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Depression and Schizophrenia in Hospitalized Black and White Mental Patients

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Project psychiatrists interviewed 192 hospitalized mental patients, ages 20 to 59 years, with a structured mental state examination. Each patient received two diagnoses, one by the hospital and an independent one by the project. According to the hospital diagnoses, race and diagnosis were strongly associated: a diagnosis of schizophrenia rather than affective illness was given more frequently to blacks than whites. According to the project's diagnoses, race and diagnosis were independent.

A comparison of the patterns of psychopathology exhibited by blacks and whites confirms the absence of any gross differences in abnormal behavior between them. When comparisons were made specific to depressives, however, blacks were found to have a quality to their depression different from whites.

The term race raises countless problems of definition as well as of its relationship with such widely divergent topics as rates of physical and cultural evolution, intelligence, psychopathology, and diagnosis. In psychiatry and the social sciences, which follow an essentially European and North American model, ethnocentric concepts of race have resulted in some unfortunate stereotyping of nonwhite races. For example, Carothers[1] studies of Africans purportedly found them impulsive, unstable, and lacking in initiative.

Most studies in the United States have reported lower rates of affective illness among blacks than among whites. Green[2] attributed the striking infrequency of depression among blacks to their presumably primitive mentality. Malzberg's[3] study of first admissions to New York State hospitals found that blacks had one quarter of the rate of whites for affective illness. A study by Jaco[4] of all residents seeking treatment in public and private mental hospitals in Texas found the disparity even greater: blacks having one seventh the affective rate of whites. Simon[5] also found a sharply lower incidence of depressive psychosis among blacks.

Wilson and Lantz[6] studied first-admission rates for manic depressive illness in the segregated state mental health facilities in Virginia. They found a reversal of the above differences, with blacks having four times the rate of whites.

Only one study seems to have compared black and white depressive patients with respect to specific details of their psychopathology. Tonks et al[7] reported that blacks diagnosed as depressive by a research psychiatrist using a semistructured interview had lower mean scores on 28 scales of depression than white depressive patients. However, when social class and severity of illness were controlled, the differences all but vanished.

With respect to schizophrenia, almost all studies of differences between blacks and whites have shown blacks to have a higher rate. Faris and Dunham[8] found blacks to have a 25% higher rate; a recent NIMH study[9] found blacks to have a greater than 65% higher rate. Frumkin[10] and Malzberg[3] both found blacks to have over twice the rate and Wilson and Lantz[6] found blacks to have three times the rate of whites.

Two studies report reversals of these differences. Jaco[4] studied admissions to all public and private mental hospitals in Texas and found the rate for schizophrenia among whites to be 25% higher than the rate among blacks. In a Baltimore study, Pasamanick[11] found that among admissions to state hospitals, blacks had a 75% higher rate than whites. Among admissions to private and Veterans Administration hospitals, on the other hand, whites had a higher rate. Pasamanick[11] also studied a sample of over

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800 subjects drawn from the community and given a thorough clinical work-up. The rate of schizophrenia for whites was ten times the rate for blacks. The overall rates across his various samples showed whites with a 25% higher prevalence rate of schizophrenia than blacks.

Two studies were found to have compared black and white schizophrenic patients with regard to specific details of their psychopathology. Vitols et al[12] conducted a study from case records of delusions and hallucinations among schizophrenic first admissions to segregated white and black hospitals in North Carolina. The incidence of delusions in the two groups was nearly the same: 63% for whites and 59% for blacks. Visual hallucinations were experienced by significantly more blacks than whites (30% vs 13%), as were auditory hallucinations (57% vs 35%). De Hoyos and De Hoyos,[13] in a study of case records of new admissions to a hospital in Indiana, reported similar findings for delusions and hallucinations.

A major drawback to almost all of the studies reviewed above is that for data on psychopathology or diagnosis they relied either on hospital statistics, on the patient's hospital records, or in the few instances in which patients were actually interviewed, on the psychiatrist's clinical impressions. Only the study by Tonks et al[7] relied on a semistructured interview and a precoded scaling system. In this paper we report on the association between race, diagnosis, and psychopathology determined by structured interview assessments and consistent diagnostic standards.

Methods

One hundred ninety-two hospitalized mental patients between 20 and 59 years of age were interviewed. The nine New York State psychiatric hospitals which serve New York City and the suburban counties of Nassau, Rockland, Suffolk, and Westchester supplied the patients, all of whom lived within these geographic boundaries. In addition to age, the sole criterion for inclusion in the study was that the patient be a new admission to the hospital.

