situations to improved post-release success.

**SUMMARY**

General conversational skills training has demonstrated positive effects on self-report measures, questionnaires completed by others who know the person well, and behavioral role-play measures. In addition, there are studies that have demonstrated that the training can improve post-release social functioning and that the effects can be long-lasting. With respect to heterosocial skills and assertion training, immediate post-training assessments have demonstrated improvements, but there have as yet been no convincing demonstrations of longterm efficacy. The best treatment strategy for problems of social withdrawal should include a careful assessment of the specific situations that are problematic and the specific treatment components that are indicated (anxiety reduction, building of behavioral skills, problem-solving skills, coping skills). Furthermore, in order to expect generalization of treatment effects onto the ward environment, and to expect treatment effects to last over the long term, the ward environment must not punish the behaviors that have been learned in the training sessions.

**PROBLEMS OF INSTITUTIONAL MANAGEMENT**

**ASSESSMENT**

The largest group of problems endorsed for maximum security patients in the Patient Problem Survey study described above were those that pertained to institutional management. The institutional management problem scale comprised assaultingiveness, threatening, insulting and teasing, lack of consideration for others, impulsivity, anger, noncompliance, insolence, manipulation, stealing, property destruction, dependency, and being easily led by others. Not surprisingly, this scale was the single most powerful contributor to the final cluster solution seeking different patient subtypes. Anyone familiar with institutions can immediately recall individuals who present such problems and can recognize the disruption and stress created when patients regularly exhibit even a few of these problem behaviors. In addition, the likelihood or possibility of these behaviors is a primary reason for the implementation of a wide variety of expensive and therapeutically unwieldy security precautions that must often be applied to all patients even though only a small minority are likely to require them. Finally, even the occasional exhibition of one or two of these problem behaviors within an institution is likely to mean that a patient will be considered neither for release nor for many treatment options including vocational training, education, and group therapy. Institutionalized individuals who exhibit such behaviors are difficult to treat and are frequently regarded as candidates for a transfer to some other institution instead (Toch, 1982). Thus, the successful reduction or elimination of institutional management problem behaviors will inevitably have very high priority in secure treatment facilities.

Unfortunately, there does not exist a coherent literature about these problem behaviors as a distinct class—especially in institutional settings. Some or all of these problem behaviors have been associated with a variety of psychiatric diagnoses including borderline (Akiskal, Chen, Davis, Pu-
disorder (Lewis, Lewis, Unger, & Goldman, 1984) and epilepsy (Leicester, 1982). Whatever their diagnostic significance, there is some independent evidence that these behaviors may largely be regarded as an identifiable class. For example, in work with intrafamilial aggression, Patterson (1982; Patterson & Cobb, 1973) showed that several of the behaviors listed above (dependency, destruction, teasing and insulting, noncompliance, aggressiveness, insolence, and threatening) can all be considered as a class of noxious or aversive behaviors characteristically emitted by members of problem families.

Of all of these behaviors however, the only one that has received systematic study within institutions is the most serious, physical assaultiveness. Rice, Harris, Varney, and Quinsey (1989) have summarized evidence that institutional violence is not simply a product of individual pathology but a result of a variety of variables including psychiatric disorder, staff behaviors, institutional routines, and other environmental factors.

At first glance, it might seem that issues of measurement are easily resolved with this class of behaviors. That is, one might be tempted to conclude that problems of institutional management are so obvious and disturbing that they would be easy to detect and record. However, in fact, it is likely that, although staff may generally agree as to who is a troublesome patient, there is no reason to assume any measurement reliability regarding the form, frequency or severity of the troublesome behaviors. For example, Lion, Snyder, and Merrill (1981) showed that institutional staff grossly underreport assaultive behavior. An accurate assessment of the form, frequency, and severity of problem behaviors is very likely to require careful behavioral description and a prospective system of recording (e.g., Harris & Varney, 1986; Quinsey & Varney, 1977a). In fact, if the class of problem behaviors is large, a time sampling observational system would undoubtedly be necessary (e.g., Paul & Lentz, 1977).

Some paper and pencil assessments could be useful in assessing these problem behaviors. For example, the Social Performance Survey Schedule (SPSS, Lowe & Cautela, 1978) has demonstrable reliability and validity in use with psychiatric patients (Monti, 1983), and yields a separate score for the degree to which a patient refrains from a wide variety of hostile and aggressive behaviors. In addition, the SPSS can be used as a staff rating scale, self report or structured interview (Monti, 1983). The Special Hospitals Assessment of Personality and Socialization (SHAPS; Blackburn, 1987) is another self report measure that may be useful in identification of belligerent individuals in a secure psychiatric setting. In addition, other simpler rating scales have been shown to possess acceptable psychometric properties with psychiatric patients. Thus, the Mood and Cooperation subscales of the MACC Behavior Adjustment Scale (Ellsworth, 1971), and the Paranoid Belligerence subscale of the Psychotic Reaction Profile (Lorr, O'Connor, & Stafford, 1960) may be useful in screening patients for more detailed behavioral assessments. Finally, a simple but specific system of recording verbal and physical aggression (Yudofsky et al., 1986) can improve the reliability of staff recording of patient behaviors.

Once individual patients who exhibit problems of institutional management are identified, a more detailed analysis of behavioral deficits can be attempted. As pointed out by Eisler and Fredriksen (1980), this assessment must focus on problematic behaviors and environments. Eisler and Fredriksen suggest a careful behavior analytic approach using a variety of information sources (self report, peers, staff, family, etc.) in order to pinpoint problematic situations, combined with role plays to identify particular behavioral deficits. The results of such an assessment can then be used to tailor a social skills training program aimed at teaching effective nonaggressive behavior.

Finally, some institutional management behaviors may be hypothetically related to such other personality deficits as impulsivity and the inability to delay gratification, defective moral reasoning, lack of empathy and faulty problem solving skills. Arbutnott, Gordon and Jurkovic (1987) provide a cogent discussion of each of these personality traits and their relation to delinquency. Carlson (1982) provides some evidence of a correlation between community delinquency or criminality and institutional maladjustment, but the relationship between these personality traits and institutional management problems is still largely speculative.

INTERVENTIONS

Several classes of interventions have been employed to reduce aggressiveness (see Rice et al., 1989 for a review). These interventions include drugs, seclusion and mechanical restraint, behavioral treatment, and staff training. Although there is limited evidence of the effectiveness of some
drugs in reducing assaultive behavior, the mechanism responsible for such effects is far from clear. There is little or no evidence supporting the use of drugs in the treatment of other institutional management problems. Moreover, due to a host of legal and ethical problems, clinicians must be very cautious in their use of drugs to treat problems of institutional management. With respect to seclusion and mechanical restraint, the available literature does not permit conclusions about their effectiveness in the reduction of disruptive or assaultive behavior (c.f. Harris, Rice, & Preston, 1989). Although the literature shows that restraint and seclusion are widely used for problems of institutional management, their use often depends as much upon factors such as staffing levels and the absence of structured activity as upon the nature of the problematic behavior itself. In addition, there is evidence that the use of behavioral treatments can drastically reduce the necessity for seclusion and restraint with no corresponding reductions in staff morale or safety (Davidson, Hemingway & Wysocki, 1984). There is also evidence that such strategies are probably a necessary part of the clinical armamentarium, at least for the most serious forms of institutional management problems (Paul & Lentz, 1977).

As noted by Rice et al. (1989), behavioral strategies for reducing aggressive and disruptive behavior involve the consequence of aggressive behaviors complemented by the teaching of prosocial skills for use at other times. Harris and Ermer-Hershfield (1978) reviewed a variety of behavioral techniques designed to suppress self injurious and assaultive behavior in institutions, including differential reinforcement of incompatible behaviors, extinction, time-out, overcorrection-restitution, and contingent electric shock. The reduction in aggressive behaviors is usually rapid with these techniques but generalization requires additional training in the new situation. There is also evidence that suppression of these problem behaviors can be achieved through the use of contingent required relaxation (Webster & Azrin, 1973) and time-out plus response cost (Liberman, Marshall, & Burke, 1981). Finally, Breuning, O'Nei1, and Ferguson (1980) have provided evidence that the use of psychotropic drugs in combination with a response cost strategy is less effective than response cost alone.

The teaching of prosocial skills has also been employed to reduce the frequency of institutional management problem behaviors. Although the basic techniques employed in such treatment have been discussed in the Social Withdrawal section and most applications are very similar to the Anger Control training discussed in that section, some discussion is warranted here because many of these disruptive problem behaviors need not or are unlikely to be due to inappropriately expressed anger. For example, Fredriksen and Rainwater (1981) showed positive results with social skill training, cognitive restructuring and relaxation training with psychiatric inpatients with histories of violent behavior. Social skills training has been shown to reduce misconducts, disruptive behavior and/or improve the institutional adjustment of adult prisoners (Daigle-Zinn & Andrews, 1980), adolescent offenders (Spence & Marzillier, 1981), and institutionalized emotionally disturbed children (Chandler, Greenspan, & Barenboim, 1974). Kaufman and Wagner (1972) used a temper control program embedded in a token reinforcement system. The technique required the identification and presentation of provocative stimuli combined with the role-play practice of appropriate responses. At first, provocations were preceded by a special cue which was later faded out. Similar on-ward use of unannounced test/training provocations combined with reinforcement for appropriate responses have been employed with positive results (Elder, Edelstein, Narick, 1979; Kolko, Dorset, & Milan, 1981). Use of a graded hierarchy of anger and aggression-provoking stimuli have also been used in a progressive muscle relaxation and systematic desensitization paradigm (Schloss, Smith, Santora, & Bryant, 1989). Finally, there is some evidence that an approach related to social skills training shows promise in reducing aggression, particularly in higher functioning individuals. The teaching of cognitive interpersonal problem-solving skills (Spivak, Platt & Shure, 1976), as long as extensive modelling and practice are included, has been shown to produce changes in high risk aggressive adolescents (c.f., Gendreau & Ross, 1987).

Other treatment approaches to aggressive and disruptive behavior have attempted to produce an institution or ward wide environment which supports prosocial behavior and discourages inappropriate, uncontrolled behavior. Behavioral approaches, especially token economies, have shown considerable success and have already been discussed in the section on ward programs. A non-behavioral approach has been the therapeutic community. Although there is some suggestion
that a therapeutic community can, by changing attitudes and values, improve institutional adjustment (Angliker, Cormier, Boulanger, & Malamud, 1973; McCord, 1982) such results are not always found (Agee, 1979) and it appears that program-related improvements in institutional adjustment are usually not investigated when therapeutic communities are evaluated (c.f., Woroth, 1987).

A final approach to the reduction of violent behavior in institutions is founded on a quite different understanding of the problem. Based on the assumption that institutional violence is not solely the product of individual pathology but stems primarily, instead, from problems in the way patients and staff typically interact. That is, while staff regard their own behavior as reasonable, expected and "part of the job," patients often regard the same staff behaviors as provocative, insensitive and arbitrary. Thus, Rice and her colleagues (Rice et al., 1989; Rice, Helzel, Varney, & Quinsey, 1985) evaluated a five day staff training course that emphasized early recognition of patients' disturbance, early verbal intervention to calm or defuse upset behavior and, as a last resort, safe and effective techniques for manual restraint and self defense. The course was positively received and reduced assaults, lowered workdays lost due to patient caused injuries, improved ward morale, and resulted in increased self ratings of staff effectiveness and patient self esteem.

OTHER CONSIDERATIONS

There are some additional considerations that should be addressed in any program that attempts to deal with individuals who present serious problems of institutional management. First, and most obvious, is that such individuals are often the cause of a great deal of friction both between staff and patients and within the ranks of institutional staff. Front line staff invariably seek to punish such behaviors but frequently fail to reinforce incompatible appropriate responses. Even in token economy programs, there appears to be a continual tendency for front line staff to lobby for more and larger fines for misbehaviors but to give fewer and fewer rewards for positive behaviors (Bassett & Blanchard, 1977). There is every reason to suppose that, in a general (non-token economy) ward environment, patients who exhibit management problems would live in a de facto program that was almost entirely aversive. That is, prosocial behaviors would largely be extinguished and there would be aversive consequences (in the form of restraint, seclusion, loss of privileges, scolding, etc.) for aggressive or disruptive behavior. Also, working with such patients can be stressful and frustrating for staff because the staff feel impotent to effect patient improvement and abused by the uncooperativeness and litigiousness of the patients. Staff who work on wards housing management problem patients are at high risk for both real and specious charges of misconduct. In work with intrafamilial aggression, Patterson (1982) described an analogous phenomenon called coercive family process in which all family members attempt to control each others' behavior through an implicit process of exclusively negative reinforcement and punishment. Those who have worked on wards for the management of problem patients can recognize a nearly identical process in operation (Quinsey, 1981; Rice, 1985). Indeed, Quinsey and Varney (1977a) noted that attempts to reduce aggression solely through the use of punishment are very likely to fail.

A related consideration pertains to the rules and regulations that exist within the institution. Some of the problems in the Institutional Management group are not those that pertain directly to interpersonal aggression but rather stem from conflicts between patients and existing rules (e.g., problems concerning manipulativeness, noncompliance and insolence). As has been mentioned elsewhere (e.g., Conn & Lion, 1984), prerequisites for reductions in institutional violence are institutional management policies that are regarded by patients and staff to be fair and reasonable. Some patients are unlikely to comply with rules whose main purpose seems to be the convenience and comfort of institutional staff or with regulations that are specified and applied only after the occurrence of some alleged misconduct. Indeed, institutional violence and disruption (along with attendant security crises) are likely to be least in an environment where patients have a stake in their own improvement.

Finally, it should be noted that it can sometimes be very difficult to create such an environment. For example, Ross and McKay (1979) showed that the provision of positive reinforcement for desirable behavior was ineffective as long as the institutional peer culture reinforced undesirable (in this instance, self injurious) behavior. It was only after the peer culture was "co-opted" through the use of prosocial models that program managers
were able to effect reductions in the problem behaviors.

CONCLUSIONS AND RECOMMENDATIONS

The available literature leads to several conclusions about the best ways to address the problems described at the beginning of this section. At the outset, it should be recognized that the treatment of such problems will be difficult, particularly because there will be several forces at work in any institution that will inadvertently operate to reduce treatment success. Careful assessment, probably including direct behavioral observation, is required due to the unreliability of routine staff reports of such behaviors. Drugs and restrictive or punitive management strategies alone are unlikely to be successful. Instead, careful behavioral consequence of problem behaviors and the training and on-ward reinforcement of incompatible prosocial behaviors will be required. Staff training in verbal calming and defusing skills combined with fair and reasonable management policies are probably essential. It is also necessary to ensure that there are effective prosocial models present in the institutional environment.

ANGER

ASSESSMENT

Anger was, overall, the most frequently noted community and institutional problem exhibited by patients in the Patient Problem Survey studies described above. Although it is possible that part of the high frequency of endorsement of anger problems was due to an inference (without independent evidence) by staff that patients' prior violent behavior must have been due to anger, problems of excessive and inappropriately expressed anger are very likely to be common among persons in any secure treatment institution. Excessive anger has been reported to contribute to physical and verbal aggression (Rule & Nesdale, 1976), ineffective personal relationships (Deffenbacher, Demm, & Brandon, 1986; Novaco, 1975; 1983), intrafamilial aggression (Patterson, 1985), hypertension and coronary heart disease (Chesney & Rosenman, 1985). The following discussion focuses on anger as a problem in itself. However, for many patients, anger is likely to be causally related to a variety of other problem behaviors (assaulting, threatening, insulting, destroying property, etc.). These problem behaviors have been discussed under the heading of Institutional Management Problems.

