Paranoia—Prognosis and Treatment: A Review

by Barry A. Ritzler

Abstract

Contemporary research indicates that paranoia is directly related to good premorbid adjustment. Also, paranoids tend to have shorter hospitalizations and better recovery of social functioning than nonparanoids, although prognosis for full remission of symptoms is poor. A substantial minority of patients with an early diagnosis of paranoia deteriorate into a more withdrawn nonparanoid psychosis. When remission of paranoid symptoms occurs without chronic deterioration, there is a greater likelihood of relapse than there is for nonparanoid psychoses.

In regard to treatment, good premorbid paranoid schizophrenics respond rather well to phenothiazines, whereas good premorbid nonparanoid schizophrenics tend to deteriorate under the influence of standard medication. Systematic desensitization is effective in reducing delusional behavior, but generalization is limited. Many discussions and case studies support the use of psychotherapy with paranoids, but no conclusive outcome studies have been reported. Group therapy, cognitive therapy, and milieu therapy hold promise but need systematic evaluation.

This review is focused on contemporary research and case studies regarding the prognosis and treatment of paranoia. Most of the studies reviewed were published in the last 15 years, although some earlier investigations are included because of their relevance to the issues under consideration. Whenever possible, I have tried to limit the review to *controlled studies* of prognosis and treatment. This presented no problem for the review of prognosis. Treatment studies, however, were regrettably scarce, and I have included some case history studies and other studies devoid of controls to fill in the gaps, at least partially, in some areas. It should be stressed that these articles, though important for their heuristic value, in no way compare to effectively designed and controlled studies that adequately test meaningful hypotheses pertaining to treatment of paranoia. With the possible exception of medication, no treatment method for paranoia has received adequate research evaluation.

Another issue to keep in mind when reading this review is the inevitable relationship between treatment and prognosis. Estimates of prognosis usually take into account that at least minimum standard treatment occurs under reasonably expectable conditions, but paranoids, because of the very nature of their disorder, are not easy to engage in the process of treatment. Either suspicious, guarded, untrusting, and hostile, or exceedingly grandiose and aloof, they are not well disposed to following treatment regimens, cooperating in psychotherapy, or staying in treatment long enough for favorable results to emerge. There is no easy way to overcome this problem, but I believe it is possible to begin to disentangle prognosis from treatment and put them in proper perspective. Some issues, however, are clouded by the interdependency between

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prognosis and treatment, and I have tried to indicate where this confusion exists.

One more point concerning prognosis in paranoia that must be made is the importance of the question, prognosis for what? As you will see from this review, prognosis in paranoia appears to be good for certain outcome criteria (e.g., length of hospitalization, severity of symptoms, general disruption of social and family life), but poor for other outcome criteria (e.g., number of rehospitalizations and remission of schizophrenic symptomatology). Consequently, for each prognostic study cited, I will specify the outcome criteria used to determine prognosis.

Prognosis

Do paranoids show higher levels of premorbid psychosocial adjustment than nonparanoids? Is paranoia associated with favorable outcome and, if so, in regard to what outcome criteria? What are the prognostic implications of paranoia in syndromes other than schizophrenia? Are paranoids rehospitalized less frequently than nonparanoids? What is the prognosis in paranoia for remission of paranoid symptomatology? These questions are addressed in the next three sections.

Premorbid Adjustment. Using a State hospital sample of schizophrenics, Wittman (1941) studied prognosis as a function of many premorbid factors, several of which fell in the realm of psychosocial adjustment. Building on Wittman's early work, Phillips (1953) constructed a scale of premorbid social competence to serve as an indicator of prognosis in schizophrenia and other psychiatric disorders. The scale was a simplified modification of Wittman's Elgin Prognostic Scale. Using Phillips' modified scale, Farina and Webb (1956) and Zigler and Phillips (1961) demonstrated that level of social competence before the onset of schizophrenia is associated with favorable outcome. Zigler and Phillips reported that patients categorized as low in premorbid social competence had a longer period of hospitalization and a greater likelihood of rehospitalization than patients categorized as high in premorbid social competence. The low group consisted of 25 schizophrenics, 4 manic depressives, 3 psychoneurotics, and 4 character disorder patients. The high group included 16 schizophrenics, 7 manic depressives, and 7 psychoneurotics. No attempt was made to assess paranoid symptomatology in these subjects.

Since the development of the Phillips Scale, studies of premorbid social adjustment and prognosis have focused primarily on schizophrenia. There is substantial evidence that good premorbid adjustment is a favorable prognostic indicator for schizophrenia in general (Strauss et al. 1977). This simple relationship, however, becomes more complex when premorbid adjustment is viewed in interaction with various sociocultural and diagnostic factors (Klorman, Strauss, and Kokes 1977). Marital status, gender, socioeconomic status, and the presence or absence of affective symptoms are but a few of the variables that alter the prognostic significance of premorbid adjustment. None of these variables, however, have received as much attention as paranoid status for the relationship it shares with premorbid adjustment as delimiting prognostic indicators in schizophrenia. This is true, in part, because studies of the paranoid-premorbid interaction have reported conflicting results. Some studies (e.g., Johannsen et al. 1963; Sanes and Zigler 1971; Eisenthal, Harford, and Solomon 1972) have shown no relationship between premorbid adjustment and paranoia, whereas other studies (e.g., Goldstein, Held, and Cromwell 1968; Neale, Kopfstein, and Levine 1972; Evans, Goldstein, and Rodnick 1973; McCreary 1974; Zigler, Levine, and Zigler 1977) have reported that nonparanoid schizophrenics tend to fall on the poor premorbid side of the good and poor premorbid dichotomy, while paranoid schizophrenics almost always score in the good premorbid range. For instance, Goldstein, Held, and Cromwell (1968) studied three State hospital samples and found that 61 percent of the nonparanoid schizophrenics (n = 72) were classified as poor premorbid while only 15 percent of the paranoid schizophrenics (n = 26) were poor premorbid. These results conflict with those of Johannsen et al. (1963) and Sanes and Zigler (1971), which failed to show a relationship between paranoid status and premorbid adjustment in samples of VA and city hospital schizophrenics. More equivocal results were reported by Evans, Goldstein, and Rodnick (1973), who found that the relationship between paranoia and premorbid adjustment fell just short of statistical significance in an acute State hospital sample (the sample of

Goldstein, Held, and Cromwell included chronic patients).

Zigler and Levine (1973) reasoned that the key to the paranoid-premorbid controversy might be differences in the samples investigated by the conflicting studies. In testing this hypothesis, they found a significant relationship between paranoia and premorbid adjustment in a State hospital sample, but not in a VA hospital sample. Reviewing this study and others, Zigler, Levine, and Zigler (1976), prompted by Cromwell (1975), suggested that various methodological differences may account for the conflict between previous findings. For instance, Zigler, Levine, and Zigler reasoned that State hospital populations cover a wider range of social competence than the populations of VA hospitals. Individuals eligible for VA benefits have shown levels of premorbid competence at least high enough to enable them to serve in the armed forces. State hospital treatment, on the other hand, does not require the patient to have achieved a minimum level of premorbid competence. Consequently, ratings of premorbid competence are likely to occupy a wider range in the State hospital samples. This means that if a true relationship between paranoid status and premorbid adjustment exists, it is more likely to be identified in a study of State hospital patients because significant relationships are more likely to emerge from statistical analyses as the amount of true variance in a sample increases.