Each patient was interviewed within 72 hours of admission by a project psychiatrist using a structured mental state interview containing over 700 items of psychopathology. Following that, each patient received a short psychiatric history interview. A diagnosis was then reached based upon the *International Classification of Diseases*, eighth edition.

Psychopathology was characterized in two ways. First, each patient was scored on 45 scales measuring various aspects of disturbed mood, thought, and behavior. Second, each patient was assigned to one of seven mutually exclusive categories on the basis of his pattern of scores on the psychopathology scales. The categories denoted were: disorganized, hypomanic-disorganized, hypomanic-bioplar, mild, bipolar, hypomanic-moody, and moody.

Patients in the disorganized category suffer such frank psychotic symptoms as delusions, flat affect, and disordered speech, but exhibit no mood disturbances. Patients in the moody category report or exhibit signs of depression, retardation, or anxiety, but no signs of perceptual or conceptual disorder. Patients in the bipolar category exhibit signs of both disorganization and mood disturbance. Patients in a category with a hypomanic component also report feelings of elation or euphoria. Patients in the mild category are characterized by little, if any, overt psychopatholgy.

The ratings of psychopathology, the project's diagnoses, and the categorization of psychopathology have been shown to be reliable,[14,15] concurrently valid,[16] and predictively valid.[17]

Of the patients, 133 were white, 55 were black, and four were of unknown racial backgrounds. The blacks were similar to the whites in social class.

As part of the same study, patients in London area mental hospitals were interviewed. Blacks in the London hospitals were all from the West Indies and thus represented a sample different in nativity as well as in ethnicity from the whites in London. Because of this confounding, no comparisons between blacks and whites in London are reported.

The term schizophrenia as used in this paper includes the four main subcategories (simple, hebephrenic, catatonic, and paranoid) plus acute, latent, residual, schizo-affective, other, and unspecified. The paranoid states are also included under schizophrenia. The term affective illness is employed here to include involutional melancholia, reactive depressive psychosis, depressive neurosis, affective psychosis unspecified, reactive excitation, depression not otherwise specified, and the three manic depressive classifications of depressed, circular, and manic. When describing depression in the results we excluded the circular and manic types of manic depressive illness and the reactive excitation classification.

This paper is confined to reporting on schizophrenic, affective, and depressive disorders. All other diagnoses are excluded from our results because, aside from work concentrating on geriatric populations, most prior research has concentrated on these diagnostic categories. Also, our previous studies[18] indicate that our ratings are more sensitive to the schizophrenic and affective diagnoses than to other illnesses.

Results

Hospital Diagnosis.—Table 1 presents the frequencies of schizophrenia and affective illness as determined by the hospital diagnosticians for the two racial groups. Fifteen percent of the whites but not a single one of the blacks were diagnosed as affectively ill by the hospital. The association between race and the hospital diagnosis of schizophrenia or affective illness is statistically significant ($\chi^2=5.80$, df = 1, $P<.05$).

This association between hospital diagnosis and race cannot be attributed to any differences between blacks and whites in the kinds of psychopathology they exhibit as elicited by the project's mental state examination (Table 2). The distributions across the seven categories of psychopathology are not significantly different between blacks and whites ($\chi^2=2.97$, df = 6, NS). What is especially striking is that of the 17 patients (nine white and eight black) who were in the moody category (characterized by the presence of depression, retardation, or anxiety and the absence of any signs of disordered thought), only two (both white) were diagnosed as affectively ill by the hospital.

Project Diagnosis.—Table 2 suggests that there are no gross differences in psychopathology between blacks and whites. The project's diagnoses confirm this absence of association (Table 3). The project diagnosed nearly 50% of the whites and about 60% of the blacks as affectively ill. These two proportions are not significantly different ($\chi^2=1.12$, df = 1, NS).

Psychopathology.—Black and white patients who received a project diagnosis of schizophrenia were compared for specific details of their psychopathology on the 45 scales measuring disturbed thought and behavior. The two groups did not differ significantly on any of the scales. Unlike the patients studied by Vitols et al[12] and De Hoyos and De Hoyos,[13] the black schizophrenic patients in New York State hospitals did not report more visual or auditory hallucinations than the white schizophrenic patients.