Theoretical views of anger vary and largely depend on general theories of emotion. For example, Patterson (1985) discusses a "bioinformational formulation" in which anger (as well as other emotions) is postulated to involve three interrelated (but somewhat independent) "action sets": verbal report, overt motor reactions, and physiological reactions. By such an account, excessive or inappropriate anger can be the result of a variety of causes: high irritability (i.e., tendency to be easily angered), frequent hostile behaviors (often the product of a reciprocal process of coercive conditioning based on negative reinforcement), and/or misattributions about the behavior of oneself and others. Such an understanding of anger has led to the development of a system for coding naturalistic observations of angry behavior (e.g., frowning, scolding, hitting) combined with diaries in which subjects report affect and attributions made about the behavior of others (Patterson, 1985, see also Biaggio, 1987).

By other accounts, anger is a normal human experience that has many adaptive properties in that it "energizes" behavior, facilitates the communication of negative affect to others, provides a defense against one's vulnerability to ego threat (which, in turn, prevents anxiety and externalizes conflict), and identifies events as provocations (thereby acting as a stress coping mechanism). However, anger can also interfere with ongoing behavior and instigate aggression from others (Novaco, 1975). Such an account leads to a slightly different approach to the assessment of anger that emphasizes self reports of strategies typically employed in provocative situations (e.g., verbal antagonism, physical antagonism, and constructive action). Others (e.g., Spielberger, Johnson, Russell, Crane, Jacobs, & Worden, 1985) have distinguished "between the intensity of the experience of anger as an emotional state and individual differences in anger proneness as a personality trait (p. 28)."

Other approaches to the assessment of anger problems have been multidimensional. For example, Buss and Durkee (1957) assumed a global concept of anger but defined several subclasses to the expression of hostility (assault, indirect hostility, irritability, negativity, resentment, suspicion, verbal hostility and guilt). However, factor analysis appeared to yield a simpler structure that corresponded to separate "emotional or attitudinal"
and "motor" components (Buss & Durkee, 1957). More recent attempts at the identification of components to problems in the expression of anger have yielded other structures. Spielberger et al. (1985) validated an anger expression scale in which there were two underlying dimensions. Anger-In (the tendency to suppress anger) and Anger-Out (the tendency to express anger). It was of interest that these two styles of reacting to provocation did not lie on a single bipolar continuum. Finally, Siegel (1985; 1986) has developed the Multidimensional Anger Inventory (MAI). This instrument was shown to yield factors that correspond to the degree or tendency to become angry, the range of situations that elicit anger, the degree of hostile outlook, anger expression (anger-out), and anger suppression (anger-in).

The available evidence supports a multifaceted approach to the assessment of anger problems. A self-report inventory (such as the MAI; Siegel, 1985) can provide useful information, especially about an individual's perception of his own irritability and the degree to which the actions of others are interpreted as hostile and aggressive. In an institution, reports by staff (e.g., the Social Performance Survey Schedule, Lowe & Cautela, 1978) and/or the use of an anger diary (e.g., Novaco, 1975) can provide some additional information about the frequency and severity of hostile, aggressive or belligerent behavior. Finally, there is evidence that the use of role-play measures can distinguish between underassertive, normal and overassertive or aggressive individuals (Quinsey, Maguire, & Varney, 1983; Stermac, 1986).

The study by Quinsey et al. (1983) also illustrates an important point about the role of anger in violent criminal behavior. That study showed that murderers who obtained high scores on the overcontrolled hostility (OH) subscale of the MMPI exhibited less anger (as measured by self report and role plays in provocative situations) than did murderers who obtained normal OH scores. Thus, not all violent offenders are persons who typically behave in an angry aggressive manner. Rather than exhibit anger problems, some violent offenders are likely to show problems of underassertion.

TREATMENT

It is interesting that, although conceptual formulations of the problem of anger vary widely and approaches to assessment differ somewhat, treatment approaches show considerable similarity. Most employ a component that uses techniques from social skills training (see the Social Withdrawal section) to teach effective, nonaggressive verbal strategies for dealing with provocative situations (Blaggio, 1987; Goldstein & Glick, 1987; Novaco, 1975; Benson, Rice, & Miranti, 1986). Such treatments could be thought to concentrate primarily on the effective expression of anger and providing patients with responses incompatible with inappropriate hostile or aggressive behaviors. Many approaches also, or instead, employ a more cognitive intervention aimed at altering patients' attributions or perceptions about the motives of others' evaluations of their own interpersonal effectiveness, and/or the range of strategies available to the patient (Benson et al., 1986; Blaggio, 1987; Hazaleus & Deffenbacher, 1986; Feindler, Ecton, Kingsley, & Dubey, 1986; Goldstein & Glick, 1987). Such treatments could be thought to be directed at patients' hostile outlook or emotional and attitudinal components to anger problems and to reduce the range of situations found to be provocative. Finally, many treatment interventions include a relaxation training component (Deffenbacher, Dunn, & Brandon, 1986; Blaggio, 1987; Benson et al., 1986; Hazaleus & Deffenbacher, 1986; Novaco, 1975) aimed at equipping patients with a strategy to employ when they determine that they are becoming unduly or inappropriately aroused.

It should be noted at this point that few, if any, of the therapeutic approaches described above have been evaluated in treatment applied to patients in secure facilities. Most anger control training has been provided to college students (e.g., Deffenbacher et al., 1986) but such training has also been provided for delinquent adolescents (e.g., Goldstein & Glick, 1987), adolescent psychiatric patients (e.g., Feindler et al., 1986), police officers (e.g., Novaco, 1983), and retardates (e.g., Benson et al., 1986). There are a few reports of anger control training applied to patients in secure facilities (Stermac, 1986) and, therefore, a reasonable treatment alternative would be a package comprising the three major components described above. There is, however, one controlled study that compared the relative effectiveness of these components (Moon & Eisler, 1983) and reported that cognitive problem solving and social skills training may be more potent components than relaxation training.

Finally, it is worth discussing catharsis as a completely different approach to the management
of anger. Institutional staff members often suggest that patients be taught to relieve anger by acting aggressively in socially acceptable ways (boxing, using a punching bag, etc.). There is evidence, however, that the mere expression or ventilation of anger leads to increases in hostility and aggression (Biaggio, 1987) and the perfection of skills that may be inappropriate.

LIFE SKILL DEFICITS

Life skills refer to adaptive behaviors required for daily living in the community. As shown in Table 1, these include deficits in reading, work skills, knowledge pertaining to general issues, sexuality and community resources, conversational skills, etiquette, room and self care, and activity level. Only a few of these problems will be dealt with in this section. Room and self care are covered in the token economy section; activity level is covered in the token economy section and conversational skills are covered in the section on social withdrawal. Sex education is dealt with in connection with the treatment of sex offenders; work is important enough to have its own section.

Life skills issues are a particularly important and pervasive problem for developmentally handicapped patients. There is a very large and sophisticated literature on educational and behavioral programs directed toward the normalization of this type of patient. This literature can and should serve as a model for the effective rehabilitation of nonhandicapped patients with life skills deficits. The emphasis on objective measurement, quantification and demonstration of change within individual subjects together with the concern for generalization and ecological validity that is found in this literature could be emulated with profit by other areas of rehabilitation technology. Introduction to this large, practically-oriented literature can be found in several recent volumes: concise descriptions of behavioral programs have been provided by Whitman, Scibak, and Reid (1983) and Thompson and Grabowski (1977); a comprehensive introduction to assessment can be found in Matson and Bruening (1983).

Wallace (1986) has reviewed the instruments available for assessing the functional living skills of the chronically mentally ill. A number of scales have been developed, such as the Independent Living Skills Survey, that sample relevant domains of behavior (eating, grooming, domestic activities, health, money management, transportation, leisure, and job related skills) and have good psychometric properties. There is a consensus in the literature that deficits in life skills play a major causal role in creating stress among chronic schizophrenics and are involved in causing relapse and rehospitalization (Brown & Munford, 1977). It has been found using the Adaptive Behavior Scale (Nihira et al., 1968) that institutionalized chronic psychiatric patients have more widespread and severe social deficits than the institutionalized developmentally handicapped (Sylph, Ross, & Kedward, 1977). It has been shown that some of these skills can be taught: Brown and Munford (1983), for example, provided chronic schizophrenics with a seven week training program in interpersonal and instrumental skills considered important for community living (e.g., telephone skills, nutrition, and health skills such as dealing with medication issues). After treatment, trained subjects scored significantly higher than controls on the health, finance, interpersonal, and community network subscales of the Life Skills Inventory. A comprehensive description of a life skills program for the chronically mentally disabled has been presented by Wallace, Boone, Donahue, & Foy (1985).

In an important and carefully conducted investigation, Harding et al. (1987a,b) reported on a 20-25 year follow-up of 82 patients who met both DSMI and DSMIII criteria for schizophrenia. At entry into the study, these patients were housed on back wards, unable to perform ordinarily expected tasks of daily life and had failed to improve after a trial on chlorpromazine; on average they had been continuously hospitalized for 6 years. In the 1950's, they were provided with a comprehensive rehabilitation program which included drug treatment, graded privileges, homelike care, activity and industrial therapy, self help groups, vocational counselling and help finding work, half-way houses, outpatient clinics, and the enlistment of natural community support networks. Given the chronicity of this sample and the rigorous diagnosis of core schizophrenia, the longterm follow-up data were surprisingly positive. Although 50% of these subjects were not taking phenothiazines at followup, data from the Strauss-Carpenter Levels of Function Scale revealed that 82% had not been hospitalized in the past year, 61% met with friends every week or two, 68% had at least one moderately good friend, 68% displayed slight or no symptoms, 81% were able to meet their basic needs, and, most happily, 73% led moderate to very full lives. Although no inferences can be drawn about the ef-
ficiency of the rehabilitation program, these results leave no doubt that rehabilitative efforts are not doomed by an inexorable schizophrenic deterioration in life functioning.

Although poor use of leisure time and boredom are common problems of community adjustment in correctional, psychiatric, and drug abusing populations (this chapter, Zamble & Porporino, 1988; DiLorenzo, Prue, & Scott, 1987) there is little in the way of evaluative intervention research in this area. DiLorenzo, Prue, and Scott (1987) argue that this dearth of evaluative research results from a lack of conceptual clarity that a behavioral reformulation can remedy.

In the area of corrections, life skills deficits have also been identified as an important problem of many inmates. Zamble and Porporino (1988), in a study of inmate coping skills, report that they were most struck by the way in which inmates living in the community frittered away their time without planning for even the immediate future or taking steps to effectively deal with their problems of daily life. These investigators found that inmates did not acquire better coping skills in prison and continued the same nonplanful approach to adjustment that they had exhibited in the community. A detailed life skills curriculum has been designed for correctional inmates (Conger 1973a, 1973b; Williams & Wardell, 1973). In a pilot evaluation of this approach, Reker and Meissner (1977) randomly assigned inmates to a Life Skills group (N = 24), a creative development group (N = 12) and a regular prison program (N = 12). The Life Skills program consisted of 60 3-hour daily lessons over 12 weeks. Inmates were very satisfied with the program and exhibited positive shifts in a number of attitudinal measures relative to controls; unfortunately, no follow-up data were presented. A behavioral approach to remedial education has been described by Aylon and Milan (1979). These investigators were able to motivate inmates to greatly increase their academic proficiency as measured by standardized English and mathematics tests through contingency management. Institutional studies of motivating inmates to participate in a variety of life skills activities through token economies have been reviewed by Milan (1987); such efforts have been largely successful and well received by inmates.

Although there is clear evidence that life skills deficits characterize both correctional and mental health populations and that many of these skills can be taught relatively easily, there has been surprisingly little evaluative research done in this area. In particular, we could find no controlled followup studies of the effectiveness of life skills training per se in either the correctional or psychiatric literatures, although there is suggestive evidence that token economy programs emphasizing vocational and educational training in prison settings reduce post-release recidivism (Milan, 1987).

**WORK PROBLEMS**

Difficulties in the area of work and employment were indicated on the Problem Checklist by the items unemployment, poor work skills, and difficulties at work. Successful vocational adjustment has been found to be extremely important in predicting post-release success of institutional populations (Sylph et al., 1977; Willer & Biggin, 1976), and studies with correctional populations show that inmates themselves report a great need for job training while incarcerated and for employment upon release (Vito, 1985).

Programs in which correctional populations have had the opportunity to work in outside employment settings either while incarcerated or as an alternative to incarceration have shown that work participation can reduce recidivism substantially (Jeffrey & Woolpert, 1974; Jenkins, Barton, deValera, DeVine, Witherspoon, Muller, & McKee, 1973; Smith, 1980). Another interesting approach to the problem of providing realistic job settings for institutional populations has been to have private industry set up a factory on the grounds of the institution (Lightman, 1982). Lightman reported that there was a suggestion that giving inmates the opportunity to work while in prison led to better work adjustment after release, but did not affect recidivism.

Work problems may be due to lack of job-seeking or job-interview skills, poor work habits, (e.g., lateness, absenteeism), lack of technical work skills, lack of appropriate vocational goals, or interpersonal difficulties in a work situation.

**ASSESSMENT MEASURES**

As is the case with treatment in other areas, it is important to select only those individuals who have work related problems for work-related interventions. Too often, work programs are directed towards persons who have adequate employment histories (Gendreau & Ross, 1987). Of course, there may be some value in providing work opportunities for persons who have good emplo-
ment histories if only to prevent the deterioration of good work habits. However, these work experiences might more appropriately be seen as maintenance or diversionary programs rather than treatment programs.

A number of work assessment devices have been developed for correctional, psychiatric, or mentally retarded populations. There are, of course, a whole range of vocational assessment devices that have been designed for normal populations and that may be helpful as well for institutional populations; these, however, will not be discussed in this section except where they have been shown to be useful for institutional populations.

A review of assessment scales for measuring the work-relevant behaviors of psychiatric patients found all to be deficient on a number of grounds (VanAllen & Loebel, 1972). In spite of the deficiencies, however, some of the scales might still be of some use in determining which patients are most deficient in work-related behaviors, and for determining treatment targets for patients who do have work-related difficulties. One scale (Ethridge, 1968) consists of 20 items, 7 of which have to do with work skills and work habits and 13 others having to do with personality characteristics and more general attitudes towards others. Staff members (who knew the patients well in an occupational or work therapy setting) completed the scale for 421 patients. High scores on the scale were correlated with satisfactory post-release employment. It is possible that low scores on this scale after a short trial period in a work situation in the institution could alert treatment staff to patients who have special treatment needs in the area of work-related behaviors. Another of the scales (Cheadle, Cushing, Drew, & Morgan, 1967; Cheadle & Morgan, 1972) was similarly successful in predicting whether or not a patient would start a job within a month of discharge and still be at work 6 months after discharge. Almost all of the 16 items on the 1972 revision of the scale were directly related to quantity and quality of work behaviors. A third scale (Distefano & Pryer, 1970) was also successful in predicting post-release work adjustment of hospitalized psychiatric patients. The scale included 24 items, half of which pertained directly to work habits and skills, and the remainder of which pertained to interpersonal relations, reading and math comprehension, and other characteristics. A scale developed for mentally retarded workers (Malgady, Barcher, Davis, & Towner, 1980) was found to predict concurrent work placement as well as placement one year later. The scale measures maladaptive behaviors likely to jeopardize the employment status of mentally retarded persons; few of the items measure job performance, per se. The AAMD Adaptive Behavior Scale (Nihira et al., 1975) has a section measuring job performance and has shown potential for predicting job output of retarded workers in sheltered settings (Cunningham & Presnell, 1978).