The rationale put forward by Cromwell and Zigler, Levine, and Zigler, while providing a logical explanation for much of the paranoid-premorbid controversy, does not account for all conflicting results. For example, Eisenthal, Harford, and Solomon (1972) studied large samples from State and private hospitals covering a wide range of social competence and found no relationship between paranoia and premorbid adjustment. In contrast, McCreary (1974) studied a relatively narrow-range VA sample and found a paranoid-premorbid relationship of the type reported by Goldstein, Held, and Cromwell (1968).[1]

In an effort to explain these maverick findings, Zigler, Levine, and Zigler discussed several other methodological issues that might influence the paranoid-premorbid relationship. For instance, they proposed that the common practice of classifying subjects into dichotomies of good or poor premorbid adjustment and paranoid or nonparanoid status may artificially constrict the true variance which might better be measured with scales quantifying various levels of premorbid or paranoid functioning.

Another particularly relevant suggestion by Zigler, Levine, and Zigler is that different diagnostic criteria used in the conflicting studies may have resulted in (1) too much heterogeneity in the diagnostic groups of a single study or (2) major differences between diagnostic groups across studies. Broad definitions of paranoid and nonparanoid schizophrenia are likely to result in overinclusion and misclassification in the diagnostic groups, resulting in increased error variance and a decreased likelihood that a real statistical relationship would achieve significance. Concerning the diagnostic differences between studies, Ritzler and Smith (1976) have demonstrated that many different diagnostic criteria are used in research on paranoid schizophrenia, with relatively few studies providing adequate specification of diagnostic criteria to allow for accurate replication. It is obvious that two studies using different criteria for paranoid (or nonparanoid) diagnosis may well obtain conflicting results. Indeed, Eisenthal, Harford, and Solomon (1972) used staff diagnoses (a very broad diagnostic strategy) to identify paranoia in a sample with a wide range of premorbid competence and found no relationship between paranoid status and premorbid adjustment. Neale, Kopfstein, and Levine (1972), on the other hand, used stricter diagnostic criteria for paranoia and found a significant relationship between paranoia and premorbid status.

Building on the Zigler, Levine, and Zigler arguments, Goldstein (1978) further explored the paranoid-premorbid relationship by studying 112 relatively young, acute, and predominantly first-break schizophrenic patients admitted consecutively to a large mental health center inpatient unit. The diagnosis of schizophrenia was obtained through independent assessments by a psychologist and a psychiatrist and confirmed by the New Haven Schizophrenia Index (Astrachan et al. 1972). The UCLA Social Attainment Scale (Evans, Goldstein, and Rodnick 1973) was used to rate premorbid adjustment, and the Venables and O'Connor (1959) rating scale was used to rate paranoid

[1] The McCreary results were of borderline significance ($p. < 10$).

symptomatology.

Instead of using the usual good-poor premorbid dichotomy, Goldstein divided the sample into fifths based on the distribution of the Social Attainment Scale. He also divided the sample into fourths based on the distribution of the Venables-O'Connor ratings rather than relying on the traditional paranoid-nonparanoid dichotomy. The results showed a linear relationship between paranoid ratings and premorbid adjustment on levels 1 through 4 of the Social Attainment Scale (with level 1 as the lowest level). Table 1 was taken from the original Goldstein article (the middle two paranoid symptomatology rating levels on the Venables-O'Connor distribution were combined to form the "intermediate" paranoid symptomatology group). It is clear from the table that the paranoid subjects rarely showed low levels of premorbid adjustment, but tended to cluster toward the higher end of the premorbid scale. Nonparanoids, on the other hand, were heavily represented at the lowest level of the premorbid scale and were more evenly distributed throughout the higher levels. These results are consistent with the reported relationship between premorbid social adjustment and paranoid status.

Goldstein further noted that patients at the second lowest level of premorbid adjustment tended to be rated at an intermediate (essentially borderline) level of paranoid symptomatology. In studies using the simple diagnostic dichotomy of paranoid-nonparanoid, classification of these equivocal cases would depend on the diagnostic strategies for diagnosing borderline symptomatology. Differences in such strategies across studies might account for some of the conflicting results in the paranoid-premorbid literature. For instance, strict diagnostic criteria for paranoia would place more intermediate subjects on the nonparanoid side of the dichotomy while broader criteria for paranoia would place more intermediate subjects on the paranoid side. The same principle applies to the cluster of clearly paranoid patients at the middle level of premorbid adjustment. Paranoids rated at this level would be split between good and poor premorbid in a dichotomous rating system based on a median split of the premorbid adjustment scores (a common procedure in many studies using the premorbid rating scale as a dichotomous measure).

Goldstein went on to speculate that the even distribution of nonparanoid, intermediate, and paranoid subjects at the highest level of premorbid functioning (level 5) may reflect the presence of high functioning, good premorbid schizoaffective patients who do not show obvious paranoid symptoms. Later results presented by Lewine, Watt, and Fryer (1978) support this speculation. In a study of premorbid competence, the authors found that schizoaffective schizophrenics showed the highest level of premorbid social competence, undifferentiated (nonparanoid) schizophrenics showed the lowest level, and paranoid schizophrenics occupied an intermediate level.

With the appearance of the Goldstein (1978) study, we are able to draw some reasonably confident conclusions about the paranoid-premorbid relationship: (1) paranoid schizophrenics seldom show low levels of premorbid psychosocial adjustment; (2) nonparanoid schizophrenics cluster at the lowest level of premorbid adjustment, but are still fairly well represented at higher levels; (3) borderline paranoid patients tend to show intermediate levels of premorbid functioning; (4) clearly paranoid individuals may occasionally show intermediate levels of premorbid adjustment; and (5) schizoaffective patients may account for relatively

Table 1. Relationship between levels of premorbid adjustment and paranoid symptomatology[1]

Premorbid adjustment groups	Paranoid symptomatology groups: Nonparanoid	Intermediate	Paranoid
Group 1[2]	16	2	4
Group 2	3	11	3
Group 3	7	5	13
Group 4	5	8	12
Group 5[3]	8	7	8

[1] From Goldstein (1978).
[2] Poor end of scale.
[3] Good end of scale.

high frequencies of nonparanoid patients at the highest level of premorbid adjustment. It should be noted, however, that these conclusions only are applicable to schizophrenia. The relationship between paranoia and premorbid adjustment has not been assessed for nonschizophrenic paranoid states.

A final note on the effects of gender on the relationship between paranoid status and premorbid adjustment should be added. Zigler, Levine, and Zigler (1977) found a tendency for female paranoids to be more similar to female nonparanoids in premorbid adjustment than male paranoids are to male nonparanoids. They attribute this difference to the fact that female schizophrenics are more likely than male schizophrenics to be married, probably because of the social pressure for women to be more compliant and men to be more assertive in the courtship process. Since marital status is highly correlated with conventional scales of premorbid adjustment (Held and Cromwell 1968; Gittelman-Klein and Klein 1969; McCreary 1974), female nonparanoid schizophrenics are likely to obtain higher premorbid adjustment scores simply because they are more likely than their male counterparts to be married. It should be noted, however, that Zigler, Levine, and Zigler still found that female paranoids were higher in premorbid adjustment than female nonparanoids even though the difference was not so great as in the case of males.