With respect to patients diagnosed by the project as depressive, on the other hand, black depressive patients exhibited a number of differences from white depressive patients (Table 4). The two groups were similar on retardation and depressed mood, but the black depressive patients reported significantly more worry, muscular tension, general anxiety, autonomic symptoms associated with anxiety, somatic complaints, and irritability. These differences are in the same direction as reported elsewhere in the literature,[19] but are in the opposite direction from those reported by Tonks et al.[7] On none of the other scales of psychopathology (measuring, inter alia, delusions, hallucinations, and disordered thought) were black depressive patients significantly different from white depressive patients.

Comment

In previous publications[16,18] we have indicated a consistent difference between the diagnoses of the New York State mental hospitals and the project: the hospitals tend to underdiagnose affective illnesses. The literature study presented here indicates that state mental hospitals (with the exception of Wilson and Lantz's[6] study which Thomas and Sillen[19] criticize as politically motivated) report even fewer affective cases among blacks compared to whites. This hesitancy to diagnose blacks as affectively ill is more than compensated for by a strong tendency to diagnose blacks as schizophrenic more frequently than whites. In view of our findings it is possible that the diagnostic differences found between blacks and whites are a reflection of US hospital psychiatrists' diagnostic habits as much as anything else.

The project's findings in the area of depressive psychopathology differ from those of Tonks et al,[7] who reported slightly less depressive psychopathology for blacks than whites. The project found more of certain kinds of affective symptomatology among blacks. Tonks et al[7] sample was drawn from outpatient, emergency room, and inpatient facilities, while the project's patients were all inpatients.

The project's findings in the area of schizophrenic psychopathology also differed from those of Vitols et al[12] and De Hoyos and De Hoyos.[13] They found blacks reporting more hallucinations than whites. Both studies used the method of record review with no structured interviewing involved. The project, on the other hand, showed no differences in psychopathology between black and white schizophrenic patients.

The studies of psychopathology by Tonks et al,[7] Vitols et al,[12] and De Hoyos and De Hoyos[13] differ from the project's in terms of the sampling and methodology involved and, therefore, the different results are not unexpected.

Conclusion

Using a structured mental-state interview and scales and categories of psychopathology derived from it, we can draw the following conclusions from our analysis of race, diagnosis, and psychopathology.

There is no significant association between race and the project's diagnosis. This contradicts other studies based upon state mental hospital statistics and the results of the

Table 1.—Hospital Diagnosis by Race in Nine New York State Hospitals

	Disorder		
Race	Affective	Schizophrenic	Total
White	13	73	**86**
Black	0	44	**44**
Total	**13**	**117**	**130**

Table 2.—Category of Psychopathology by Race for Schizophrenic or Affectively Ill Diagnoses by Hospitals

Category	Whites, % (N = 86)	Blacks, % (N = 44)
Disorganized	25.6	22.7
Hypomanic-disorganized	22.1	22.7
Hypomanic-bipolar	10.5	9.1
Mild	10.5	4.5
Hypomanic-moody	3.5	2.3
Bipolar	17.4	20.5
Moody	10.5	18.2
Total	**100.1**	**100.0**

Table 3.—Project Diagnosis by Race in Nine New York State Hospitals

	Disorder		
Race	Affective	Schizophrenic	Total
White	38	41	**79**
Black	23	15	**38**
Total	**61**	**56**	**117**

Table 4.—White vs Black Depressive Patients on Mood Disturbance Scales

	Blacks (N = 19)		Whites (N = 32)		
Scale	$\bar{X}$	SD	$\bar{X}$	SD	*t* Ratio
Worry	58.26	11.65	51.77	8.66	+2.27*
Muscular tension	57.17	12.43	50.27	8.88	+2.31*
General Anxiety	55.83	13.05	47.53	7.77	+2.86†
Situational anxiety	52.76	14.44	47.67	5.74	+1.78
Avoidance anxiety	54.33	17.85	48.77	8.43	+1.51
Autonomic symptoms	52.98	11.39	45.87	7.02	+2.77†
Slowed thinking	54.19	12.58	51.08	11.88	+0.88
Motor retardation	54.40	11.95	54.69	12.96	−0.08
Diminished self-opinion	53.69	11.99	52.93	12.92	+0.21
Depressed mood	57.41	9.63	54.01	10.12	+1.18
Somatic complaints	59.59	11.76	50.74	9.57	+2.93†
Irritability	56.33	10.96	46.57	6.68	+3.96†
Loss of interests	52.84	11.28	52.59	11.59	+0.08
Lack of concentration	52.26	11.71	52.03	11.68	+0.07

* $P < .05$.
† $P < .01$.

official hospital diagnoses given to this sample that found whites more likely to have an affective diagnosis than blacks and blacks more likely to have a schizophrenic diagnosis than whites.