A measure of vocational maturity for educationally and economically disadvantaged adults (Manuele, 1983) contains items pertaining to attitudinal, cognitive, and behavioral aspects of vocational selection. The measure has more adequate psychometric properties than the scales developed for psychiatric patients, and has the advantage that it has been shown to be treatment sensitive. The scale requires a one hour structured interview with the client, and requires considerable training on the part of the interviewer.

Finally, in recognition of the fact that not all patients with deficiencies in the area of work are suitable candidates for vocational training, a scale has been developed to help to identify unemployable psychiatric patients who might better benefit from other treatment programs (Sears, Wilson, & Miskimins, 1971).

Combined with a detailed work history, information gained from one or more of the above scales might be useful in selecting patients and in selecting specific problems to target for each patient. In other cases, the assessments might suggest areas where more in-depth behavioral assessments involving observation of the individual in a work setting might be useful.

TREATMENT

Some of the most successful programs in the area of work difficulties have been programs designed to teach job-seeking or job-interviewing skills. Many of these programs have followed a skills training model that has involved modeling, role-playing, coaching, and feedback. In one study (Furman, Geller, Simon, & Kelly, 1979), formerly hospitalized psychiatric patients were individually taught job-interview skill components such as providing positive information about their backgrounds and asking the interviewer questions about the job. Pre- and post-training interviews with actual personnel managers revealed improvement in two out of three cases. In another study (Kelly, Laughlin, Chirborne, & Patterson, 1979), the training was similar but was done in a
group situation. Again, an actual personnel manager, blind to whether the interview was pre- or post-training, rated the interviews. Not only did patients (all of whom had been trying unsuccessfully to obtain employment for at least one year) show improvement on the interview, but five of the six former patients actually obtained paid jobs at the conclusion of the training. Similar training programs with correctional populations (Shady & Kuc, 1977; Twentyman, Jensen & Kloss, 1978) have also been successful. One of these studies (Shady & Kuc, 1977) involved, in addition to traditional social skills training, other components such as having the former inmates work without pay for a week. Although there was no appropriate control group, those who completed the course were very successful in being employed at the time of a 15-month follow-up. It should be noted that none of the above studies used currently institutionalized clients.

There have been some studies in which the focus of treatment has been the teaching of good work habits and positive attitudes towards work. In one study, (Ayllon & Milan, 1979) contingency management procedures were used with adult inmates to teach employability skills such as punctuality, asking for permission before leaving the job, working with minimal supervision, accepting and acting upon negative feedback from work supervisors, and adhering to rules and regulations in a working setting. The training was done within the prison setting. In one project, 40 correctional officers were given 50 hours of specialized training in behavior modification principles and techniques such as identifying, defining, observing and recording behavior, positive reinforcement and punishment. There was also a praelictum phase in which the officer trainees, under supervision from course trainers, taught inmates specific employability skills. Despite skepticism on the part of the correctional officers involved, the contingencies (e.g., time off work, making up extra time for time absent) were found to result in improved work habits according a pre- and post-baseline design. In another study (Anderson, 1985) a program in which probationers were encouraged to learn the value of work and to develop responsible work habits was found to have no effect in reducing recidivism on a one year follow-up. However, Gendreau and Ross (1987) suggested that there were severe problems of program integrity in this study inasmuch as the employment rate of individuals in the program decreased from 84% to 26% while they were in it. Ayllon and Azrin (1968) have shown that it is possible to teach vocational skills using a contingency management approach. Trainees were given points in a token economy program for mastering the theory and skills of auto mechanics. During the time reinforcement contingencies were in effect, trainees passed more tests in a 12 month journeyman automobile mechanics course than when contingencies were not in effect. In another study, trainees in a barbering curriculum made fewer errors in a program in which they earned points for error-free behavior and for passing written tests of barbering skills than they did when no contingencies were in effect. Building maintenance, drafting, masonry, small engine repairs, and welding were other trades in which contingency management techniques were tried, but without similar success rates. Because of the large number of possible vocations that could be selected for training, any one institution can select at most only a few if they are going to have on staff persons who are highly skilled in those vocations. Vito (1985) suggests that skilled and semi-skilled trades should be emphasized, and that there should be educational prerequisites for work training programs. The education required to meet these prerequisites should also be available within the institution. Vito also argues that there should be other incentives besides pay (such as the chance for promotions and higher status jobs with more authority and responsibility) for good work performance.

Some studies have evaluated the effects of vocational counseling in solving work-related problems. In one study (Massimo & Shore, 1963; Shore & Massimo, 1979) delinquent boys were assigned a counselor who encouraged and helped the youth find and keep a job. Counseling was very intensive with each full-time counsellor having only ten clients at a time. Significant post-treatment differences were found between experimental and control subjects, and the program led to improved employability and decreased criminality fifteen years later. Johnson and Goldberg (1983) attempted to replicate the results of the Massimo and Shore study with a less intensive counseling schedule. Their study was extremely rigorous methodologically, featuring random assignment and extensive assessment. No program effects were found after a three-year followup in youths' employment, school success or reincarceration rate.

Finally, a comprehensive behaviorally based employment intervention package for noninstitu-
tionalized delinquent boys (Mills & Walter, 1979; Walter & Mills, 1980) was found to have positive effects in increasing youths’ attendance in jobs and in school, as well as decreasing subsequent arrests and institutionalizations. The program involved training local employers in behavioral techniques, prevocational training for the boys, and placing the boys in jobs.

In summary, there have been several studies showing positive results of interventions designed to alleviate work-related problems. Few have been with institutionalized adults, however, and few of those have evaluated the long-term effects of the treatment on either employment in the community or on recidivism.

**POSITIVE SCHIZOPHRENIC SYMPTOMS**

**ASSESSMENT**

At the outset, it must be noted that the concept of schizophrenia is both controversial and complex. A thorough discussion of the evolution and current status of varying theories about the schizophrenic disorder is beyond the scope of this chapter. There is no doubt, however, that many patients in secure psychiatric institutions are diagnosed as schizophrenic, exhibit many problem behaviors characteristic of schizophrenia and would, therefore, benefit from successful treatment of such problem behaviors.

Although the empirical work using problem surveys discussed above concentrated on bizarre speech, bizarre behaviors, confusion and inappropriate suspicion, a discussion of assessment issues in schizophrenia must consider a broader range of symptoms. First it is important to note a distinction between the components of a diagnosis of schizophrenia and those problem behaviors likely to be treatment targets in a secure psychiatric facility. Thus, the most precise instruments base a diagnosis of schizophrenia on such things as the duration of past episodes of severely disturbed behavior and the failure of the subject to meet the criteria for affective disorders (American Psychiatric Association, 1987; Spitzer, Endicott, & Robins, 1978). Other diagnostic criteria are specific problems, but require fine distinctions and considerable inference on the part of the clinician and, therefore, probably do not represent good treatment targets. Thus, the issue of whether hallucinations are a running vocal commentary is likely irrelevant to real life treatment decisions (Neale & Oltmanns, 1980; 1981).

A final important consideration concerns a distinction between behavioral deficits and behavioral excesses. That is, several characteristics of schizophrenic patients (though not necessarily diagnostic criteria) are the marked lack of normal functioning (e.g., lack of insight, withdrawal, retarded movement, retarded speech, unkempt appearance, noncompliance, indifference, paucity of thought, lack of spontaneity, and poor interpersonal rapport). As noted above, these so-called negative symptoms of schizophrenia (Andreasen, 1982; Andreasen & Olsen, 1982) are not necessarily diagnostic because they are also exhibited by many psychiatric patients not diagnosed as schizophrenic and because many schizophrenics do not show these characteristics. It has been persuasively argued that the negative symptoms of schizophrenia are due to a completely different physiological cause (McKenna, 1987) or are even the iatrogenic product of typical custodial institutionalization and the long term use of neuroleptic drugs to control the positive symptoms of schizophrenia (MacKay, 1980). Consequently, the assessment and treatment of most of the behavioral deficits above have been addressed under such other problem areas as life skills, social withdrawal and institutional management problems. This section will concentrate on the assessment and treatment of the positive schizophrenic symptoms: bizarre speech (expressions of delusions and hallucinations, formal thought disorder), bizarre behaviors (agitation, silly, overly elated behavior, and stereotypies), suspicion, and confusion.

With respect to bizarre speech, there have been some concerted attempts at the detailed behavioral description and assessment of formal thought disorder (e.g., Johnston & Holzman, 1979; Haimo & Holzman, 1979; Andreasen, 1979). In general, these approaches have concentrated on the identification of a variety of subcomponents of the more general disturbance of schizophrenic thought. Similarly, investigators have attempted to develop instruments that provide quantification of the wide variety of delusional and hallucinatory experiences characteristic of the content of schizophrenic thought (e.g., Chapman & Chapman, 1980; Spitzer, Endicott, & Robins, 1978; Strauss, 1969; Wing, Cooper, & Sartorius, 1974; see also Winters & Neale, 1983).

Similarly, there has been considerable interest in the varieties and qualities of paranoid (suspicious) speech and thought (e.g., Colby, 1981; Oxman, Rosenberg, & Tucker, 1982) and some investigators have attempted to develop instru-
ments to quantify the experience of paranoia (e.g., Gordon & Gregson, 1970). It may be of considerable importance to assess paranoid delusions especially in cases where the subject of a patient’s paranoid delusion is a past or anticipated victim of aggression. Interestingly, it has been observed that formal thought disorder and paranoid symptoms may be the most treatment resistant of all schizophrenic characteristics (Chapman & Knowles, 1964; Goldberg, Scholer, & Mattson, 1967; Shimkunas, Gynther & Smith, 1966). However, a general characteristic of most aspects of bizarre speech is that the degree of severity is related to the extent to which the patient is willing to consider the possibility that the subjective experience is indeed “crazy” (Alford, 1986).

Generally, however, there have not been similar efforts aimed at the understanding, classification, detailed description, and quantification of the nonverbal characteristics of schizophrenic behavior. Thus, other than noting the possibility of, and providing definitions for, agitation, stereotypy, silly behavior, and confusion, little effort has gone into the behavioral assessment of such problem behaviors.

As a general comment, it is remarkable that, given all the work by psychologists on diagnostic issues, and on the identification of a vast array of perceptual, cognitive, memory, and social deficits correlated with a diagnosis of schizophrenia, there has been very little effort aimed at the behavioral assessment of specific treatment-relevant schizophrenic problem behaviors. Indeed, as suggested by Bellack (1986), it seems that behaviorists have decided that, because schizophrenia is such a serious biological disorder, its treatment and assessment should be the exclusive province of medicine. Of course, even in the unlikely event that the treatments of choice for schizophrenia become exclusively drug therapies, behaviorists could provide a great service by developing treatment-sensitive measures of schizophrenic problem behaviors.

**DRUG TREATMENTS**

There is little doubt that the most revolutionary change in the history of the treatment of the mentally ill has been the advent of phenothiazine drugs. The striking efficacy of these drugs in the treatment of schizophrenia has been established beyond scientific doubt (e.g., Davis, Janicak, Linden, Moloney, & Pavkovic, 1983). The use of these drugs has drastically altered the nature and duration of psychiatric hospitalization, and has revolutionized the quality of life for persons diagnosed as schizophrenic.

Despite their powerful ameliorative effects, these drugs do not represent a cure for schizophrenia or other psychotic disorders. Although these drugs have been demonstrated to have specific effects on many psychotic symptoms (Enna & Coyle, 1983), many cognitive and affective components appear to be unaltered by neuroleptics (Chapman & Knowles, 1964; Enna & Coyle, 1983; Mackay, 1980; Shimkunas, Gynther, & Smith, 1966; Zarifian, Scattone, Blanchiatti, Cuche, Loo, & Morelli, 1982). In addition, some schizophrenics do not show improvement in symptoms commonly improved by neuroleptic drugs (e.g., Hollister & Kim, 1982; Itil, Shapiro, Schneider & Francis, 1981; Sakurai, Takahashi, Nakahara & Ikenaga, 1980). Indeed, efforts to determine whether specific schizophrenic symptoms respond to specific neuroleptic drugs have proved fruitless (Csernansky, Kaplan, & Hollister, 1985).

In addition, treatment with neuroleptics presents other difficulties. It appears that there is no clear and simple relationship between plasma levels of the drug(s) and clinical improvement (May, Van Putten, Jenden, Yale, & Dixon, 1981; Reifler, Ward, Davis, & Freidal, 1981). Of course, this lack of relationship means that those prescribing such drugs have difficulty knowing whether the nonresponding patient will show improvement with an even higher dose. This has led to suggestions that extremely high doses of neuroleptics are indicated in cases where psychotic patients have not (yet) responded to drug therapy (e.g., Aubree & Lader, 1980; Nerbowsky, Janowsky, Munson, & Depry, 1980).

Problems in determining the appropriate dose for neuroleptic therapy are exacerbated by the fact that these drugs often produce unpleasant side effects (e.g., Manos, Gkouzepas, & Logothetis, 1981; Van Putten, May, & Wildins, 1980) such as increased aggression and agitation (Liberman, Marshall & Burke, 1981) that can be mistaken for schizophrenic symptoms. More rarely, neuroleptics have been associated with permanently disabling side effects (e.g., Gardos & Cole, 1983; Richardson & Craig, 1982) and even sudden death (e.g., Brown & Kocis, 1984; Oliver, Luchins, & Wyatt, 1982). Some of the more common side effects can be reduced by the use of anti-Parkinsonian drugs (e.g., Manos et al., 1981). However, some authors argue that anti-Parkinsonian drugs merely block the therapeutic action of neuroleptics and recommend against their long-term use.
(e.g., Hollister, 1982; Johnston, Coleman, Callaway, May, & Druff, 1980). Thus, for some symptoms, at least, it is difficult to know whether the neuroleptic drug should be increased or decreased or whether the anti-Parkinsonian drug should be increased or decreased. Similarly, it is often difficult to determine when (if ever) neuroleptic drug treatment should cease (e.g., Cheung, 1981).