Paranoia as a Favorable Prognostic Sign. In light of the information reviewed in the previous section, the status of paranoia as a prognostic sign would seem to be fairly well established. Clear-cut paranoid symptomatology is predominantly associated with good premorbid psychosocial adjustment; good premorbid adjustment has been established as a favorable prognostic sign in schizophrenia; therefore, paranoia is a favorable prognostic sign. Beware of such logical deduction—it has embroiled many a paranoid deeper in delusion!

To appreciate the complexity of the issue of paranoia as a favorable prognostic sign, we must first consider the basic nature of the paranoid process and how it relates to the real world outside the hospital and the therapy office. Kaplan and Sadock (1971) point out that paranoid individuals may be able to do well outside the hospital even though they show obvious paranoid symptomatology. Paranoia often blends well with the fabric of society. Paranoid ideation and behavior usually cause less disruption than other forms of psychotic symptomatology, and at times, paranoia turns out to be an appropriate and adaptive response to the real hazards in some sectors of life outside the hospital.

When in the hospital, paranoids are usually quite uncomfortable with the rules of the ward and the intrusive behavior of ward staff and other patients. Consequently, they do not adapt well to the ward milieu and are anxious to leave as soon as possible. More often than not, the ward staff also look forward to the discharge of the negativistic, uncooperative paranoid patient. Also, the disruptive paranoid is more likely to receive high levels of neuroleptic medication (see Young and Meltzer 1980—reviewed below). The result is often an early discharge with reasonably adequate re-entry into life outside the hospital where adaptation is somewhat easier for the paranoid than for individuals with other psychotic symptoms.

But what of paranoia itself? Is prognosis as favorable for remission of the paranoid symptomatology as it is for length of hospital stay or success in readapting to society?

Several studies (e.g., Tsuang et al. 1974; Winokur et al. 1974; Affleck, Burns, and Forrest 1976; Pulkinnen 1977) have demonstrated that paranoia, when compared with other psychoses, is associated with later age of onset, shorter hospital stay, less severe symptoms, and less disruption of social and family life. The Iowa studies (Tsuang et al. 1974; Winokur et al. 1974) have shown that a relatively favorable prognosis for paranoia is apparent even for process schizophrenia, i.e., a schizophrenic disorder with no clear precipitating stress, an insidious onset, and associated with essentially poor premorbid adjustment. Affleck, Burns, and Forrest (1976) used the Scandinavian diagnostic criteria and separated paranoid psychoses from schizophrenia and schizophreniform psychoses to find that favorable prognosis was associated primarily with the paranoid syndrome. Pulkinnen (1977), also using the Scandinavian diagnoses, found that paranoid psychotics showed immunoglobulin patterns indicative of acute systemic stress reactions, but relatively quickly recovered and functioned reasonably well once the stress was removed or attenuated by brief hospitalization. It is important to note that in each of these studies the outcome criteria used to confirm "good prognosis" were shorter hospital stays and easier readjustment to the community. Remission of paranoid symptomatology was not reported.

Evans, Goldstein, and Rodnick (1973) presented evidence in support of the assumption that paranoids leave the hospital showing a higher degree of pathology. They studied a sample of 80 acute, first admission schizophrenics: 16 good premorbid, paranoid; 23 good premorbid, nonparanoid; 8 poor premorbid, paranoid; and 33 poor premorbid, nonparanoid (note the paranoid-nonparanoid imbalance in the poor premorbid category). Although there were no differences between the groups in level of pathology during hospitalization, followup data indicated that paranoid patients were rated higher in global mental illness at 6 months and 1 year following discharge. Paranoids also were more likely to receive medication after discharge and were rehospitalized more often during the 1-year followup period. These effects were most apparent in the poor premorbid paranoid group, although the difference between good and poor premorbid groups was of borderline significance ($p < .10$). Evans, Goldstein, and Rodnick concluded that "a poor premorbid history coupled with a clear-cut paranoid symptom picture had a particularly negative prognostic pattern (i.e., less remission of symptoms, more postdischarge medication, and more rehospitalizations) for these acute first-admission schizophrenics" (p. 668).

Some Scandinavian investigators have identified paranoid states for which there appears to be good prognosis for at least partial remission of paranoid symptoms. The Scandinavian diagnostic system has for some time made a distinction between various paranoid states and schizophrenia with paranoid features. A good example of the Scandinavian prognostic studies is that of Leonhard (1975) which showed that paranoia is associated with good prognosis in psychotic states other than schizophrenia. In schizophrenia (as diagnosed by the Scandinavians), paranoia is a sign of poor prognosis, particularly for the remission of symptoms. Support for such a relationship is provided by the American study of Evans, Goldstein, and Rodnick (1973) in which schizophrenics were classified according to the good premorbid-poor premorbid and paranoid-nonparanoid dichotomies. The results showed that at a 1-year followup good premorbid nonparanoid schizophrenics enjoyed significantly more remission of symptoms than poor premorbid paranoid schizophrenics. Poor premorbid nonparanoids and good premorbid paranoids shared an intermediate level of remission. These results must be viewed with caution, however, since Hawk, Carpenter, and Strauss (1975) failed to find these differences in a 5-year followup.

Other paranoid nonschizophrenic psychotic states associated with good prognosis are situational paranoia (Tanna 1974) and late paraphrenia (Fish 1960; Kay and Roth 1961; Herbert and Jacobson 1967; Retterstøl 1970). Situational paranoia refers to the acute psychotic paranoid reaction sometimes observed in prisoners, POWs, immigrants, and others faced with enforced passivity in hazardous situations. Prognosis is very good for full remission of paranoia upon escape or release followed by brief, supportive treatment (Tanna 1974). Late paraphrenia is a psychotic nonschizophrenic paranoid psychosis occurring most often in elderly individuals who have suffered some traumatic physiological illness or shock. This condition, though highly resistant to many forms of treatment (Kay and Roth 1961), has a good prognosis when the treatment modality is phenothiazines (Herbert and Jacobson 1967). Another paranoid psychotic condition designated as "paraphrenia" is defined as a condition midway between paranoid schizophrenia and nonschizophrenic paranoia. Although the evidence is sketchy, it has been reported (Frost 1969; Retterstøl 1970) that this condition has a better prognosis than paranoid schizophrenia for remission of symptoms.

In light of the Scandinavian findings of separate prognoses for paranoid schizophrenia and other paranoid states, it is encouraging that *DSM-III* provides criteria for the diagnosis of nonschizophrenic paranoia. Perhaps more American investigators will be encouraged to attempt replications of the prognostic distinction heretofore primarily reported by the Scandinavians. Before we show too much enthusiasm, however, it should be noted that Kendler (1980) has reviewed evidence which suggests that the type of delusion on admission (the distinguishing feature in *DSM-III* which separates schizophrenic and nonschizophrenic paranoia) is not predictive of outcome.

