



**WESTERN
MICHIGAN**
UNIVERSITY

The Journal of Sociology & Social Welfare

Volume 8
Issue 1 *March*

Article 15

March 1981

Factors Distinguishing Urban and Rural State Mental Hospital Patients in Florida

Elane M. Nuehring
Barry College

Robert A. Ladner
Behavioral Science Research Institute of Coral Gables, Florida

Follow this and additional works at: <https://scholarworks.wmich.edu/jssw>



Part of the Rural Sociology Commons, Social Work Commons, and the Urban Studies and Planning Commons

Recommended Citation

Nuehring, Elane M. and Ladner, Robert A. (1981) "Factors Distinguishing Urban and Rural State Mental Hospital Patients in Florida," *The Journal of Sociology & Social Welfare*: Vol. 8 : Iss. 1 , Article 15.
Available at: <https://scholarworks.wmich.edu/jssw/vol8/iss1/15>

This Article is brought to you by the Western Michigan University School of Social Work. For more information, please contact wmu-scholarworks@wmich.edu.



**WESTERN
MICHIGAN**
UNIVERSITY

FACTORS DISTINGUISHING URBAN AND RURAL
STATE MENTAL HOSPITAL PATIENTS IN FLORIDA*

Elane M. Nuehring, MSW, Ph.D.
Barry College School of Social Work
Miami, Florida

and

Robert A. Ladner, Ph.D.
Behavioral Science Research Institute
Coral Gables, Florida

ABSTRACT

This study compares the patients of two state mental hospitals, one serving an urban region, the other a rural district. The purpose is to explore urban and rural patient differences on background, hospital history and experience, post-release living situation, use of community mental health services, and post-release functioning. A summary attempt to distinguish urban from rural patients using discriminant function analysis established that rural-urban differences exist in symptom manifestation, the patient's personal and social environment, and institutional processing patterns. These patient differences have implications for the development of aftercare services.

The traditional focus of rural-urban differentials in mental health research has been almost exclusively one of predicting incidence and prevalence of disorder. Typically these issues have been answered by pointing to urban settings and situations coinciding with them that are thought to promote higher rates of disturbance, treated or untreated. Hence, the stresses of urban living (Faris and Dunham, 1939), especially mediated by social class (Eaton, 1974; also Liem and Liem, 1978) have been considered risk factors in mental disorder. Other contributing dimensions include in-migration of the psychiatrically disturbed from rural areas to urban (Murphy, 1965); lower tolerance of deviance and weaker primary relationships in urban areas (Eaton, 1974); and the greater availability, accessibility and utilization of psychiatric

*Data for this study were collected for the Aftercare Project, of the Florida Department of Health and Rehabilitative Services, Mental Health Program Office and are used with permission of that agency.

services in urban areas (Eaton, 1974; Dohrenwend, 1975). Not only are incidence and prevalence seen to vary with urbanization, but type of disorder also appears subject to that influence. Rural areas have been associated with more functional psychoses, except schizophrenia, which along with the neuroses and character disorders, tend to be urban phenomena (Dohrenwend, 1975: 370).

If there are real urban-rural differences in the extent and nature of disorder, based on different stresses, different social definitions of behavior, and different service utilization patterns, then it is reasonable to expect treated patients to differ according to their urban or rural situation. The purpose of this study is to compare the discharged patients of two state hospitals, one serving a cosmopolitan urban region, the other a more homogeneous and essentially rural district, and to consider the possible ramifications for aftercare in the two areas. The issue to be addressed here is the extent to which two groups, one rural, and one urban, differ on some combination of variables related to (a) other demographic characteristics; (b) hospital history and experience; (c) post-release living situation and use of community mental health and (d) post-release functioning.

METHODS

The initial sample of 414 consisted of all willing patients released from February to April, 1976, from one urban, and one rural state hospital in a southeastern state. The severely medically infirm and those with criminal charges pending were excluded from the sample. At release, background social data and clinical information were gathered from hospital records and with a brief interview with each patient. At six months post-discharge, a follow-up interview was conducted with all patients who were still in the community and a "significant other" (SO) designated by the patient. Patients readmitted before the six months follow-up were also interviewed as soon as possible after return to the hospital, along with an SO. With attrition due to deaths, geographic moves, and refusals at follow-up, the total sample with sufficient data for analysis was reduced to 332; 227 came from the urban institution, 105 from the rural. Of the total, 240 were still in the community at six months, and 92 had relapsed. Readmission for the urban group was 30%; for the rural group 24% - this was not a statistically significant difference. Diagnoses for the groups were relatively homogeneous; 70% were designated functionally psychotic, primarily schizophrenic; the remaining 30% were equally spread among the organic syndromes and character disorders, all considered severe. Table 1 describes the sample demographically.