A final set of difficulties encountered in neuroleptic therapy concerns the fact that, despite its demonstrably positive effects, some patients resist taking these drugs (e.g., Frances & Carpenter, 1983; Marder, Mebane, Chien, Winslade, Swann, & Van Putten, 1983). In fact, there is evidence that the best predictor of future drug refusal is the severity of some side effects (dysphoria and akathisia) upon initial drug administration (Van Putten, May, & Marder, 1984). Therefore, many relapses and rehospitalizations of psychotic patients are due to the patients’ failure to comply with the prescribed medication regimen. A skill-training approach to teaching about medication and medication-taking skills has recently been shown to hold promise for increasing medication compliance among mentally disordered offenders (MacKain & Streveler, 1990).

In spite of their revolutionizing effects on the treatment of psychosis and upon the operation of institutions for the mentally ill, neuroleptic drugs present many difficulties for physicians and other staff who are charged with the treatment of mental patients, as well as for the patients themselves. These difficulties may explain the low levels of agreement among clinicians about the type and dose of drug most appropriate in individual cases (Gillis & Moran, 1981; see also Huessy & Ruoff, 1984). Finally, there is evidence that the problems associated with the use of neuroleptic drugs can result in a destructive phenomenon in secure psychiatric facilities.

A detailed correlational study (Harris, 1989) established several things in this regard. First, response to hospital treatment is not equal for all patients. A large number respond early in their hospitalization and show quick and dramatic improvement with an average delay of approximately two weeks between drug administration and subsequent clinical improvement. Such patients are usually quickly transferred or discharged. The patients who remain show a very different pattern of response to drug treatment. These patients show no evidence that increases in neuroleptic dose or, in fact, that any change in medication will result in an improvement in program performance. The data presented by Harris (1989) indicated that continued adjustments in drug prescription did not bring about hoped-for improvements. That is, repeated “fine tuning” of the medication regimen in a doomed search for the effective drug and dose may occupy the attention of treatment staff who could more profitably consider other non-drug treatments.

Mental health professionals frequently witness this problem first hand. A chronic patient will exhibit some form of aberrant or symptomatic behavior. Ward staff will decide that this may represent a real exacerbation of the patient’s psychiatric condition and approach the attending physician with a request that the patient’s medication be reviewed. If a medication change is followed by more deterioration, another medication change quickly follows. If a medication change is followed by any change for the better, it is assumed that the medication change produced the desired result and things return to normal. This process occurs almost weekly on many psychiatric wards.

The on-going repetition of this process has a number of deleterious results. First random (or unexplained) fluctuations in patient behavior result in unnecessary changes in medication prescription. The pairing of such fluctuations with frequent changes in medication create the false impression for treatment staff that the answer to problems presented by patients’ symptoms will be in the administration of drugs. Such a false belief prevents ward staff and physicians from seriously considering other forms of treatment. Other mental health professionals, who seek to provide alternate forms of treatment, discover that although such treatment is usually tolerated, it is frequently regarded as a luxury, as baby-sitting, or as a distraction itself. The fruitless search for a simple medical intervention seems to result in a “revolving door” phenomenon (e.g., Toch, 1982) in which patients who fail to respond to treatment cycle through a variety of psychiatric and correctional institutions.

NONDRAUGHTREATMENTS

As discussed in the previous section, neuroleptic drugs do not produce remission of all schizophrenic symptoms in all patients. Although much less established, there are two behavioral treatment approaches that have shown considerable promise in producing clinically significant improvements in positive schizophrenic symptoms especially when employed with patients who are
also receiving at least partially effective doses of neuroleptic drugs.

First, because schizophrenic patients exhibit such obvious and gross deficits in interpersonal behavior, considerable effort has gone into teaching social skills to schizophrenic patients. As discussed earlier, there is substantial evidence that social skill training produces lasting treatment effects with schizophrenic patients. Although high levels of generalization to community settings are not always reported, there is some evidence that social skills training can increase community adjustment and reduce rehospitalization (e.g., Bellack, Turner, Hersen, & Luber, 1984; Hersen, Turner, Edelstein, & Pinkston, 1975; Liberman, Mueser, & Wallace, 1986; Spencer, Gillespie, & Ekisa, 1983). An important feature of social skills training for schizophrenic patients is that although not specifically directed towards remediation of positive psychotic symptomatology (bizarre talk and actions, etc.), a very common result of standard social skills training is that patients are reported to have (and report themselves) significant reductions in such psychotic symptoms (Hersen, 1979). The reason for this apparently fortuitous side effect is not clear. However, in a careful review of the use of social skills training, Liberman, Nuechterlein and Wallace (1982) attempted to extend a theoretical account of the cognitive deficits associated with schizophrenia to an understanding of the social deficits exhibited by many schizophrenics. By their account, there are predictable relationships between fundamental cognitive and attentional deficits, symptomatology, social stimulation, and social deficits. Liberman and others (1982) make a cogent argument for a concerted treatment effort aimed at teaching a combination of skills: (a) basic cognitive/conversational skills such as staying on topic, focussing attention, ignoring distractions, handling stimulus overload, delaying responses, employing appropriate voice volume, and developing greater fluency; (b) basic interpersonal social identification skills such as the accurate identification of others’ emotions, predicting the impact of social behaviors, and the identification of others’ social status; and (c) coping strategies such as compromise, repeating requests, refusing to comply and escaping (see also Wallace, 1982). Liberman and others (1982) also identify adjunct interventions aimed at addressing motivational deficits characteristic of schizophrenia. In addition, they offer advice about the timing, intensity, and generalization of social skill training for schizophrenic patients.

A second class of behavioral interventions demonstrated to be effective in producing lasting improvements in such positive schizophrenic symptoms as delusions and hallucinations are specific operant conditioning techniques targeted directly at the problem behaviors. Thus, such aversive procedures as thought stopping (Lamontagne, Aude, & Elie, 1983; Samaan, 1975), isolation (Davis, Wallace, Liberman, & Finch, 1976), and faradic conditioning (Alford & Turner, 1976) as well as positive reinforcement for incompatible nonsymptomatic thoughts and verbalizations (Alford, 1986; Ayllon & Houghton, 1962; James, 1983; Ratner & Bugle, 1969; Meichenbaum, 1969; Wincze, Leitnberg, & Agras, 1972) have all been shown to produce improvements (and in some cases, long lasting improvements) in delusions and hallucinations. Finally, although they are notoriously resistant to treatment, paranoid delusions can be understood in behavioral terms and may be amenable to concerted behavioral interventions (Haynes, 1986).

There is, therefore, substantial evidence that nondrug treatments can (in combination with drugs) help ameliorate positive schizophrenic symptoms. Clearly, however, the effective delivery of psychological treatments requires institutional administration to engage in extensive planning and to exercise considerable control over the behavior of staff at all levels, while the delivery of drugs alone rarely requires such a high degree of effective administrative control. A comprehensive treatment program for chronic psychiatric patients that includes both drug and nondrug components is described by Liberman (1988). For the most part, however, optimal treatment of the chronically mentally ill, especially those in secure treatment settings, probably awaits the implementation of advances in administrative technology (see the end of this chapter).

ANXIETY

Anxiety is a broad and sometimes nebulous concept which varies on a continuum from normal to pathological and from mild to severe. Accordingly, in DSM-III-R, anxiety disorders include agoraphobia, simple phobia, social phobia, panic disorder with or without agoraphobia, obsessive-compulsive disorder, post-traumatic stress disorder and generalized anxiety disorder. Anxiety can also emerge as an important problem following a recent stressful event; in that case a diagnosis of adjustment disorder with anxious mood is made.

Anxiety, as measured in our problem check-
list, referred to generalized or situational anxiety. For this reason, we will restrict our discussion to these two types of problems. Anxiety related to social interaction has been discussed under the heading of social withdrawal. Assessment and treatment procedures for phobic, agoraphobic, obsessive-compulsive, and panic disorders are well documented in the literature and the efficacy of behavioral techniques is well known (Barlow, 1988; Chambless & Goldstein, 1980; Fyer, Mannuzza, & Endicott, 1987; Foa & Tilmanns, 1980; Nietzel & Bernstein, 1981; Schuckit, 1981; Turner, 1984).

Generalized anxiety disorder and anxiety provoked by a stressful recent situation have received less attention from researchers than the other categories of anxiety disorders. Consequently, these concepts are not well defined and few assessment or treatment methods have been identified as efficacious and reliable although behaviorally oriented techniques have shown promise (Suinn, 1984). There has been extremely little research on the assessment or treatment of anxiety in secure psychiatric or correctional institutions, and thus the discussion here pertains to studies done with more diverse patient populations.

Physiological reactions, overt motor behaviors, cognitions and affect are frequently used to evaluate types and degrees of anxiety. These first two domains are more relevant for phobic, panic or obsessive-compulsive anxiety disorders than for general anxiety (Nietzel & Bernstein, 1981). For example, the use of electromyography, cardiovascular or electrodermal measures, the observation of avoidant behavior, speech disturbances, and so on require that specific stimuli provoking anxiety are known and manipulable. Currently, the most appropriate instruments for the assessment of general or situational anxiety are clinician ratings and patient self-report. Such instruments focus on cognitive, affective, and somatic symptoms. With any of the instruments, a review of the response patterns can indicate whether the patient's symptoms are primarily cognitive, affective, or somatic. Such a determination may be useful in deciding amongst treatment alternatives.

Structured and semi-structured interviews designed for clinicians include the Anxiety Disorders Interview Schedule-Revised or ADIS-R (DiNardo et al., 1985), the Structured Clinical Interview for DSM-III (SCID, Spitzer. & Williams, 1985; see Fyer et al., 1987), and the Schedule for Affective Disorders and Schizophrenia-Lifetime Anxiety Version (SADS-LA, see Fyer et al., 1987). DSM-III or DSM-III-R diagnoses can be made with information provided by these interviews. Description of anxiety symptoms for the current episode as well as clinical history are obtained from these instruments. Good reliability and validity data currently exist for the ADIS and SADS-LA, and data are being gathered for the SCID. In addition, clinicians can use a variety of symptom checklists to evaluate anxiety. The Hamilton Anxiety Scale (Hamilton, 1959), and the Brief Psychiatric Rating Scale (Overall & Gorham, 1962), have both been widely used. The Hamilton scale has most frequently been used in outcome studies (Barlow, 1988).

Several self-rating questionnaires are also available for patient evaluations. Of the available measures, one of the most popular is the Spielberger (1983) State-Trait Anxiety Inventory (STAI). An advantage of this measure is that it provides sub-scores for both cognitive and somatic anxiety. The Taylor Manifest Anxiety Scale (Taylor, 1953) also provides a general measure of anxiety with a particular focus on interpersonal or ego-threatening (personal adequacy) situations (see Endler & Okada, 1975). The Anxiety Differential developed by Husek and Alexander (1963) and Zuckerman's Affect Adjective Check List (1960) are designed to measure general anxiety by asking patients to rate their current state on a list of adjectives. Finally, the anxiety scale of the Symptom Checklist (SCL-90-R) can also be used (Derogatis, 1977).

There is evidence of the efficacy of both pharmacological and cognitive-behavioral treatments for generalized and situational anxiety. The evidence suggests that the anxiolytic drugs (benzodiazepines) and, more recently, the beta blocker drugs (propranolol) or imipramine are the preferred pharmacological treatments. Many studies (Barlow, 1988; Rickels & Schweizer, 1987) have observed that the benzodiazepines produce significant, if small, improvements on somatic and affective symptoms of anxiety compared to a placebo. These drugs are effective short-term, temporary treatments for non-psychotic anxious patients, especially if they suffer from high levels of depression and interpersonal problems (Rickels & Schweizer, 1987). The maximum improvement with anxiolytic drugs is obtained within the first 6 weeks of treatment, and continuous uninterrupted therapy for several months is inappropriate.

Cognitive and behavioral treatments for generalized or situational anxiety, include relaxation training, anxiety induction, anxiety-management training, thought-stopping, cognitive restructuring, and stress inoculation. The first two are most
suitable for persons whose symptoms are primarily in the somatic or affective area, while the latter are more suitable for persons whose symptoms are in the cognitive or cognitive and affective areas.

There is some support for the efficacy of various forms of relaxation training (Schuitt, 1981), and the most popular of these is progressive relaxation training (Bernstein & Borkovic, 1973). Anxiety arousal behavioral methods are those which emphasize inducing the client to experience high levels of anxiety as a major part of the treatment. Flooding and implosion are the most common methods. In both cases, the client is prevented from avoiding the feared stimuli. Although these procedures have most commonly been used for specific fears or phobias, they have also been used for cases in which the cue conditions are diffuse, or involve a large number of diverse stimuli as in generalized anxiety. However, based on a review of available evidence, Barlow (1988) concluded that relaxation-based treatments, like anxiolytic drugs, are not sufficient treatments for chronic or generalized anxiety.

Among the treatments for persons whose anxiety symptoms are primarily cognitive, stress inoculation and anxiety management training have received the most empirical support. Developed by Meichenbaum (1977), stress inoculation incorporates cognitive restructuring techniques of identifying and challenging the rationality of undesirable thoughts, as well as in-vivo rehearsal training and relaxation. Meichenbaum and Cameron (1983) describe three training phases. The first is an educational process designed to clarify the cognitive, affective and physiological concomitants of stress. The second is a skills training phase in which specific coping self-statements and relaxation skills are learned and rehearsed. Finally, the application phase is designed to allow the patient to test out these new skills in a laboratory situation. While most of the research on the efficacy of stress inoculation training comes from situation-specific anxieties instead of diffuse anxieties, there is some evidence that it can lead to lower scores on generalized anxiety measures (Suinn, 1984).

Anxiety management training combines elements of both relaxation and anxiety induction techniques, plus self-control training. Anxiety management training theory is based on the premise that clients are aware of their anxiety responses, and that they can be made to acquire cue or drive properties, which can in turn, with training, become associated with coping behaviors.

The steps in therapy include relaxation training, guided rehearsal for anxiety arousal and control, cue-discrimination training, graduated self-control training, and transfer to real-life situations. Research has shown anxiety management training to be superior to a placebo condition in improving scores on self-report measures of anxiety, and in improving performance during stress. Anxiety management training was also found to be superior to relaxation training and placebo treatments in reducing disturbing cognitive preoccupations (Hutchings, Denney, Bagall, & Houston, 1980). A number of studies have shown that anxiety management training does teach self-coping skills, and that results are retained over 12 to 15 month follow-ups (Suinn, 1984). Recent studies have shown it to be effective for persons with persistent generalized anxiety (Barlow, 1988; Butler, Cullington, Hibbert, Klimes, & Gelder, 1987).

Little is known about the problem of generalized anxiety among psychiatric patients for whom a specific diagnosis other than an anxiety disorder has been given. Yet this question is surely pertinent to maximum security psychiatric hospital patients, most of whom are diagnosed as psychotic or personality disordered. Strahl (1980) reported that the manifestation of anxiety in schizophrenics is the same as in nonschizophrenic patients but the way it is handled by schizophrenics is different. Serban (1975), in a comparison of normals and schizophrenics, has observed that schizophrenics experience significantly more stress in dealing with life events (see the section on life skills). The community adjustment of schizophrenic patients is known to be associated with anxiety (Serban, 1979). Van Hassel, Bloom, and Gonzalez (1982) showed the effectiveness of short-term anxiety management interventions in helping schizophrenic outpatients to manage anxiety more appropriately and to cope with life stresses.