Finally, several miscellaneous studies provide isolated evidence for the role of paranoia as a prognostic indicator in special circumstances. For instance, Shobe and Brion (1971) report that manic-depressive patients with paranoid delusions were less responsive to treatment than manic depressives without paranoid delusions. It should be noted, however, that the Shobe and Brion study was conducted before lithium carbonate treatment became popular. Papernick, Pardes, and Winston (1975) found that hospitalized paranoid schizophrenics with grandiose delusions showed less improvement than paranoid schizophrenics with delusions of self-reference and persecution. The authors speculated that grandiose delusions constitute a very resistant barrier to the formation of a therapeutic alliance. Monahan (1977) demonstrated that the diagnosis of paranoid schizophrenia is associated with pessimism on the part of ward staff toward the patient's potential for change. Monahan argued that such negative expectations become self-fulfilling prophecies and may account for the modest level of success reported for hospital treatment of paranoia. And in a rather puzzling report, Mazurowska (1975) claims that paranoid schizophrenics of mixed pigmentation (i.e., eye and hair color that do not match) have better prognosis than paranoid schizophrenics of matched pigmentation. No explanation is offered for this relationship.

In summary, paranoid schizophrenics have a good prognosis for early release from the hospital, adequate readjustment to the community outside the hospital, and reduction in the severity of symptoms following hospitalization; prognosis is poor, however, for avoidance of rehospitalization and full remission of schizophrenic symptoms; nonschizophrenic paranoia (as diagnosed by the Scandinavians) generally has a better prognosis than paranoid schizophrenia; paranoia as a secondary symptom in manic-depressive psychosis appears to be a poor prognostic sign (at least without the use of lithium carbonate treatment). Grandiosity and matched pigmentation may be signs of poor prognosis when associated with paranoid schizophrenia.

Paranoia and Rehospitalization. The relationship between paranoia and rehospitalization has important implications for the interpretation of results from studies of prognosis and treatment. In a review of chronicity and paranoia, Strauss (1973) reanalyzed the data of Johannsen and O'Connell (1965) and found that the proportion of paranoids decreased as length of illness increased. Strauss also found with a reanalysis of the Sanes and Zigler (1971) data that readmitted schizophrenics were less likely than first-admission patients to be diagnosed paranoid. Strauss, Sirotkin, and Grisell (1974) also reported that schizophrenics hospitalized for the first time are more likely to be diagnosed paranoid than schizophrenics who have returned to the hospital after discharge from their first admission. In a sample of first admission schizophrenics from a large metropolitan mental health clinic, 64 percent were diagnosed paranoid. In a sample of readmitted schizophrenics at the same institution, 48 percent were diagnosed paranoid. Unfortunately, Strauss, Sirotkin, and Grisell did not have access to the first admission diagnoses of the readmitted sample. Did the paranoid percentage decrease because paranoid symptomatology fades out in some readmitted individuals who, nevertheless, show other schizophrenic symptoms when they return to the hospital?

In an investigation bearing on this question, Sommer and Whitney (1961) studied a sample of first-admission schizophrenics on a short-term ward and found that nonparanoid patients were twice as likely as paranoids to be transferred to a chronic ward. No effort was made, however, to determine if the paranoids discharged from the short-term ward ever returned with a diagnosis other than paranoia. We have already seen that paranoids tend to have shorter hospitalizations than nonparanoids, but this does not tell us whether paranoids, if rehospitalized, retain their paranoid symptomatology.

Depue and Woodburn (1975) followed Strauss, Sirotkin, and Grisell (1974) by studying 50 readmitted State hospital schizophrenics with a first-readmission subtype diagnosis of paranoia. All of these patients had at least three hospitalizations. Depue and Woodburn found that of the 50 patients, 25 changed to a nonparanoid schizophrenic diagnosis at some time following their first admission. The change in diagnosis for the changed patients came at a mean of 3.44 admissions and 6.53 years since the first admission.

The results of the Depue and Woodburn study indicate that a large proportion of schizophrenics diagnosed paranoid at their first admission lose their paranoid symptoms as they become more chronic (i.e., experience repeated rehospitalizations). An earlier report by Morgan, Porzio, and Hedlund (1968) supports the Depue and Woodburn conclusions by indicating that readmitted schizophrenics showed fewer paranoid symptoms when readmitted. Although further replication of these findings has not been reported, they give sufficient reason to exercise caution in designing and/or interpreting studies of chronic paranoid and nonparanoid schizophrenics. If no control is exercised for the possible disappearance of paranoid symptoms, the chronic nonparanoid group may consist of some patients who were diagnosed as paranoid earlier in the course of the disorder. Consequently, when such studies find no differences between paranoid and nonparanoid groups, there is no way to determine if the presence of previously paranoid patients in the nonparanoid group had anything to do with the outcome.

Personal communications with both Strauss and Depue and a comprehensive review of the literature led to the conclusion that no further studies of the relationship between paranoia and rehospitalization had appeared at the time this review was written (early 1981). In addition to the need for replication, another reason for further research is to determine what accounts for the disappearance of paranoid symptoms in some chronic schizophrenics. In other words, what distinguishes the chronic schizophrenics who have lost their paranoid symptoms from those who have continued to receive the paranoid diagnosis?

Although the evidence is not conclusive, the Depue and Woodburn (1975) results suggest that paranoids do not have a more favorable prognosis than nonparanoids for avoidance of rehospitalization. Instead, they appear to be readmitted about as often as nonparanoids. The Depue and Woodburn study indicates, however, that about half of the readmitted paranoids eventually lost their paranoid symptoms. This can hardly be viewed as a favorable outcome, however, since the loss of the more flamboyant paranoid symptoms probably is a sign of chronic deterioration (i.e., "burn out") rather than improvement in the patient's psychological functioning.

Treatment

My original intent was to use the guidelines suggested by May (1974) for selecting articles in review of the treatment of paranoia. May recommended the following standards: (1) adequate controls; (2) comprehensive and meaningful outcome criteria; (3) clearly stated purpose and/or hypotheses; (4) adequate methodology; (5) appropriate statistical analyses; and (6) accurate and comprehensive conclusions.

With few exceptions, the articles reviewed herein fall short of most of May's standards. In each case, I have tried to identify the deficiencies in order to put the interpretation of results in proper perspective.

Medication. Few recent studies have investigated the specific effects of psychotropic medication on paranoia. Those that have, however, have resulted in relatively clear-cut findings. The medication treatment process lends itself well to experimental analysis. Double-blind methodology, the relatively short time expected for treatment to take effect, and the essentially straightforward impact of medication on the behavior of the subject help the investigator avoid the ambiguities and complexities usually associated with studies of other treatment modalities.

In spite of these advantages, studies of the effects of medication on paranoia are not easy. The paranoids' suspiciousness and negativism make them hesitant to participate in any research, but particularly the kind that involves the administration of medication. The actual administration of medication to paranoids can be a major procedural problem; care must be taken to assure that the paranoid subjects actually take the medication when and as it is prescribed. "Cheeking" and other devious means of sabotaging the treatment regimen are favorite ploys of the untrusting paranoid. Also, ward personnel often question the wisdom and ethics of giving placebo dosages to patients with symptoms as flamboyant and disruptive as those of paranoia. Perhaps these practical difficulties are at least partly responsible for paranoids seldom being singled out for medication studies.