Black and white schizophrenic patients do not differ in psychopathology. This finding does not support Vitols and associates'[12] conclusion that black schizophrenic patients have more hallucinations than white schizophrenic patients.

Finally, our scales of psychopathology do indicate significant differences between black and white depressive patients: blacks show more worry, muscular tension, general anxiety, and autonomic symptoms. This contradicts Tonks et al's[7] study which found blacks with slightly less depressive psychopathology than whites.

Hospital psychiatrists should be made aware of the existence of depression among black patients and also that the qualities of this mood disturbance may differ from those of white depressive patients.

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CORRECTION

Reversed Figures.—In the article "Disrupted 24-Hour Patterns of Cortisol Secretion in Psychotic Depression" by Sachar et al that appeared in the January ARCHIVES, Fig 3 and 4 were transposed so that the legends for the two patients were reversed. The figures are reprinted here correctly.

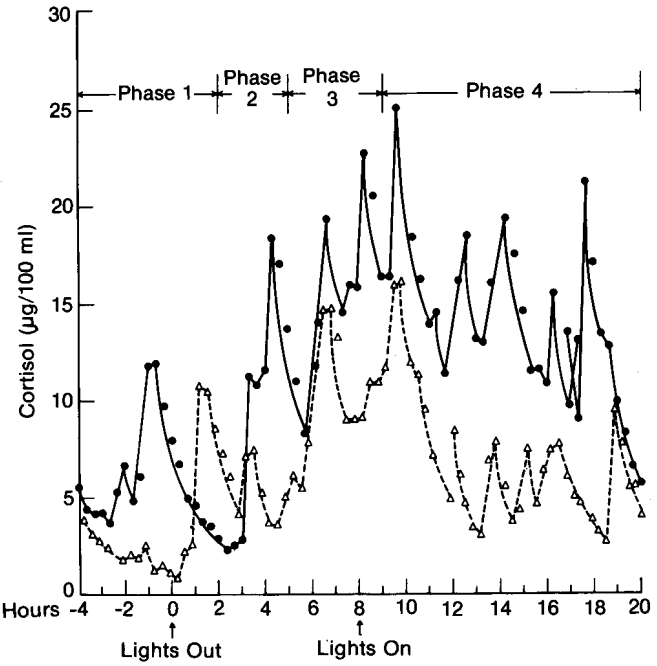
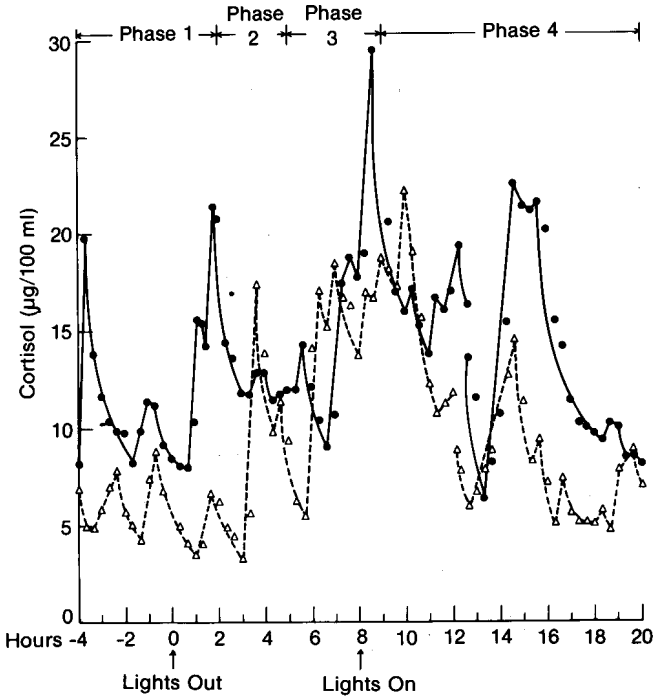


Fig 3.—The 24-hour plasma cortisol patterns in a depressed 42-year-old woman (patient 2) before (solid line) and after (broken line) treatment. Lights out at 10:40 PM during illness and 11:30 PM after treatment.

Fig 4.—The 24-hour plasma cortisol patterns in a depressed 48-year-old woman (patient 3) before and after treatment. Lights out at 10:20 PM during illness and 11 PM after treatment. This patient made an incomplete psychiatric recovery.



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