For psychiatric patients in a secure setting, anxiety can be provoked by many different events such as social interactions with staff and patients, uncertainty about such things as trials or upcoming decisions of various review boards, as well as treatment procedures that involve confrontation and learning of new behaviors and skills. Assessment of general anxiety among patients in secure hospitals would thus involve assessment of a variety of potential deficits (affective, cognitive, behavioral, and physiological) in a variety of potentially stressful situations.

In one of the few studies in a secure institution, it was found that newly admitted inmates in a penitentiary had very high anxiety scores. Within
14 to 16 weeks these scores fell significantly, reflecting an adjustment to prison conditions (Zamble & Porporino, 1988).

CONCLUSIONS AND RECOMMENDATIONS

Although generalized or situational anxiety are the least well-defined and explored of the anxiety disorders, some assessment and treatment procedures can be recommended. Structured interview schedules such as the SADS-LA or the ADIS provide a good evaluation of anxiety problems. Patient self-report scales such as the Taylor Manifest Anxiety Scale are also useful. A study of the patient's responses can reveal whether the patient's symptoms are primarily affective, somatic, or cognitive, and how long the symptoms have been evident. Treatment with anxiolytic drugs has proven to be efficient for treatment of severe anxiety involving somatic symptoms over a short period. but such drugs are not useful for psychotic patients suffering from general anxiety, or for the treatment over a long term. Anxiety management training, which combines induced anxiety, and relaxation, is recommended as the treatment of choice for persons whose generalized anxiety is manifested primarily by affective symptoms. Stress inoculation should be considered for persons whose symptoms are primarily in the cognitive domain. The evaluation and treatment of general anxiety among psychotic patients, and among patients in secure facilities, remain virtually unexplored domains, and more research is needed.

DEPRESSION

Affective disorders were common among Pinel and Oak Ridge patients. Depression is a broad and heterogeneous concept, and more precise assessment of depressive symptoms and features reveals different types of depression. Two classes of affective disorders are identified in DSM-III-R: (a) Bipolar disorders, subdivided into bipolar disorder and cyclothymia; and (b) depressive disorders, subdivided into major depression, dysthymia; and other depressive disorders. Major depression and bipolar disorder are the more frequent in the psychiatric clientele of maximum security hospitals. Of course, patients with any diagnosis can become depressed because of their life circumstances. For example, Zamble, and Porporino (1988) observed that of newly admitted inmates of a Canadian federal penitentiary, nearly half reported sleeping problems and 37% scored in the moderate to severe range of the Beck Depression inventory. As was the case with anxiety, these depression scores dropped significantly 14–16 weeks later, presumably reflecting adjustment to prison life.

It should be emphasized here that psychiatric patients in secure settings often have very good reasons to feel depressed. The indeterminate nature of their confinement, repeated refusals by review boards to release them, guilt over serious crimes, intractable legal problems arising out of findings of unfitness, and so on can produce serious and chronic depressive phenomena. In secure settings, such problems are frequently ignored or even exacerbated (patients are encouraged to experience and show remorse, for example).

Hirschfeld and Cross (1987) reported that 79% of patients with major depression achieved a full or partial recovery within two years of onset, implying a chronicity rate of one in five. Among recovered patients, approximately 35% relapsed within 1 year. On the other hand, bipolar depressives typically have an earlier age of onset and are first hospitalized at a younger age than unipolar depressives. Some 60 to 80% of these bipolar cases begin with a manic episode. The clinical course of bipolar disorders is similar to that of unipolar depression but bipolar depression is more likely to involve multiple subsequent episodes.

There is a general agreement (Kovacs, 1979; Rehm, 1981) that the depressive syndrome includes the following features: (a) a dysphoric mood expressed verbally and nonverbally; (b) anhedonia and loss of interest in previous enjoyable activities; (c) an exaggerated negative self-concept or low self-esteem; (d) disturbance in general cognitive and evaluative processes; (e) disturbance in social and interpersonal functioning; (f) psychomotor agitation or retardation; (g) altered vegetative function; and (h) physical or somatic complaints. Nevertheless, this general agreement is not reflected in the various specific symptom lists designed to assess depression. Some of these emphasize vegetative signs, while others emphasize cognitive deficits, and so on. For Rehm (1981), a complete assessment of depression should include in addition to depressive symptoms (e.g., neurovegetative signs), dimensions related to verbal-cognitive, behavioral, somatic, and interpersonal symptomatology.

Different techniques are available for the as-
essment of depression. Patient self-report and clinicians' judgments are the most common. In addition, significant others have been sometimes used to evaluate patients' depression and a few direct observational methods have also been developed. We will briefly review the most important.

In 1975, Levitt and Lubin reviewed a list of 23 self-report scales but many of these were not well developed psychometrically and have been used in few studies. Among the most popular and widely used scales (Rehm, 1981) are the Beck Depression Inventory (Beck, Ward, Mendelsohn, Mock, & Erbaugh, 1961; Beck & Beck, 1972), the CES-D developed by the Center for Epidemiological Studies (Radloff, 1977), the Depression Adjective Check Lists (Lubin, 1965, 1966), the MMPI-D Scale (Hathaway & McKinley, 1942), and the Self-rating Depression Scale (Zung, 1965; 1967; 1969). All of these self-report scales have good psychometric properties but they differ in the type and amount of data collected. For example, the Beck Depression Inventory tends to emphasize cognitive content, the CES-D and Lubin Adjective Check List focus more on affective content, and the MMPI-D mostly comprises somatic and cognitive items. The Zung Scale is the only one which covers all five major dimensions of depression (affective, cognitive, motor-behavioral, somatic, and social-interpersonal) recommended by Rehm (1981).

Consequently, the choice of a self-report scale for depression should depend on the purpose of the assessment (e.g., outcome research, clinical monitoring, etc.). It is appropriate to use more than one instrument to have a complete evaluation of the patient's depression. With respect to this issue, other types of measure can be used to cover specific dimensions. For example, the Social Adjustment Scale (Weissman & Bothwell, 1976) can be considered as a measure of the social-interpersonal aspects of depression and, in addition to the self-rating form, a form is available for clinician ratings. In addition, cognitions have been the focus of attention for several years (Kendall & Hollon, 1981) and various scales are available to measure irrational beliefs (Nelson, 1977), depressive attributional style (Seligman, Abramson, Semmel, & Von Bayer, 1979), depressive thoughts (Cognitive Responses Test, Watkins, & Rush, 1983) and depressive self-statements (Automatic Thoughts Questionnaire, Hollon & Kendall, 1980). Many of these scales also cover negative self-concept and low self-esteem. Self-monitoring procedures to record dysfunctional thoughts have also been developed (Beck, Rush, Shaw, & Emery, 1979).

Fewer instruments are available for clinician's ratings of depression, although clinicians are frequently requested to evaluate the severity, extent and type of depressive disorders. The Hamilton Rating Scale (Hamilton, 1960; 1967) involves rating 17 depressive symptoms on a 3 or 5 point scale. Items concern somatic, behavioral, cognitive, and affective complaints.

The Schedule for Affective Disorders and Schizophrenia (SADS; Endicott & Spitzer, 1978), was developed as a structured interview for collecting standardized information for diagnostic purposes (Spitzer, Endicott, & Robins, 1978). Regular, lifetime, and change forms are available. Among the scales derived from the SADS are four subscales assessing depressive features: depressive mood and ideation, endogenous features, depressives-associated features, and suicidal ideation and behavior.

The Brief Psychiatric Rating Scale (Overall & Gorham, 1962) can also be used to assess depression. This scale consists of 16 dimensions, each rated on seven point scales: A number of these scales are relevant to depression, such as somatic concern, anxiety, emotional withdrawal, guilt feelings, depressed mood, motor retardation, and blunted affect. Diagnostic categories can be extracted from the scales; this instrument can also be used to evaluate clinical changes.

Other types of measures can also be used to assess depression. The information provided by a significant other who knows the patient well is sometimes utilized to check the adequacy of patient self-report. In addition, significant others are often the most suitable for providing a direct evaluation of the interpersonal problems associated with depression. For this purpose, the Katz Adjustment Scale (Katz & Lylerly, 1963) can be used.

In addition, the assessment of overt behavior can be very useful in planning treatment for depressed patients. To date, very few methods of behavioral assessment exist and most of the coding systems already available need further replication, psychometric refinement, and standardization (Rehm, 1981). These instruments code cognitive verbal behavior, overt motor behavior and activity schedules. In this last category, the Pleasant Events Schedule (PES; MacPhillamy & Lewinsohn, 1976; see Rehm, 1981) is a good example of a well developed and validated measure. The instrument consists of 320 positive events scored for
frequency of occurrence. The PES has been used in case studies for individualized treatment planning (Lewinsohn, 1976; Fuchs & Rehm, 1977) and positive treatment outcomes have been reported.

TREATMENT

Numerous treatments have been developed for depression. There is virtually no literature on the treatment of depression within secure psychiatric or correctional institutions. Thus, most of the following discussion pertains to the treatment of psychiatric patients in general.

There are two broad classes of treatment: pharmacological and psychotherapeutic. Pharmacological treatment usually involves the administration of monoamine oxidase inhibitors (MAOI) or tricyclic antidepressants (TCA). These two kinds of antidepressants have been found to be efficacious for both major and unipolar depression in numerous studies (Hirschfeld & Cross, 1987). The best treatment for bipolar depression is without doubt lithium carbonate. The overall response rate to lithium in bipolar disorder is approximately 80% (Hirschfeld & Cross, 1987). Despite the availability of other drugs for the treatment of acute mania, such as carbamazepine, clonidine, and lorazepam, lithium is usually recommended as an initial treatment (Dunner & Clayton, 1987); benzodiazepines or neuroleptic treatment can be added to lithium for acutely manic patients.

Because of the high relapse rate following initial major depression (around 50%) or manic episodes (over 80%), the longterm treatment of affective disorders is a crucial issue. Prien (1987) reviewed evidence indicating that antidepressant drugs have a prophylactic action against relapse. Because Angst & Grof (1976; see Prien, 1987) have demonstrated that the duration of episodes tends to remain constant or lengthen slightly with each relapse, the length of the preceding episode may serve as the lower estimate for the longterm treatment. Electroconvulsive therapy (ECT) is often recommended for patients who do not respond adequately to drug treatment (Bolwig, 1981). Fink (1987) reported that in such cases, the efficacy of ECT is quite high.

Psychodynamic or humanistic interpersonal psychotherapies and behavioral or cognitive behavioral therapies are the other major class of treatments recommended for affective disorders. From a psychodynamic or humanistic point of view, depression represents the introjection of hostility resulting from the loss of an ambivalent loved object, loss of self-esteem resulting from not attaining an ego-ideal, loss of the meaning of existence, a reaction to separation from a significant object of attachment, or a negative self-concept (Akiskal & McKinney, 1975). According to a behavioral perspective, depression may be seen as maladaptive behavior provoked by aversive stimuli or decreased positive reinforcement (Akiskal & McKinney, 1975; Kovacs, 1979). Behavioral treatment consists of an analysis of maladaptive behaviors and the application of techniques to increase the frequency of adaptive behaviors and to decrease the rate of maladaptive behaviors. Kovacs (1979) cited the work of Lewinsohn as a good example of this type of approach in which the Pleasant Events Schedule (discussed above) is used to help patients to monitor their own behaviors. The cognitive-behavioral and cognitive therapies regard cognitions as a behavioral class which can be brought under patient self-control. Beck (1967, 1976; Beck et al., 1979) explains depressive symptoms as being caused by negative self-references and systematic errors in thinking and evaluation. Treatment focuses on the acquisition of self-control and problem solving skills and on the correction of distorted negative beliefs and self-schemas.

What do we know about the efficacy of these drug and psychotherapeutic treatments? Reviews of numerous studies done on treatments for depression (Conte, Plutchik, Wild, & Karasu, 1986; Steinbrueck, Maxwell, & Howard, 1983; Weissman, Jarrett, & Rush, 1987; Whitehead, 1979) conclude that both pharmacotherapy and psychotherapy are more efficacious than placebo or control conditions. However, the question of the superiority of one approach over the others has received less consistent answers. In one study (Whitehead, 1979) it was found that cognitive-behavioral therapy was superior to drug, cognitive, behavioral, or nondirective therapy. In another study (Bellack, Hersen, & Himmelhoch, 1983) it was found that social skills training was superior to pharmacological or psychodynamic treatments. Steinbrueck et al. (1983) conducted a meta-analysis of 56 outcome studies in the treatment of unipolar depression in adults and concluded that psychotherapy was superior to drug therapy. Weissman and others (1987) have concluded that while psychotherapy and pharmacotherapy are approximately equivalent for milder depression over the short term, psychotherapy may be superior in the long run. The inconsistency of results over various studies can be attributed to the differences in patient characteristics.
(e.g., degree and type of depression, inpatients vs outpatients, etc.), as well as differences in the types of psychotherapy and pharmacotherapy.

A number of studies have also examined the effectiveness of the combination of drug and psychotherapy over the efficacy of each alone. In all cases, no evidence of a negative effect of combined treatment was observed (Weissman et al., 1987). Conte and associates (1986) and Weissman and associates (1987) concluded that the combination appears somewhat superior to drug or psychotherapy alone but the findings are not strong or consistent. In a recent study of depressed inpatients, it was found that cognitive therapy or social skills training added significantly to the effectiveness of pharmacotherapy, but that the effects were not noticeable until after discharge (Miller, Norman, Keitner, Bishop, & Dow, 1989).

While future research is needed to elucidate these questions, two findings appear especially relevant for the treatment of depressed psychiatric patients. Blackburn, Bishop, Glen, Whalley, and Christie (1981) have found that cognitive therapy either alone or in combination with pharmacotherapy was more effective for psychiatric clinic patients than for patients treated by a general practitioner. In addition, cognitive-behavioral treatment appears to have larger effects on patient self-concept and produces greater reductions in hopelessness than drug treatment (Rush, Beck, Kovacs, Weissengruber, & Hollon, 1982). Furthermore, Weissman and associates (1987) have reported evidence from 1 and 2 year follow-up studies that psychotherapy (interpersonal therapy or cognitive therapy) showed greater longer-term effects than pharmacotherapy. They noted that the effects of psychotherapy take longer to achieve but seem to last longer as well.

So, evidence of the efficacy of both pharmacological treatment and psychotherapeutic approaches for the treatment of depression is well established. Among the psychotherapeutic approaches, cognitive-behavioral approaches seem to be most efficacious. It would seem that the most ethically and clinically sound approach would be to offer cognitive-behavioral therapy first and then drug treatments for acute cases who decline or do not respond to psychotherapy.

CRIMINAL LIFESTYLE

The criminal lifestyle problem scale included items pertaining to patients having committed acts of theft and property destruction in the community, having had criminal associates in the community, and making procriminal statements in the institution. All of these problems were relatively common in both Oak Ridge and Pinal, but they were generally much more common among the Pinal patients.

The literature relevant to these problems includes most of the literature on criminal behavior in general, as few authors have targeted the types of problems listed above for special treatment. Of course, the problems of those who exhibit criminal behavior may include problems discussed in all of the other sections of this chapter; the discussion here pertains specifically to those assessments and treatments that are relevant to the problems in the criminal lifestyle cluster.