The results of the few studies that have been reported in the last 10 years or so represent some of the clearest and most reliable findings in research on the treatment of paranoia. For instance, Goldberg, Schooler, and Mattson (1967) conducted a double-blind study of 226 schizophrenic patients for 6 months of phenothiazine treatment. The main purpose of the study was to examine the effects of medication on specific schizophrenic symptoms. Two patterns of results emerged: (1) all significant changes in withdrawal symptoms occurred within the first 5 weeks of treatment, and (2) paranoid symptoms continued to show improvement through 13 weeks of treatment. Paranoid symptoms also improved in the placebo condition. The authors suggest that the paranoid response may be primarily a placebo phenomenon, whereas the improvement in withdrawal symptoms was more clearly a medication effect. It is important to note that this study examined withdrawal and paranoid symptoms *in the same patients.* Consequently, caution must be exercised in generalizing the results to the comparison between paranoid and nonparanoid patients.

Later results reported by Kellam et al. (1967) replicated the findings of Goldberg, Schooler, and Mattson. In a double-blind study of the effects of medication and ward atmosphere on 202 schizophrenics, Kellam et al. found the greatest number of positive effects with paranoid symptoms and the least number of effects with withdrawal symptoms. Reduction in withdrawal appeared solely as a function of medication and was not associated with ward atmosphere. Other symptoms not classifiable as paranoid or withdrawal showed an intermediate response to the two types of treatment. These results suggest that paranoid symptoms show good response to medication combined with milieu treatment whereas the withdrawal symptoms respond essentially to medication alone and are little affected by ward atmosphere.

Rappaport et al. (1972) used auditory signal detection as a criterion measure and found results which partially contradict those reported by Goldberg and Schooler and their colleagues. Rappaport et al. found that paranoid schizophrenics (n = 22) improved in their signal detection performance when under the influence of phenothiazines. The performance of nonparanoid schizophrenics (n = 24), on the other hand, deteriorated under increasing levels of phenothiazines. Normals, as expected, performed better than both patient groups. Paranoids began at a lower level of signal detection performance than the nonparanoids but improved to just below the level of the nonparanoids in the drug condition. In other words, the findings of Rappaport et al. suggest that the paranoids' response to medication is more than a placebo effect.

The seemingly conflicting findings of Goldberg, Schooler et al. and Rappaport et al. may not be difficult to reconcile. The "withdrawn" symptoms of Goldberg and Schooler, it must be remembered, were not independent of paranoid symptoms in the same individuals. For Rappaport et al., "paranoid" and "nonparanoid" referred to different individuals and paranoids simply caught up with, but did not surpass the nonparanoids. It may be that the improvement in signal detection of paranoid patients was the result of an initial reduction of withdrawal and not the result of changes in paranoid symptomatology. Unfortunately, Rappaport et al. did not measure withdrawal. They also did not study the effects of medication on paranoid behavior. Consequently, there is no way to determine if the paranoids' response to medication was due to a reduction in withdrawal or paranoia per se (or both). A definitive study needs to be done in which the effects of medication on paranoid and nonparanoid schizophrenics are evaluated in terms of reductions in withdrawal and paranoid behavior.

In spite of its shortcomings, the Rappaport et al. study is important because it indicates that paranoids show a positive response to medication while nonparanoids do not. Other results consistent with this interpretation come from separate studies reported by Goldstein (1970), Judd et al. (1973), and Young and Meltzer (1980). Goldstein (1970) reported that poor premorbid schizophrenics receiving 100 mg q.i.d. of thioridazine showed improvement on psychophysiological and behavioral measures compared to their scores when not on medication. This was true for poor premorbid schizophrenics whether or not they were diagnosed paranoid. The results for good premorbid schizophrenics, however, showed an interaction between medication effects and paranoid status. The good premorbid paranoids showed greater vigilance for threat in the environment and deteriorated cognitively in the placebo condition compared to the medication condition. Good premorbid nonparanoids, on the other hand, showed no deterioration in the placebo condition and only a small positive response to medication. Once again, in the placebo condition, the scores of the good premorbid paranoids were significantly more pathological than the scores of the good premorbid nonparanoids. With medication, the paranoids simply approached, but did not surpass the level of functioning of the nonparanoids in the placebo condition. Goldstein concluded that psychiatrists might benefit from noting the premorbid adjustment and paranoid status of a patient before prescribing medication. Also, he warned that differential drug effects may be critical in research comparing paranoid and nonparanoid schizophrenics if both groups are on medication. That is, the medication effects are likely to obscure the deficits of poor premorbid schizophrenics (whether paranoid or nonparanoid) and good premorbid paranoid schizophrenics when comparisons are made with good premorbid nonparanoid schizophrenics.

In a partial replication of the Goldstein study, Judd et al. (1973) measured 24 good premorbid paranoid and nonparanoid schizophrenics under the influence of 100 mg of thioridazine q.i.d. Although between-group base rate comparisons and degree of change differed slightly across the various measures (skin resistance, behavior in a filmed interview, perceptual defense, ward behavior, and the Serial Seven Test), the essential findings were that the paranoids improved with medication and deteriorated with placebo while nonparanoids performed well in the placebo condition and showed little improvement with medication. In some cases, the nonparanoids tended to deteriorate somewhat when medicated.

Recently, Young and Meltzer (1980) assessed the relationship between various demographic, clinical, and outcome variables and the amount of medication commonly administered to 61 schizophrenics—28 paranoid and 33 nonparanoid—in an acute phase of the disorder. They found that nonparanoid, "nonschizoid" patients tended to receive placebo or low dosage medication while paranoid, "nonschizoid" patients tended to receive high conventional medication dosages. "Nonschizoid" was equivalent to nonwithdrawal. These *in vivo* findings suggest that psychiatrists have either read and heeded the suggestions of Goldstein and his colleagues or have learned from experience that good premorbid paranoids respond favorably to medication while good premorbid nonparanoids show little, if any, improvement when medicated.

Medication studies using the stricter Scandinavian diagnostic criteria showed differences between various types of paranoid psychotics in response to certain medication. For instance, Blanc (1970) found that TPN 12 was more effective than thioridazine for true paranoia and paranoid schizophrenia. There were no differences between the two drugs, however, with the psychotic state "paraphrenia"—a borderline condition between true paranoia and paranoid schizophrenia. Reid (1972), in a study of psychoses in adult mental defectives, found that phenothiazines were more effective for late paraphrenia than for paranoid schizophrenia. Seven out of seven mental defectives with symptoms of late paraphrenia (ages 53–74) showed a positive response to medication while only 4 of 12 mental defectives with paranoid schizophrenia (ages 20–64) showed a similar positive response. In studies of psychotics with at least average intelligence, results similar to those of Reid were found for late paraphrenia; that is, a dramatic response to standard dosages of phenothiazines by patients who developed paranoid psychotic symptoms late in life (Fish 1960; Kay and Roth 1961; Herbert and Jacobson 1967).

In summary, phenothiazine treatment seems better suited for poor premorbid and paranoid patients than for good premorbid nonparanoids. Also there is some suggestion that phenothiazines help to overcome general withdrawal symptoms in paranoids while leaving the paranoid symptoms, per se, reasonably intact. With medication, the functioning of good premorbid paranoid schizophrenics improves to near the level of good premorbid nonparanoid schizophrenics, which is still below the level of normals. These are meaningful findings which pave the way for further studies of the effects of medication on the paranoid process.

Psychotherapy. Little has been reported on the specific effects of individual psychotherapy on paranoia. For instance, in a comprehensive review of psychotherapy with schizophrenics, Gunderson (1979) lists patient characteristics which are assets or liabilities in psychotherapy; paranoia is not mentioned. Gunderson also enumerates several clinically derived hypotheses about what kind of therapist personality will match particularly well or poorly with a specific patient personality; again, paranoia is not included. The only mention of paranoia comes in a single sentence in the 32-page review: "Among the patients who seem most difficult to engage in psychotherapy are the severe chronic paranoid patients or those with severe concurrent antisocial problems" (p. 370). The fault is hardly Gunderson's. The truth is that little, if anything, has been done to study the specific effects of individual psychotherapy on paranoia.

Gunderson also notes the scarcity of controlled outcome studies of psychotherapy with schizophrenics. He concludes that the few controlled studies that exist in the literature give mixed reports on the efficacy of individual psychotherapy for schizophrenics. Unfortunately, paranoia was not isolated as a variable in any of the studies cited in Gunderson's review. Correspondingly, a thorough search of the literature for 1971 through 1980 failed to unearth a single controlled study of the effects of individual psychotherapy in paranoia or paranoid schizophrenia.

Only two studies were discovered in which the focus of investigation was on the process of psychotherapy with paranoids. These studies did not compare the outcome of psychotherapy with the outcome of other treatment approaches; instead, they manipulated several key variables in the therapy process and observed the results. In one of these studies, Levy (1976) varied the amount of emotional expression and self-disclosure emitted by the therapist in dynamically oriented psychotherapy interactions. She studied the reactions of 22 paranoid and 18 nonparanoid schizophrenics who had been carefully diagnosed by means of Endicott and Spitzer's (1972) Psychiatric Evaluation Form. A reasonably adequate attempt was made to control for effects of hospitalization, and most subjects were on approximately equal levels of phenothiazines. Groups matched for sex and diagnosis were exposed to tape recordings of the examiner demonstrating high or low emotion in discussing various interpersonal topics. Following the recordings, subjects were asked to discuss the same topics. Half of the groups in each diagnostic category were encouraged to use high self-disclosure while the other groups were discouraged from talking about their own feelings.

The paranoids, compared to the nonparanoids, responded with more suspicion in the "noncongruent" condition in which the interviewer, while quite impersonal in her discussion of the topic, demanded high self-disclosure from the patient. In the "congruent" condition, when the interviewer gave a highly personal discussion of the topic, the subsequent self-disclosure instructions elicited highly autistic responses from the paranoids while the nonparanoids became more suspicious.

Although Levy's study is one of process rather than outcome, the results suggest useful guidelines for the therapist's behavior in psychotherapy with paranoids. Since high self-disclosure on the part of the therapist tends to elicit highly autistic responses from paranoid patients, it may be advisable for therapists to limit their self-expression, especially early in therapy when the patient is more susceptible to psychotic decompensation. On the other hand, impersonal demands by the therapist for the patient to be highly self-disclosing might also best be avoided to reduce the characteristically suspicious behavior of the paranoid patient. Levy's findings seem to suggest a better approach to psychotherapy with paranoid individuals might be a genuine concern for the patient coupled with mild curiosity about the patient's experience.

In regard to the design of the study, criticism can be directed at elements of the procedure. Levy evaluated a single contact with the patient replete with tape recorders, structured research instructions, and an interviewer who was not the patient's regular therapist. These artificial circumstances limit the confidence with which generalization of the results can be made to real therapy relationships. It bears repeating, however, that this study stands alone as a carefully controlled effort to investigate the process of psychotherapy with paranoids and deserves commendation.

The only other controlled study pertaining to psychotherapy with paranoids is that of Frost (1969), who found that paraphrenia (i.e., paranoid individuals with some, but not all the characteristics of schizophrenia) are significantly more motivated to achieve self-awareness when compared with true paranoid schizophrenics. Frost suggested that this drive toward self-awareness could be used effectively in psychotherapy.

Gunderson (1979) further noted that case reports which regularly occur in the literature are a contrast to the rather pessimistic conclusions about psychotherapy for schizophrenics drawn by controlled outcome study. The literature on psychotherapy for paranoia is no exception. Although case studies add little to the controlled evaluation of treatment techniques, they are useful for their heuristic value. The typical case report serves as a prime example of the author's favorite treatment method in action. Theoretical principles are dramatically illustrated, and the therapy is almost always successful. The following case reports are those pertaining specifically to psychotherapy with paranoid patients.

One of the most intriguing case studies of individual psychotherapy is that of Small (1971), who chronicled 25 years of therapy with one paranoid patient. Small begins with a discussion of the diagnosis of paranoia, distinguishing it from paranoid schizophrenia because " . . . hallucinations are ordinarily absent, and there is no evidence of disorganization of thinking or reasoning outside of the delusional system" (p. 3). At the beginning of therapy, the patient was in her late 40s, a typical age for the onset of a nonschizophrenic paranoid disorder. Her behavior style was socially correct, highly formal, and rigidly restrained. She expressed numerous hypochondriacal complaints and reported several circumscribed delusions of reference. For instance, she claimed to have an unwarranted bad reputation that was being spread nationwide by her minister, a national magazine, and a local radio station. For a few years before therapy, her husband had been treating her with indifference, and she reported longstanding sexual dissatisfaction in the marriage. Small identified these characteristics as typical of paranoia. Dynamically oriented psychotherapy was initiated and proved effective in curbing the patient's delusional ideation by allowing her direct expression of her ambivalence toward her husband and her inconsistent self-esteem.

The therapy contact was maintained by letter, telephone, and occasional office visits for two decades. During the time, the patient continued to function effectively in the community, but maintained much of her paranoid ideation, albeit in a more discreet and less disruptive form than at the beginning of therapy. After 20 years of therapy contact, the patient contracted cerebral arteriosclerosis and required several emergency therapy sessions in a short period of time because of the ensuing mental confusion. Surprisingly, even though the confusion continued as a chronic condition, she relinquished nearly all her paranoid ideation and reported feeling more comfortable in social situations than ever before. In an articulate and convincing summary, Small argues that the close, longstanding relationship between the patient and the psychiatrist-physician was instrumental in the long maintenance of socially effective behavior in spite of continuing paranoia and the eventual remission of paranoia with the onset of the cerebral arteriosclerosis. This is a clear example of the already stated theme in this review that recovery in paranoid patients consists initially of the restoration of social effectiveness followed, much later, by a remission of paranoid symptoms which may not be complete.

In a case report of psychotherapy with a paranoid schizophrenic patient, Searles (1972) also described a long-term therapy relationship in which the patient's realistic perceptions of the analyst were used to counteract the delusional process. The summation of this therapy, which at the time of the report had lasted more than 18 years and 3,500 hours, is best expressed in the singular style of Searles himself.