Although many psychometrically adequate assessment scales or subscales have been developed specifically to measure criminal personality characteristics, (e.g., the Psychopathic Deviate scale of the Minnesota Multiphasic Personality Inventory, the Socialization subscale of the California Psychological Inventory, and the Jesness Inventory), the combined results of research over several decades has failed to demonstrate that the use of these scales add much to our knowledge of criminal behavior, either theoretically or practically (Arbuthnot & Gordon, 1987). The scales do not suggest targets for prevention or treatment programs, nor do they contribute to an understanding of the causes of criminality. The Hare Psychopathy Checklist (Hare, 1980; 1986) has proven to be very useful for diagnosing psychopaths, a group who commonly have very severe criminal lifestyle problems, and are very resistant to treatment (Cleckley, 1976; Wong, 1984), but the checklist also is not useful in selecting treatment targets. By contrast, the Carlson Psychological Survey (Carlson, 1982) was developed primarily for incarcerated adult offenders and was designed with treatment considerations in mind. The survey has scales labelled Chemical Abuse, Thought Disturbance, Antisocial Tendencies, and Self-Depreciation. The Antisocial Tendencies scale includes many items that pertain to problems of criminal lifestyle. A further advantage of the scale is that it has been shown to be sensitive to treatment effects (Carlson, 1982). The Jesness Inventory, originally developed for delinquents, is another instrument that shows promise of having treatment utility (Jesness, 1988). The Inventory can be used to classify offenders into maturity level categories that are, in theory at least, relevant to matching offenders and treat-
ment strategies (Harris, 1988). There has been some demonstration of reduced recidivism among juvenile offenders when they are assigned to the treatment that matches their maturity level rather than assigning them at random to the different treatment methods (Palmer, 1974). The utility of classifying adult offenders, however, remains to be seen.

In addition to the multivariate scales mentioned above, a number of other univariate assessment measures have been evaluated for delinquent populations. Most of the constructs measured (e.g., time orientation, sensation-seeking, loss of control, and impulsivity) have been found not to yield consistent differences between delinquent and nondelinquent samples (Arbuthnot & Gordon, 1987). Measures of self-concept have fared slightly better. Consistent and meaningful differences have been found, however, for those dimensions with a strong sociocognitive component: sociomoral reasoning, interpersonal problem-solving, role-taking, and empathy (Arbuthnot & Gordon, 1987). Perhaps not surprisingly, treatments designed to improve skills in these areas have been among the most successful in altering criminal lifestyle. We will turn to these treatments now, and the specific measures used to evaluate each form of treatment will be discussed at the same time.

PROBLEM-SOLVING AND SOCIAL SKILLS TRAINING

There is some evidence that offenders are characterized by lower stages of cognitive development and problem-solving ability than nonoffenders (Arbuthnot & Gordon, 1987; Platt, Scura, & Hannon, 1973). Zamble and Porporino (1988) found that offenders generally tend to deal with problems in unplanned, scattered and impulsive ways, even though the problems may be long-term and complex. Problem-solving includes the abilities to: (a) recognize potential problems when people interact, (b) generate alternative solutions to such problems, (c) consider the consequences of such solutions, (d) formulate a step-by-step plan to reach one's goal, and (e) see the cause-and-effect relation between one's actions and another's behavior (Spivack, Platt, & Shure, 1976). Problem-solving therapy typically combines cognitive and behavioral techniques to teach problem-solving skills. In one study, (Kazdin, Esvelt-Dawson, French, & Unis, 1987), delinquents in a psychiatric institution were taught problem-solving skills through the use of practice, modeling, role-playing, and corrective feedback. Compared to children who received nondirective relationship therapy or a control treatment, children who received the problem-solving therapy demonstrated more prosocial behavior immediately after treatment and on a 1 year follow-up.

Ross and Fabiano (1985) reviewed assessment measures and treatments for criminal populations and recommended a number of measures of problem-solving and thinking ability. Although adequate psychometric properties have been shown for only one of the scales (the Means-End Problem-Solving Test developed by Spivack et al., 1976), Ross and Fabiano recommend the use of such tests because they appear to measure key aspects of the cognitive inadequacies that have been found in offenders.

Social skills training techniques have been used in a number of studies to alter precriminal speech and promote prosocial conversation (Maloney, Harper, Braukmann, Fixsen, Phillips, & Wolf, 1976; Sanson-Fisher, Seymour, & Baer, 1976; Spence & Marzilleri, 1981). Although positive effects were noted in altering speech in role-play assessments or sample conversations immediately after training, follow-up results in the two studies that examined long-term effects were not impressive. Changes in one of the studies were not maintained after training and did not generalize to periods when staff were usually absent (Sanson-Fisher, Seymour, & Baer, 1976). In the other study (Spence & Marzilleri, 1981), changes were maintained at follow-up relative to an attention-placebo and no-treatment control condition, but the experimental group showed no differences from the other groups on staff ratings, self-reported convictions, or police records of convictions.

Problem-solving and social skills training together were the major components of an 80 hour intensive cognitive training program for high risk probationers (Ross, Fabiano, & Ewles, 1988). Compared to offenders who received regular probation or life skills training, cognitive training led to reduced recidivism rates.

MORAL REASONING AND EMPATHY TRAINING

According to a cognitive development view, delinquency is related to lack of age-appropriate development of understanding of how transgressions result in harm or hurt for others. It is perhaps not surprising that criminal offenses (especially non-
violent offenses such as theft and property destruction) are committed if an individual cannot take the perspective of others and empathize with others' circumstances. If he or she cannot see the value of conforming to rules designed to ensure order, if property has no meaning beyond possession, and if friendship has no value beyond utility. Such are the sociomoral views of persons at what Kohlberg has called the preconventional stages of sociomoral development (Arbuthnot & Gordon, 1983). Moral reasoning development training is designed to help an offender move up to a conventional stage of moral development, in which standards or rules of a prosocial nature provide guides for desirable and approved behavior. It is assumed, according to this view, that criminal lifestyle patterns will abate when a higher sociomoral stage is achieved.

In one study, predelinquent, behavior-disordered adolescents participated in a cognitively-based moral reasoning development program (Arbuthnot & Gordon, 1986). Compared with matched and randomly assigned nonparticipating controls, adolescents who had received the training demonstrated an advance in moral reasoning stage as measured by the Kohlberg Moral Judgment Interview (Colby et al., 1987; Colby & Kohlberg, 1987). In addition, improvements were shown on several behavioral indices, including behavior referrals, tardiness, academic performance, and police or court contacts. For a subgroup, 1-year follow-up data showed maintenance of improvement for moral reasoning stage, behavior referrals, and other measures, but not police or court contacts. Furthermore, moral reasoning and all outcome pre- to posttest change scores were positively associated.

Goldstein and Glick (1987) developed a comprehensive treatment package for delinquents. Their program included both social skills training (they called their version structured learning therapy) and moral reasoning development components. Compared to other institutionalized delinquents in control conditions, youths who received the training showed improved scores on a measure of sociomoral development (Gibbs, Widaman, & Colby, 1982) as well as on behavioral and self-report measures. They mention unpublished data which show that their training enhances prosocial skill, decreases impulsiveness and leads to improvements in community functioning.

Although no studies have yet evaluated the combined effects of problem-solving and moral reasoning development programs, it has been suggested that training in problem-solving might be a necessary precursor to a successful moral reasoning development program for offenders at lower Piagetian reasoning stages (Arbuthnot & Gordon, 1986).

Finally, there has been some effort (Lomis & Baker, 1985) to modify offender's empathic skills directly through the use of microtraining (similar in many ways to a social skills training approach). In their studies, a group of forensic psychiatric patients was given 7-1/2 hours of training in the use of empathy as well as other counseling skills, while another randomly selected group was exposed to an attention placebo condition. Empathy was measured on Hogan's (1969) self-report scale, which has been shown to have adequate psychometric qualities, and has been the most commonly used empathy measure in offender research (e.g., Arbuthnot & Gordon, 1986; Kessling & Andrews, 1980; Wormith, 1984). However, despite obtaining changes as a result of empathy training on measures of other counseling skills, Lomis and Baker found no effects of training on increasing scores on the Hogan scale, nor did the effects of training generalize to ward behavior.

**EDUCATIONAL PROGRAMS**

Although many criminologists had high expectations that educational programs would alter criminal lifestyle and reform inmates, the evidence in general has been disappointing (Linden & Perry, 1982). There is at least some indication that basic education designed to provide high school diplomacy equivalents to offenders can affect rearrest rates (Linden & Perry, 1982; Walsh, 1985). However, most studies have shown only that offenders benefit academically, and have not shown that education affects post-prison behavior (Gendreau & Ross, 1987). Linden & Perry noted that in the one program they reviewed that did affect recidivism rates, the important factor seemed to be ensuring a smooth transition for offenders to the community in order that they could continue their studies in regular academic programs upon release.

Another major effort to provide education to offenders has been the University of Victoria (UVIC) program conducted within the penitentiaries of British Columbia, Canada (Duguid, 1981a; 1981b; 1983; 1985). The UVIC program focuses on reasoning, problem-solving, and decision-making skills, and attempts to change crimi-
nal attitudes, values, thinking, and behavior. A liberal arts curriculum is provided within the prison itself. While not all courses are at the university level, the program emphasizes university undergraduate courses in the humanities and social sciences. The emphasis is on democratic rather than authoritarian teaching methods, and inmates have a great deal of exposure to, and interaction with, the course instructor who is an employee of the university rather than the penitentiary. In an evaluation of the UVIC program (Ayers, Duguid, Montague, & Wolowidnyk, 1980), inmates in the UVIC program were compared to matched inmates who participated only in the normal prison routine. After an average follow-up period of 20 months, the recidivism rate for experimental subjects was found to be significantly lower than for a matched control group. There was also evidence that the program had a positive effect on both inmates and staff within the institution, and on inmates' employment rates within the community. The authors emphasized that in order to be successful, there must be peer support for educational activities, and that there must be support services upon release to enable inmates to continue their education and to assist them in finding jobs.

TREATMENT THROUGH DIFFERENTIAL ASSOCIATION

According to differential association theory (Sutherland & Cressey, 1970), criminal behavior and its component attitudes, motives, and techniques are learned in the process of communicating with others. A behavioral reformulation of differential association theory (Andrews, 1980) asserts that criminals behave as they do because they associate with other criminals and are thus exposed to criminal rather than anticriminal models. Secondly, learning occurs best in interpersonal situations characterized by mutual liking and respect, and by open and honest communication. Modeling effects would be expected to be very strong in such situations because the model is also a source of powerful rewards and punishments. Recent support for the importance of criminal associates in contributing to criminal behavior comes from a large, longterm study of delinquency (Elliott, Huizinga, & Ageton, 1985). In that study, youths involved with prosocial friends were found to have a very low risk for delinquency whereas those involved with delinquent friends were at high risk. Although strong bonds to family and school were found to have some ef-
high or low risk for recidivism. A study with adult probationers (Andrews et al., 1986) showed that intensive counseling was related to lower recidivism among the high-risk offenders, but was actually related to poorer outcome among low risk offenders. They stress the importance of careful selection of offenders to match offender needs with relevant programs. Bonta and Motuk (1985) reported impressive reliability and validity data for a version of the LSI designed for incarcerated offenders. Although the evaluative research has not yet been fully completed, the literature discussed in this section suggests that highly intensive counseling and supervision based on differential association theory should reduce recidivism of high risk incarcerated offenders.

OTHER INTERVENTIONS

There are two other interventions that deserve mention in a discussion of criminal lifestyle problems because of the frequency with which they have been recommended for and applied to criminal populations. One is employment. Many employment programs for offenders have been based on the proposition that unemployment causes crime, and is associated with a criminal lifestyle. Unfortunately, research provides only weak support for this notion (Orsagh & Witte, 1981). Nevertheless, it has been proposed that employment programs are effective for a certain subgroup of offenders who are likely to be older, to be married, to be better educated, to have no alcohol or drug problems, and to have been motivated to commit their crimes for economic gain. Orsagh and Witte (1981) concluded that there are some data to indicate the promise of work programs for this subgroup of offenders. However, the data they cite to support their claims involved released (rather than incarcerated) offenders.

Another type of intervention that has frequently been employed in an attempt to alter criminal lifestyle problems is the therapeutic community. Pioneered in England by Maxwell Jones, therapeutic communities attempt to resocialize patients through intense and prolonged interaction among the participants (Jones, 1956, 1962). Patients are given more responsibility for themselves and one another than in traditional hospital programs, and there is a high emphasis on a democratic egalitarian social organization. Although there have been reports in the literature of positive effects of therapeutic communities in altering criminal lifestyle, the reports have been unsubstantiated by comparative outcome data (Angliker, Cormier, Boulanger, & Malamud, 1973; Barker & Mason, 1968; McCord, 1982; Gunn & Robertson, 1982, Whiteley, 1967). Similar to a therapeutic community is another approach to make the peer culture a positive rather than negative influence on offenders by intensive group interactions (Vorrath & Brendtro, 1974). While this program, like the therapeutic communities, may have led to positive changes in the behavior of participants while they were in the institution, comparative outcome data suggest lasting changes in criminal lifestyle are as yet, conspicuously lacking. Data from a study of recidivism among psychopaths treated in an intensive therapeutic community program in a secure hospital setting showed extremely high (90% and 80%, respectively) rates of recidivism and violent recidivism (Harris & Rice, 1988), suggesting that, at the very least, the therapeutic community program did not reduce recidivism for psychopaths. In fact, Elliot and associates (1985), on the basis of their findings regarding the negative influence of antisocial models, argued that therapeutic communities and treatment programs that placed offenders in intensive interaction with one another would be more likely to foster rather than inhibit criminal identification.

CONCLUSIONS

The available research suggests that problem-solving and social skills training combined with training in moral reasoning, educational programming that is directed towards changing criminal attitudes and criminal thinking, and counseling based on a differential association model are all interventions that have positive effects on altering patterns of criminal lifestyle. While there are as yet few data demonstrating that any of the interventions alter criminal behavior after release, there are data that indicate promise for training in moral reasoning, educational programming, work programs, and intensive counseling.

SUBSTANCE ABUSE

As shown by the survey results at both Philippe Pinel and Oak Ridge, alcohol and drug abuse are very common problems among maximum security psychiatric patients. It is likely that the use of standardized questionnaires designed to screen for alcohol and drug abuse would reveal even higher
prevalence rates (Ross & Lightfoot, 1985). Zamble and Porporino (1988) found that, although only 14% of a representative sample of Canadian penitentiary inmates reported that drug or alcohol use was an important problem for them before their incarceration, the inmates' descriptions of their alcohol use indicated that at least half of them were in need of treatment. Alcohol was frequently abused in combination with other drugs. The prevalence of alcohol abuse problems among North American offenders in general is extremely high and is associated with parole failure (Ross & Lightfoot, 1985). However, the causal relation between substance abuse and violent antisocial behaviors has been difficult to demonstrate, although the statistical association of alcohol abuse and crimes against the person has been well established (e.g., Lindquist, 1986).