> I hope the foregoing excerpt gives at least a brief glimpse into the usual way I endeavour to function with her, keeping in touch with my own reality as I experience it while encouraging her exploring and elaborating upon her own experience of the situation. Since she possesses so very precarious a sense of reality, and since this tends to be destroyed so quickly when vigorously challenged by me, collaborative relatedness between us occurs best, I long ago have learned, when I relatively strongly confirm that she is perceiving such-and-such, while not pretending that I am at one with her in that perception, and meanwhile putting before her, in a non-coercive way, bits of my own mode of experiencing the situation. There are several examples of consensi established between us in that brief excerpt—a very great advance over the state of things years earlier, when a much deeper degree of fragmentation and a terrible unrelatedness prevailed. [p. 17]

Other recently reported case studies lend credence to the analytical approach as a method of treatment for paranoia.

Fromm (1976) reported that analytically oriented psychotherapy also can be effective in crisis intervention with paranoia. Ross (1976) also focused on using the analytic method to provide a quiet, nonstimulating environment in which a workable, narcissistic transference could develop. More general illustrations of psychotherapy with paranoid patients were presented by Maxson (1973) and Bernstein (1976). Maxson further demonstrated a method for measuring improvement in ego functioning in long-term psychotherapy, although the method was never applied to a controlled study of treatment outcome.

Other therapy techniques cover a wide gamut of case study reports. Some methods are standard applications or modifications of reasonably well-known therapies. Other procedures border on the exotic. The following is a chronological summary of case histories appearing in the literature over the last decade.

Nelson (1974) used reality therapy (Glasser 1975) administered by a nursing staff to enable a paranoid withdrawn patient to become more socialized on the ward. Paranoid symptomatology, per se, was little affected by this treatment although the patient expressed her delusional beliefs less often.

Beels (1975) illustrated the use of family therapy with case histories of a paranoid schizophrenic and other psychotics.

S. Williams (1976) described how a paranoid schizophrenic was treated successfully with short-term art therapy. Marked improvement in social functioning was noted after 15 days although, again, little change was observed in the amount of paranoid ideation.

Berwick and Douglas (1977) presented case histories of two female paranoid schizophrenics who were treated successfully through hypnosis using direct suggestions. An example of one of the hypnotic suggestions is informative:

> As each day goes by, Satan will have less control of your mind. You will gradually be rid of him and he will find someone else to plague. You will get stronger and stronger. Gradually, your memory will improve as your mind becomes free. His power over you will gradually diminish and become less and less. [p. 147]

This suggestion was reported once a week for 3 weeks. The delusion subsided and did not reoccur during a 6-month followup period.

Behavior Therapy. In a comprehensive discussion of token economy programs in mental health settings, Magaro et al. (1978) urge that greater research attention be paid to the dependent and independent variables of behavior therapy in clinical practice. Magaro et al. point out that currently we simply have an understanding of the range of behaviors effectively modified by token economy programs. Little is known about processes behind the results.

One of the independent variables identified by Magaro et al. as needing further exploration is diagnosis. A few controlled studies have been conducted which begin to fill this gap with reference to the specific diagnoses of paranoia and paranoid schizophrenia.

Wincze, Leitenberg, and Agras (1972) studied the effects of token reinforcement on the delusional speech of chronic paranoid schizophrenics. Ten patients (six males and four females), all paranoid, were included in the study. Hospitalization had been continuous for all patients and ranged from 2 to 35 years with a mean of 12.2 years. Baseline rates and outcome measures of delusional speech were obtained by timing tape-recorded interviews in three settings: (1) sessions with a therapist, (2) conversations with psychiatric nurses on the ward, and (3) 30-minute mental status interviews with a psychiatric resident unfamiliar with the design of the study. Noncontingent tokens were given to the patients to spend ad lib during the baseline period. During the experimental phase, tokens were awarded for every correct (i.e., nondelusional) response during the training sessions. Patients also were told that they would receive a token "for each minute you speak correctly to the nurses." No tokens were awarded during the interviews with the psychiatric resident. In addition to the tokens given during the training sessions, patients received feedback from the therapist pointing out the logical inconsistencies in their delusions. Token exchange rates were individualized for each patient depending on his or her particular preferences and pattern of noncontingent spending. The results showed that token reinforcement was associated with significant decreases in the amount of delusional speech in the training sessions and in conversations with nurses. The psychiatric residents, however, were unable to detect any differences in the rate of delusional speech between pre- and posttraining interviews. Furthermore, the cognitive feedback had a disruptive effect on at least three patients who became upset when the logic of their delusions was challenged. Wincze, Leitenberg, and Agras concluded that token reinforcement, while effective in reducing delusional speech, did not result in generalization beyond the setting in which it was used. They indicated that further procedures are necessary if generalization is to be achieved.

Leberman et al. (1973) treated fewer patients with a simpler token economy program and obtained results similar to those of Wincze, Leitenberg, and Agras. Four patients were reinforced with extra staff contact and evening snacks for refraining from delusional speech. All subjects showed significant decreases in delusional speech on the ward, but generalization to situations outside the treatment setting was minimal.

Better generalization was found by Kowalski, Daley, and Gripp (1976), who used a token economy system similar to that of Wincze, Leitenberg, and Agras on a much larger sample of patients: 15 nonpsychotic, 16 paranoid schizophrenic, and 29 nonparanoid schizophrenic (staff diagnoses). In contrast to Wincze and Leberman and their associates, Kowalski, Daley, and Gripp studied essentially acute schizophrenics (current hospitalization of less than 30 days and no more than one previous hospitalization). They used the NOSIE nurses' rating scale (Honigfeld and Klett 1965) as a more general measure of psychosocial functioning on a psychiatric ward; only a very few of the NOSIE items are concerned with delusions or other paranoid behavior. Results showed that paranoids improved immediately and continued to improve at an erratic, but progressive rate. The paranoids' improvement was better than that of other groups. Kowalski, Daley, and Gripp also found better generalization than that apparent in the studies of the Wincze and Leberman groups. It should be noted, however, that the latter two studies were concerned specifically with delusional speech while Kowalski, Daley, and Gripp measured general ward behavior. The differences in results appear to be another illustration of the previously reported paranoid tendency to show general improvement in social functioning while demonstrating little remission of paranoid and schizophrenic symptomatology. In addition, the nonchronic nature of the sample studied by Kowalski, Daley, and Gripp may have contributed to their better results with paranoids. They speculated that the paranoids in their sample showed more improvement because they possessed "superior cognitive and behavioral integrity relative to nonparanoids" (p. 374). It also is interesting to note that Kowalski, Daley, and Gripp measured adequacy of premorbid adjustment and found it unrelated to outcome.

These few controlled studies of basic behavioral treatment of paranoia suggest that paranoids initially respond quite well. There appears to be some problem, however, with generalization, especially in regard to the frequency of delusional speech. More studies are needed to test the reliability and validity of these early suggestive findings.

As was the case with psychotherapy, the behavior therapy literature is replete with interesting case studies. For instance, Hosford and Rifkin (1975) used methods similar to those of Wincze and Leberman and their associates in controlling persecutory hallucinations and delusions of a chronic paranoid individual. The patient was a prison inmate prone to violent outbursts in reaction to his psychotic experiences. Hosford, a behavior therapist, and Rifkin, a psychoanalytically oriented therapist, combined their efforts to use both behavioral and psychoanalytic techniques in the treatment process. The prison environment was particularly well suited for controlling the reinforcement contingencies of the prisoner's behavior. Prison hospital personnel were enlisted to help conduct a contingency management program using social reinforcement (e.g., smiling and patting the patient on the back whenever he performed one of the desired behaviors). After 10 weeks, the patient was spending more time socializing on the hospital ward in an appropriate manner; the violent behavior was essentially eliminated; and the frequency of the paranoid hallucinations and delusions was diminished, but not entirely eliminated. The program failed, however, to change the patient's erratic work behavior. This may have been because the prison environment provided too much inadvertent reinforcement for not working. Generally, however, the behavioral program was successful.

Weidner (1970) reported a case of *in vivo* desensitization of a paranoid schizophrenic. The patient had been hospitalized almost continuously for 6 years because of his persistent belief that the CIA was going to kill him. He reported hallucinations of the voices of CIA agents plotting against him. He was described as "a shy, passive, socially awkward man." Since the hallucinations occurred most frequently when the patient was on passes outside the hospital, desensitization was conducted first in the therapist's office, then in the therapist's car traveling outside the hospital grounds, and then in the open outside the hospital. Concomitant with therapy sessions outside the hospital grounds, the patient was encouraged to go on trips with other patients. Some social skills training also was implemented. After 10 weeks, the amount of time spent outside the hospital had risen dramatically. The patient also behaved in a more social and comfortable manner with others. No mention was made of the continuing frequency of paranoid symptoms, but since the patient was still in the hospital 36 weeks after the treatment began, it can be assumed that some evidence of psychotic functioning remained.

Behavior therapy with a more cognitive orientation has been reported in several case studies. Nydeggar (1972) used verbal conditioning and assertive training to eliminate hallucinatory and delusional behavior. J. Williams (1976) used self-monitoring of unwarranted assumptions of a delusional system in an ambulatory paranoid woman. Not only did the delusional behavior disappear in the Williams study, but the patient's MMPI paranoia score dropped to the normal range. Mann and Piorkowski (1973) used guided participation, role playing, and systematic desensitization to reduce fears in a paranoid alcoholic. The outcome showed the patient's alcoholism stopped with treatment, although some paranoid ideation remained. Johnson, Ross, and Mastria (1977) used a reattribution procedure to eliminate a sexual delusion in a 37-year-old black male. The treatment had dramatic results in a very short time (three sessions). All paranoid ideation was eliminated. The final diagnosis, however, was adult adjustment reaction because the patient did not show any psychotic symptoms other than the very circumscribed sexual behavior.

Finally Shorkey and Himle (1974) used systematic desensitization and medication (methohexital) to prevent recurring nightmares and insomnia in a chronic paranoid schizophrenic. The dreams were of the devil persecuting the patient by assuming the form of a snake and giving the patient electric shocks. The patient was afraid to sleep at night and would awake during the dreams, unable to go back to sleep. A standard desensitization program for snake phobia was instigated. After 4 weeks, the dreams were eliminated and there was no recurrence during a 2-year followup period. Unfortunately, however, the treatment had no effect on the patient's paranoid symptomatology and he remained hospitalized throughout the 2-year followup.

Group Therapy. A few poorly controlled studies suggest that group therapy may be effective with paranoia. Borowski and Tolwinski (1969) compared a combination of group therapy and drug treatment with drug treatment alone. Group sessions were held twice a week for 60 minutes over a 2-month span. Patients received 300–600 mg of chlorpromazine daily. The method of group therapy was to use reassurance and persuasion to encourage group interaction and clarification of problems concerning social interaction. Ratings of general social behavior were used to test the treatment effects. The results showed that 14 percent of the drug-only group improved over the 2-month period while 61 percent of the drug-plus-therapy group improved. Unfortunately, the ratings were not done blind to the group membership of the subjects, there were no nonparanoid patient controls, and no followup measures were obtained.

In a study of outpatient group therapy with recently discharged schizophrenics, Wong (1963) found that results were better when the group was made up of patients who had spontaneously formed acquaintances with each other while in the hospital. Although no estimate was made of premorbid adjustment, it is quite likely that Wong's previously acquainted group was made up of paranoids of higher premorbid functioning than the members of the other group who were unable or unwilling to get to know each other while in the hospital. Nonparanoid controls were not used in this study.

Another study lacking in nonparanoid controls was conducted by Carter and Jordan (1972), who engaged chronically hospitalized black paranoid men in reality-oriented group therapy. The group discussions were focused on issues of black identity and real problems the men had encountered in their lives outside the hospital. Paranoid content was avoided. The sessions were twice a week for 90 minutes. After 6 months, more than half of the group members had been released from the hospital. No other outcome or followup measures were reported.

Obviously, the group therapy studies have serious methodological flaws. Also, almost 10 years have passed since a study of group therapy with paranoids was last reported. The hint of promise in this technique would seem to justify further and better designed investigation.

Discussion

Two questions are essential for this review: (1) Is there a specific prognosis for paranoia? (2) Are certain treatments more or less effective for paranoia compared to other disorders?

The answer to the prognosis question is fairly well established by the studies covered by this review. When care is taken in diagnosis and measurement, paranoia is related to good premorbid psychosocial adjustment. This relationship, in itself, is enough to warrant optimism about the course of the disorder. Indeed, paranoids have shorter hospitalizations and recover their social functioning better than nonparanoids (with the possible exception of schizoaffective types). Prognosis for full remission of symptoms and avoidance of recurring hospitalizations, however, is poor. In other words, paranoids reintegrate fairly well with society, but retain much of what earns them the diagnosis of paranoia (i.e., suspicion, ideas of reference, grandiosity, and eccentric relationships with others). Paranoia usually subsides, but rarely disappears. When it does, the result may, at times, be a deterioration into a more withdrawn, chronic, nonparanoid psychotic condition. Even when remission of paranoid systems occurs without chronic deterioration, there is a greater likelihood of relapse than there is for nonparanoid psychoses.

The treatment question has several answers. For medication, the primary effect is an interaction between paranoia and premorbid adjustment. Good premorbid paranoid schizophrenics respond rather well to standard phenothiazine treatment, whereas good premorbid nonparanoids either do not respond at all or tend to deteriorate under the influence of medication. Poor premorbids tend to show a moderate response to medication independent of their paranoid status. With this reliably reported interaction, paranoid status emerges as a potentially important variable to consider in treatment, particularly of good premorbid schizophrenics. The results for other treatment approaches are not so clear in establishing paranoia as a critical variable. Systematic desensitization and other basic behavioral methods have a positive effect on the frequency of delusional behavior, but generalization appears limited. Dynamically oriented psychotherapy is much discussed, but poorly evaluated. Other approaches like group therapy, cognitive therapy, and milieu therapy hold promise, but need extensive evaluation.

Regardless of the method used in treatment, the results are similar. Paranoids regain good social adjustment, but retain many paranoid and/or psychotic symptoms, usually at a borderline level.

Very little evaluation has been done of specific treatment for paranoid schizophrenia, but even less has been done to study treatment outcome for nonschizophrenic paranoids. The prognostic studies suggest that the nonschizophrenic paranoid patients may show a different pattern of response to treatment, but there seldom has been a direct test of this suggestion.

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