The desirability of treating substance abuse problems for individual patients can turn upon a variety of considerations depending on the individual case. It should, of course, be targeted if the substance abuse is an important problem in its own right (e.g., cirrhosis, drug related arrests) or if it appears that substance abuse is directly or indirectly a cause of antisocial behaviors. Examples of these latter paths are impoverishment induced by drug purchase leading to property offenses, pathological intoxication (caused by either pharmacological or expectancy effects) leading to aggressive offenses, frequenting bars where provocations are frequent, and so on. In brief, substance abuse should be targeted whenever it figures as a causative factor in a clinical theory of a patient's offense history.

There is evidence that all addictive substances share a common physiological mechanism of action. Wise and Bozarth (1987) have argued from neurophysiological data that drugs of abuse (including depressant drugs such as alcohol and barbiturates) are psychomotor stimulants and positive reinforcers because they activate midbrain dopamine neurons or their target neurons in the forebrain. These arguments lead to the expectation that there should be important commonalities among all of the addictions. One disturbing such commonality is the low success rate of interventions for a variety of addictions such as alcohol abuse (Nathan & Skinstad, 1987) and heroin use (Webster, 1986). Two thirds of heroin addicts, smokers, and alcoholics relapse within 3 months of treatment (Brownell, Marlatt, Lichenstein, & Wilson, 1986).

Addictive substances are addictive because they are powerful reinforcers (e.g., Stitzer & McCaul, 1987). At least some of the variability among people in their use of addictive substances is likely caused by genetically transmitted variation in the reinforcing effectiveness of various drugs. With respect to alcohol, for example, it is well known that orientals have an unpleasant facial flushing reaction to ethanol and, presumably for that reason, are unlikely to abuse it (Helzer, 1987). Persons who are at risk to develop alcoholism because of a positive family history (Nathan, 1988; Donovan, 1986) show differences in evoked potentials and EEG from persons not at risk (Shuckit, 1987); more importantly, alcohol more readily reduces physiological indices of stress in high risk individuals (Finn & Pihl, 1987; Levenson, Oyama, & Meek, 1987).

Unfortunately, it is extremely difficult to use the literature as a guide to what works in the treatment of substance abuse. The literature is very large, often poor methodologically, and replete with conflicting claims. The outcome literature on the abuse of substances other than alcohol is so sparse as to be discussed below only incidentally. Webster (1986) has reviewed compulsory treatment programs for narcotics addicts, described their generally abysmal results and concluded that had evaluations been required for their continuance, "the huge coercive programs in New York and California would either have collapsed much earlier, or, alternatively, have been modified so that they would work in at least some minimal respects" (p. 157). Although it is true that such interventions have not affected relapse rates, compulsory methadone programs can reduce heroin use while they are in effect (Stitzer & McCaul, 1987). Nathan and Skinstad (1987), in a review of the alcoholism treatment literature, assert that no treatment method has unequivocally been shown to work. There have been, in their view, no differences in outcomes clearly attributable to type or intensity of intervention.

Miller (1982) has presented a somewhat more sanguine view of the alcoholism treatment literature but agreed that many popular types of interventions are ineffective. Ineffective interventions in Miller's view include: the use of disulfiram (Antabuse), metronidazole (Flagyl), or tranquilizers; individual psychotherapy; group psychotherapy; and Alcoholics Anonymous. One of the most difficult clinical and methodological problems in the drug abuse treatment literature (e.g., DeLeon, 1985) and the alcohol abuse treatment literature (Miller, 1985) is the high dropout rates
associated with most of these treatments; Miller (1985) has recommended the development of specific procedures to "motivate" clients and improve compliance.

Therapeutic communities, similar to those described in the criminal lifestyle section of this chapter, have been a popular form of treatment for alcohol and drug abusers (Coombs, 1981; DeLeon, 1984; Holland, 1978; Wexler & Williams, 1986). Despite reports of positive results from many of the evaluations of such programs, the studies have not been well-controlled, and drop-out rates of 80% or more are not uncommon (e.g., DeLeon, 1984; Holland, 1978).

In view of the reinforcing effects of alcohol, it is interesting that aversion therapy is one of the interventions that has received some empirical support. Although electrical aversion has achieved only modest effects and covert sensitization has not yet been convincingly evaluated, emetic aversion has consistently produced high abstinence rates in clinical studies (Miller, 1982). The use of emetine appears potentially quite useful as part of behavioral programs designed to promote self-control, despite methodological criticism of previous evaluation studies (Wilson, 1987a). Emetic aversion has been shown to decrease alcohol consumption in taste tests, lead to more negative flavor ratings, greater overt signs of aversion, and increased heart rate; more importantly, the post-treatment tachycardic response to alcohol was positively related to number of days to relapse (Cannon, Baker, Geno, & Nathan, 1986). Other treatments which have received some support include behavioral training in self-control, relaxation, communication, assertion, social skills, and family therapy (Miller, 1982).

Relapse prevention training has recently created a great deal of interest in the alcohol treatment field (Wilson, 1987b), although evaluation research on its use is yet preliminary (Nathan & Skinstad, 1987). The idea behind this approach is that the conditions underlying the maintenance of treatment induced behavioral change are different than those involved in its initiation (Brownell et al., 1986). The maintenance of treatment change is hypothesized to depend upon an addict's confidence that he or she can cope with alcohol-related situations. Addicts' judgments of self-efficacy in these situations can be negatively affected by slips, the "abstinence violation effect," unless the addict has been prepared to use them constructively (Brownell et al., 1986).

Annis and Davis (1989) recommend that, although cognitive phenomena are hypothesized to control self-regulation, behavioral or performance based procedures should be used to change cognitions in relapse prevention training; in particular, actual experiences of mastery or success. Annis and Davis (1988) evaluated a relapse prevention training program that employed these ideas. Following an assessment of situations that occasioned heavy drinking in individual clients and obtaining clients' estimation of their confidence in coping with alcohol related situations, modelling and rehearsal of coping skills were employed in phase I and, in phase II, external aids (e.g., supervision) were withdrawn in a graduated manner over increasingly risky situations. One of these external aids was a short-term, fast acting, self-administered, alcohol sensitizing drug which could be used by clients as a "safety net" in case of weakening control in high risk situations (Peachey & Annis, 1985). The entire program consisted of 6 hours of intake assessment and 8 outpatient counselling sessions over 3 months. Six month post-treatment follow-up revealed enhanced client judgments of drinking-related self-efficacy, fewer adverse effects of drinking, and greatly reduced self reported alcohol intake. In another report (Annis & Davis, 1989) relapse prevention training was found to significantly reduce drinking behavior of alcoholics whose problem drinking was confined to a few risk situations, but not to affect alcoholics whose problem drinking was more generalized.

Ross and Lightfoot (1985) have thoroughly reviewed the literature on the treatment of alcohol abusing offenders. They note that few treatments popularly employed in corrections (transactional analysis, group therapy, reality therapy, counseling, antabuse, hypnosis, alcoholics anonymous, or psychotherapy) have any convincing empirical support. In one of the few well-controlled studies in this area, Annis (1979) found no effect of an intensive, confrontational style group therapy program for prison inmates with drug and alcohol abuse problems on postrelease substance abuse and recidivism. Ross and Lightfoot argue that much more rigorous evaluative methodology should be employed in evaluating skill based and cognitively oriented interventions for offenders who have alcohol abuse problems.

The question of whether the goal of treatment should be moderation or abstinence has received considerable study and engendered a great deal of controversy. There is some consensus, however,
that moderation is the more appropriate goal for early stage problem drinkers and abstinence a better goal for those exhibiting signs of alcohol dependence (Miller, 1982). Alcohol dependence is seen as important in assessment, treatment, and outcome by nearly all investigators (Meyer, 1986; Miller, 1982; Nathan, 1986). Findings supporting the concept of physical dependence were obtained by Morey, Skinner, and Blashfield (1984) who derived empirical typologies of problem drinkers using data from the Alcohol Use Inventory, Michigan Alcohol Screening Test, and the Lifetime Drinking History and then validated them with a variety of personality, intelligence, and psychopathology measures. Three distinct types of problem drinkers were identified: (a) early stage drinkers, a heterogeneous group with few signs of physical dependence, (b) affiliative drinkers who were socially oriented daily drinkers with moderate signs of dependence, and (c) schizoid drinkers, who showed severe signs of dependence and drank during binges. These clusters are clearly superimposed upon a continuum of physical dependence. In a secure institution, abstinence would likely be an appropriate goal even for non-alcohol dependent patients in cases where alcohol abuse was related to the commission of serious crimes.

CONCLUSIONS AND RECOMMENDATIONS

What are the implications of this literature for substance abuse programs in secure psychiatric institutions? First, many treatment methods designed to address problems of substance abuse either do not work or have not been adequately evaluated. Second, assessment should concentrate on drinking patterns rather than on more general (e.g., personality) issues (Miller, 1976); measures described by Annis and Davis (in press) and Morey, Skinner, and Blashfield (1984) are appropriate for this purpose. Third, attention must be focussed both on the integrity of the intervention (i.e., whether treatment was delivered as intended) and risk factors in the posttreatment environment (Nathan & Skinstad, 1987). Fourth, treatment should focus on skills related to not drinking (self-control); emetic aversion and the use of short-term, fast acting alcohol sensitizing drugs appear to be useful adjuncts in initiating and maintaining behavioral control, respectively. Fifth, abstinence is the appropriate goal for drinkers who are dependent on alcohol or who commit crimes of violence when intoxicated while con-

trolled drinking may be better for other patients. Sixth, the net effect of these recommendations is that programs for alcohol abuse must extend into community settings and/or that alcohol should be made available for therapeutic purposes in secure settings.

ASSESSMENT AND TREATMENT OF SEX OFFENDERS

Although sexual problems were not endorsed for many patients in the Oak Ridge or Pinel surveys, sex offenders are common in many secure institutions and cause an uncommon amount of concern. Part of this concern is caused by the lack of relation between hospital adjustment and recidivism in this patient population (e.g., Quinsey & Maguire, 1986).

Because there are a number of recent comprehensive reviews on sexual deviance or paraphilias (e.g., Langevin, 1983), child molesters (e.g., Quinsey, 1986), and rapists (e.g., Quinsey, 1984); recent descriptions of sex offender treatment programs (e.g., Abel, Becker, Cunningham-Rathner, Rouleau, Kaplan, & Reich, 1984; Griffiths, Quinsey, & Hingsberger, 1989; Maletzky, 1980; Marshall, Ears, Segal, & Darke, 1983; Quinsey et al., 1987) and reviews of specialized topics such as setting up a laboratory to treat paraphilias (Laws & Osborne, 1983) and modifying inappropriate sexual arousal (Quinsey & Marshall, 1983; Quinsey & Ears, 1990), the following discussion will be brief. A survey of North American sex offender programs can be found in Borzdecki and Wormith (1987), and a review of treatment outcome studies can be found in Furby, Weinrott, and Blackshaw (1989).

As in treating other sorts of patient problems, a theory must be constructed to explain the offense history from assessment information before treatment can be begun. The most important information pertains to the offense history itself: the type of victims selected (age, relation to offender, etc.), the frequency of the behaviors, the amount and kind of force or coercion involved, and the setting characteristics of the attacks (e.g., involvement of alcohol, depression, etc.). This information should be gathered from multiple sources where possible (never from the patient alone). Police and autopsy reports, interviews with relatives of the offender, and previous assessment data are all useful in this regard.

Phallometric assessment of the patient's sexual preferences is a powerful method of measuring
sexual age and gender preferences as well as sexual interest in coercive or sadistic activities. These assessments involve measuring changes in penile tumescence to a variety of paraphilic and non-paraphilic stimuli. Phallicometric measures have been found to differentiate patients who have exhibited these sorts of behaviors in the past from those who have not, and to differentiate sexual recidivists from nonrecidivists (Rice, Quinsey, & Harris, 1989). Patient verbal report can also contribute useful information about sexual preferences. Data regarding sexual preferences is required to determine whether these preferences require alteration.

A patient can exhibit inappropriate sexual behaviors because he prefers these activities or for a variety of other reasons, such as inability to form relationships with appropriate partners. In addition, we may hypothesize various conditions as antecedent to the development of inappropriate sexual preferences or as relevant to the later maintenance of treatment gains. A number of these issues are commonly addressed by specialized assessments, including: social skills, sexual knowledge, and attitudes toward sex, women, and relationships. Obviously other issues may be relevant in individual cases, most frequently alcohol abuse.

Typically, treatment first involves an effort to have the patient understand the seriousness of his offenses, to accept responsibility for them, and to share a theory with the therapist about why the offenses have occurred. A variety of counselling and group therapy techniques have been used in this phase of treatment.

Depending upon the results of the patient's assessments, he may be offered interventions designed to modify his sexual preferences (usually some form of aversion therapy), social skill training, and sex education (with an emphasis on values). Antiandrogen medication may also be indicated for patients who ruminate about sexual matters excessively or who are unable to gain control of their paraphilic sexual preferences as a result of laboratory treatment.

There is indirect evidence that community follow-up, continuing treatment, and ongoing supervision is necessary for success (Maletzky, 1980; Quinsey & Earls, 1990). Efforts to promote treatment and prevent relapse are seen by most clinicians as an integral part of treatment (Pithers, Marques, Gibat, & Marlatt, 1983).

The effectiveness of this multimodal approach to treating sex offenders has yet to be convincingly evaluated, although very successful clinical studies have been reported (Maletzky, 1980; Marshall & Barbaree, 1988). It does appear, however, that aggressive treatment extending into community settings is necessary. The outcome of treatment is, of course, related to patient characteristics, such as the frequency of previous sex offenses, and can never be predicted with certainty. Release decisions must balance response to treatment (interpreted with great caution) with the availability of a structured system of community treatment and supervision and the seriousness of a patient's offense history.

ASSURING PROGRAM INTEGRITY

Program Development Evaluation, as described earlier in this paper, emphasizes accurate measurement of the internal validity of treatment interventions. This section outlines a method of assuring the integrity of ward based treatment programs. The rationale for focusing on the everyday behavior of frontline staff is that, as seen in the section on token economies earlier, the problem of measuring and maintaining the integrity of treatment program delivery is most difficult at this level.

In any institution, it is important that clinical staff interact with patients in a manner that fosters the attainment of rehabilitative goals. The extent to which front-line staff in fact do this has been a source of serious concern for decades (e.g., Goffman, 1961). In general terms, this concern has focused upon whether staff behavior creates a therapeutic or antitherapeutic ward atmosphere, and, more specifically, upon whether and how well staff perform specific tasks related to particular treatment programs.

With regard to general ward atmosphere, there is a large literature which demonstrates that the condition of psychiatric inpatients is often worsened during hospitalization through a process of "institutionalization." Institutionalization has been associated with the "aide culture," punitive attitudes toward mental patients, discouragement of patient initiative, lack of meaningful tasks or direction for front-line workers, and a variety of other variables (for reviews see Ellsworth, 1968; Moos, 1974). In more recent years, many, if not most, psychiatric patients receive short-term, acute treatment designed to return them quickly to the community in community mental health centers. Short term treatment designed to facili-
tate fast community reintegration avoids problems of institutionalization for those patients for whom it is effective (for example, schizophrenic patients who respond to phenothiazines and patients with affective disorders who respond to lithium). For institutions dealing with those patients who do not respond to acute treatment, the problems of maintaining a therapeutic atmosphere and avoiding institutionalization remain. Because of the conflicting demands currently placed on publicly funded psychiatric institutions, serious attempts to improve the performance of front-line workers are even more difficult to implement now than formerly (e.g., Talbot, 1978). Perhaps needless to say, security issues in secure psychiatric settings exacerbate efforts to change front-line workers' interactions with patients (e.g., Quinsey, 1981).

It has been shown, however, that improvement is possible in at least some situations. In an environment where program managers have relatively complete control over staff hiring and duties, nonprofessional staff can maintain a therapeutic atmosphere and, as well, can systematically engage with chronic and assaultive mental patients in high rates of therapeutic interactions of a kind specified by a detailed rehabilitation program (Paul & Lentz, 1977). Unequivocal evidence was found in this large controlled study that a social learning approach was very superior to a milieu therapy or a custodial approach.

With the increasing development over the past decade of patient rehabilitation technologies that are known to be effective when properly implemented, it is increasingly true that the technology of therapy and training has surpassed the technology of program implementation (Rice & Quinsey, 1986; Quilitch, 1975). This state of affairs partly results from: (a) managers using ineffective methods of attempting to improve the behavior of front-line workers; for example, memos describing desired courses of action and in-service training programs are often used and seldom effective alone in developing (much less in maintaining) appropriate staff behaviors (Quilitch, 1975; Willet, 1983); and (b) from inadvertent administrative signals that ward treatment is unimportant. Ellsworth (1988) has observed that, among these signals, unpredictable staff transfers and staff promotions based on criteria unrelated to program performance are particularly disruptive to ward programs and indicative to institutional staff that ward treatment is considered to be unimportant by management.

However, studies in a variety of ordinary institutions have shown that front-line staff can, under certain conditions, show reductions in errors of various kinds, increase the amount they interact with patients or residents, decrease the amount of non-job and non-patient related activities in which they engage, and increase the frequency with which they exhibit program-specified therapeutic behaviors (Andrasick & McNamara, 1977; Brown, Willis, & Reid, 1981; Burgio, Whitman, & Reid, 1983; Ellsworth, 1968; Montegar et al., 1977; Parsons, Cash, & Reid, 1989; Quilitch, 1975; Repp & Deitz, 1979; Seys & Duker, 1978).

The conditions that have been found to produce and maintain therapeutic performance among front-line staff include: (a) a detailed written description of the desired behaviors, (b) frequent supervisor approval of enactments of the behaviors, together with a description of precisely what was being approved, (c) continuous posted feedback describing progress on staff target behaviors, (d) provision of rewards for superior performance, and (e) front-line input into decision making. Of course, prerequisites for these interventions are a well managed ward with a detailed overall program plan and individualized patient treatment objectives.

Given the above conditions, it is not difficult to see why staff behavior is so resistant to change in typical institutions. Most institutions are strongly hierarchical and front-line staff have little say in ward management decisions. Ward programs are often so poorly specified that no one is sure what is supposed to be done. Front line staff are not rewarded for therapeutic interactions with patients and these behaviors are not modelled for them by supervisory staff. Front line staff are rewarded for having a neat ward, for having their paper work done, and for not having "incidents." In addition, program managers, such as unit directors, who might be expected to implement interventions known to affect staff performance, almost never have line authority over front line staff.

More to the point of this chapter is that institutional management is often not in a position to know whether change is occurring on the wards, how staff in fact behave, or what important clinical events transpire. Institutional records of assaults, seclusions, and most other important events are notoriously unreliable (e.g., Lion & Reid, 1983). For this reason, specifically developed information systems are required to measure important clinical events and staff behaviors.

In secure psychiatric institutions there are a
number of different areas in which management can obtain reliable information about the quality of ward based interventions. These include measurement of assault frequency, of the quality of ward notes, of interactions between staff and patients, and of ward atmosphere. Each of these measurements is described below.

ASSAULT FREQUENCY

A variety of events can have programmatic or clinical significance in various settings. The most important of these can be singled out for precise and continuous measurement which can be used to reflect the effectiveness of various interventions. Because patient assaults on other patients or staff are relatively commonplace in many secure psychiatric institutions, assault frequency is used as the example here. In fact, for some patients, institutional assaultiveness is the primary reason they are in a secure setting. Staff fear of patient assaults has major repercussions on the level of security on any given ward.

Our previous research indicates that assaults do not emanate solely from patients' psychopathology but relate in an intimate way to ward social systems of which front-line staff are an integral part (Quinsey & Varney, 1977a). Because staff behaviors influence assault frequency, changes in staff behaviors can reduce it. Short term reductions in assaults against staff at Oak Ridge have been previously associated with the implementation of an assault prevention task force (Quinsey, 1977a) and, in a large scale evaluation project, short-term reductions in both assaults on patients and staff were demonstrated to result from staff training in crisis prevention and intervention (Rice, Harris, Varney, & Quinsey, 1989; Rice, Helzel, Varney, & Quinsey, 1985). Because variations in staff behavior affect their frequency, assaults are an important, if indirect, indicator of staff clinical skills; more importantly, they are clinically significant in their own right and can be measured in an accurate manner by carefully defining assaults and having investigators interview patient and staff witnesses within a day or two of each incident (Harris & Varney, 1986).

WARD NOTES

Entries in a patient's file are designed to satisfy legal requirements and to convey information for use in patient assessment. It is, therefore, of crucial importance that the information in these records provide an accurate description of those aspects of a patient's institutional life which are relevant to clinical decision making.

The kinds of information essential to sound clinical decisions must be specified before it can be determined what sorts of observations should be recorded. It appears reasonable to suppose that in order to conduct a treatment program in a rational manner, a clinician must know what behaviors are to be changed; what methods have been or are being used to effect this change, and finally, how the patient is responding or has responded to these methods of treatment. A patient's file should, therefore: (a) identify the behaviors that are to be changed before the patient can safely be discharged or transferred; (b) provide an accurate description of the patient's condition and behaviors that appear relevant to his ability to behave in a responsible manner in a less secure setting; and (c) describe the treatments that the patient has received and the outcome of these treatments.

In light of the foregoing, there are obvious and commonly observed deficiencies in typical records of patient progress. The first of these involve noncomparable observations. In order to detect patient change, at least two comparable observations of his behavior must be obtained. To illustrate, we cannot infer that a patient has improved from knowing that he was "sulky when examined by the admitting doctor" and "a good worker on the ward" a month later because the observations were made in two totally different situations. Furthermore, the observations refer to two different behaviors that are not mutually exclusive; that is, a person can be sulky and also a good worker on the ward.

A more insidious kind of noncomparability results from the different interpretations of common descriptive phrases which different observers employ. For example, if a patient is described as a "risk" on one occasion, he may or may not be behaving in a similar manner on another occasion when the same phrase is used by another person in describing him. A number of years ago, we investigated the possibility of this sort of confusion in a study of the descriptive phrases most commonly appearing in ward books at Oak Ridge. This research revealed that, although most of these phrases were negative ("sulky," "hostile and threatening," "confused," etc.), staff members showed very poor agreement as to which patients were accurately described by these phrases at a given time but showed better agreement on pos-
itive phrases, such as “no management problem” which applied to most of the patients most of the time. It appears, therefore, that negative terms vary in meaning according to which staff member is writing the daily report in the ward book. Although a patient may be described as “surly” in the ward book by one staff member, another would not agree that the patient was “surly” on that day.

Comparable observations made at random or regular intervals provide an unbiased assessment of a patient’s performance. On the other hand, if the intervals between observations vary in a non-random manner, distortion will result, particularly if the frequency of observations varies with the patient’s condition. Unfortunately, this appears to be the case. An examination of the files shows that the frequency of notes increases as the patient disturbs others. Such a correlation inevitably leads to a gloomy caricature of the patient’s behavior.

The problems of noncomparable observations, imprecise language, and negative bias outlined above mean that it is difficult to employ ward notes to make clinical inferences. These problems are in addition to those described in nursing note audit procedures.

Notes are not only important in themselves but also reflect the training, ability, and motivation of the staff who make them. Because these documents are kept indefinitely, they can be used in both retrospective and prospective studies of ward staff performance. Nursing note audit procedures are well developed (e.g., Phaneuf, 1976) and can be supplemented by a variety of coding procedures designed to monitor the inferential value of file information. Of course, another, more radical option, would be to discontinue most narrative notes and replace them with standardized rating scales of patient behavior.

**STAFF-RESIDENT INTERACTION CHRONOGRAPH**

What is of most direct concern in any rehabilitative program is the daily interactions between staff and patients; for example, whether and how well personnel actually carry out program specified tasks. The only way to measure these interactions in an accurate quantitative manner is to actually observe them as they occur. Such information not only allows rigorous prospective evaluation of institutional changes but also, by being continuously communicated to ward staff and supervisors, can provide a stimulus for improvement and tangible evidence of progress.

The Staff-Resident Interaction Chronograph (SRIC) was developed by Paul and Lentz (1977). This instrument has impressive reliability and validity data. It has been successfully employed to monitor the integrity of milieu therapy and social learning programs for chronic mental patients. Paul and Lentz (1977) found very large differences between the behaviors of staff working on social learning and milieu therapy units that were in line with unit program manuals; most notably, staff in the milieu therapy unit frequently attended to inappropriate patient failure whereas staff in the social learning program frequently rewarded appropriate patient behavior.

The SRIC is an observation form for the objective coding of 5 classes of patient behavior (appropriate, inappropriate failure, inappropriate crazy, request, and neutral) and 21 classes of staff response (e.g., positive verbal, negative verbal, reflect, clarify, etc.). A time sampling scheme is employed by trained on-ward observers in order to produce a manageable amount of data. Staff behavior is coded as it functionally relates to patient behavior. Because the SRIC is a very detailed instrument, it requires extensive training to use, and requires much staff time to enter and analyze the data it produces. However, it has the advantage of being proven to be sensitive to intervention and of yielding data that are directly comparable to data gathered at other institutions.

A common concern about on-ward observations is their potential reactivity; that is, it seems likely that staff who are being observed by someone with a clipboard will behave very differently when being observed than when not being observed. Thus, there are potential problems of ecological validity. This argument, fortunately, has little force in the present context. First, it does not apply to instances where staff do not have the skills or knowledge to enable them to interact appropriately with patients; any staff who attempted to “look good” under these circumstances would be in a similar situation to a respondent who was attempting to “fake good” on an intelligence test. Second, in cases where staff do have the skills but ordinarily (when not being observed) choose not to use them, the observer making the SRIC observations serves as a prompt for appropriate behavior; the observation process in this instance would, therefore, produce 20 minutes of publicly observed appropriate behavior. It is, of course, just this behavior that we wish to encour-
age. The point of this kind of measurement is to measure behavior, and thereby, hopefully to help change it, not to "catch" people so that they can be exposed or punished.

There is a substantial literature on the reactivity of in vivo observations in a variety of contexts (Patterson, 1982). In general, the results of these studies indicate that although subjects do not habituate to being observed, the effects of being observed on actual behaviors are often small and sometimes nonexistent. The data from Paul and Lentz (1977) indicate that in vivo on-ward observation reveals meaningful aspects of staff-patient interactions regardless of reactivity issues.

More generally, the advantage of using multiple measures in a PDE context is that not all measures are subject to the same sources of bias. Assault frequency, nursing note quality, and patient assessments of ward atmosphere (to be considered next) are all immune to reactivity artifact.

In order to complete the picture of staff-patient behavior, the SRIC could be modified by adding objective items concerning supervisor behaviors: for example, such items as modeling therapeutic behaviors, direct teaching of therapeutic techniques, delivering positive messages concerning appropriate staff performance, monitoring program performance, attending meetings, and so on.

WARD ATMOSPHERE SCALE

Although the SRIC is the most important proposed measure of staff performance (because it involves direct observation of staff behaviors), measures of ward atmosphere can also play an important, if supplementary, role. These measures are also important because they provide an index of consumer satisfaction; such measures are conspicuously absent in most inpatient data acquisition systems.

The Ward Atmosphere Scale (WAS) consists of 40 items completed by both patients and front-line staff (Moos, 1974). The instrument measures social-environmental characteristics classified under three major dimensions: Relationship (involvement, support, spontaneity), Personal Development (autonomy, practical orientation, personal problem orientation, anger, and aggression), and System Maintenance and Change (order and organization, program clarity, and staff control). These subscales have been found to have adequate psychometric properties when completed by either patients or staff. On stable wards, subscale profiles have shown remarkable test-retest consistency over periods as long as 40 months, even in instances where there was complete patient turnover. Yet, the scale profiles were sensitive to program changes where they occurred (Moos, 1974).

CONCLUSIONS

The measures described above (assault frequency, ward note audits, the Staff-Resident Interaction Chronograph, and the Ward Atmosphere Scale), when taken together, provide a comprehensive, objective, and rigorous system of measuring important patient-related staff behaviors and clinical events. These measures not only provide the information that is required by management to monitor the internal validity of ward programs but can, by being made public on an ongoing basis, provide institutional staff with a powerful impetus for improvement.

CONCLUSIONS

A program development evaluation approach to planning rehabilitation programs in secure treatment settings involves identifying the nature and frequency of patient problems, determining clusters of patients who share similar problems, and assigning these clusters to ward programs particularly suited to their needs. Certain problems, such as assaultiveness and low levels of functioning, have clear living unit implications and are prioritized in making ward assignments. In addition to ward-based programs, treatment interventions directed toward problems that do not have living unit implications are offered to patients regardless of their ward assignment.

The literature review showed that interventions have been developed that are relevant to all of the problem types most commonly exhibited by patients in secure facilities. Not surprisingly, the degree to which these treatments have received rigorous evaluation varies but there is at least some encouraging evidence for the efficacy of all of the interventions we recommend.

Implementing treatment programs in secure psychiatric institutions presents formidable difficulties. Implementation problems relating to the integrity of interventions can be addressed through measurements of staff therapeutic behavior. Other problems of implementation, such as those caused by ideological or political concerns, were not addressed in this chapter. A related problem, outside the purview of this chapter, is the difficulty in ensuring that interventions begun in the institution
are followed through into the community in a
planned manner.

The relationship between various types of pa-
tient problems and the dangerousness of patients
is sometimes direct (e.g., assaultiveness), some-
times indirect (e.g., suspiciousness), and some-
times unknown (e.g., life skills deficits). Although
we commented on whether an intervention for
a particular problem might be expected to make
a patient less dangerous when there was some-
thing known, the relationship between response to
a particular form of treatment and subsequent
dangerousness is largely uncharted empirically.
Like other clinicians, however, we regard the im-
provement of patients' conditions and behaviors
as desirable in themselves. Moreover, the relation
between therapeutic interventions and subsequent
behaviors cannot be established until the interven-
tions are appropriate, implemented properly, and
guided by plausible theory.

Clearly, the adoption of a program develop-
ment evaluation approach in a secure psychiatric
institute is an enormous undertaking that has
important budgetary, staffing, and organizational
implications. The benefits of such an effort would
not be immediately manifest. On the other hand,
progress will not be made unless coherent treat-
ment programs can be developed and evaluated.

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