The follow-up interviews, use of a patient-SO combination to provide information on the patient, and a number of composite indices of adjustment and functioning were based on the prior studies

TABLE 1: PATIENT DEMOGRAPHIC CHARACTERISTICS AND REGION

	Rural (n=105)	Urban (n=227)	TOTAL (n=332)	χ^2
Sex:				
Male	57%	60%	59%	
Female	43	40	41	.19
Marital:				
Ever married	63%	51%	55%	
Never married	37	49	45	3.39
Occupation:				
White collar	25%	14%	18%	
Laborer	64	63	63	
None	11	23	19	9.81**
Age:				
0-29	32%	40%	37%	
30-49	32	39	37	
50+	36	21	26	7.49*
Ethnicity:				
Anglo	63%	57%	59%	
Non-Anglo	37	43	41	.87
Religion:				
Protestant	67%	55%	59%	
Catholic	9	27	21	
Other	24	18	20	13.78**
Education:				
High school or less	65%	58%	60%	
High school diploma or more	35	42	40	1.02

* $p < .05$; ** $p < .01$

of Freeman and Simmons, 1963; Angrist, *et.al.*, 1968; Michaux, *et.al.*, 1970; Katz and Lyerly, 1963; Katz, 1966; Katz, *et.al.*, 1966, 1969. The indices of patient performance, revalidated and re-analyzed to assure internal reliability, included twin measures of social functioning and symptomatology based on both the patient's self report and the ratings of the S0, typically living with or in daily contact with the patient. In addition, S0s were assessed as to their general attitudes, beliefs and stereotypes of mental patients (the S0-Stereotype Index).

Patient performance, then, was considered to involve (1) the patient's adequacy in social functioning as represented by indices measuring the quality of leisure time use and successful social relationships, and feelings of social rejection and stigma; (2) the patient's psychiatric symptom level as represented by indices of anxiety, depression, general psychopathology, and incompetence in self care and personal management. Further details on the

sampling, instrumentation, index validation, and field data collection have been reported in Nuehring and Thayer (1978).

Since the basic task was to distinguish urban from rural patients, Discriminant Function Analysis (DFA) was selected. (Becker and Kronus, 1977; Klecka, 1975; Morrison, 1969). DFA is a multivariate technique used to distinguish two or more groups, by means of a statistically "best" combination of variables forming a single dimension or "function" (Table 2). To paraphrase Becker and Kronus (1977: 488), it is assumed that urban patients cluster at one pole in space, rural patients at the other pole. Variables which discriminate strongly between the groups "gravitate" closer to one pole or the other and have large weights, or large standardized discriminant coefficients. Variables which do not differentiate the groups very much are located midway between poles, and have small standardized discriminant coefficients. The mean scores of the groups on the function, called "centroids," then determine what variables in the function characterize which group. The group with the highest mean score is the one best described by variables displaying large positive (+) standardized discriminant coefficients; the group with the lowest mean score is the one best typified by variables with large negative (-) coefficients.

Beyond separating groups, DFA also provides a basis for classification of individuals to their appropriate groups. If the discriminant function allows correct classification in excess of chance, it is regarded as useful. The more sensitive standard against which to test the discriminant function is the proportion of the smaller group correctly classified. Thus, a high percentage of correctly classified rural cases is sought in this analysis.

DISTINGUISHING URBAN AND RURAL PATIENTS WITH MULTIPLE VARIABLES

For present purposes, the DFA was used to investigate the following questions: What conditions or characteristics in combination differentiate urban from rural patients? Which of the variables in the constellation are most important in separating the groups? How well does this combination of variables, mathematically translated into a discriminant function, differentiate the groups?

Table 2 exhibits the results of the DFA achieved for urban versus rural patients with a wide array of discriminating variables concerning patient background, hospitalization history, post discharge situation and performance available to contribute to the discriminating function.

Taking the last discriminant analysis question first, the best combination of measures derivable differentiated the urban from the rural patients moderately well (group centroids, $-.75$ to $+.41$).

TABLE 2: DISCRIMINANT FUNCTION ANALYSIS ON RURAL AND URBAN HOSPITAL PATIENTS

Variables Entered Stepwise		Standardized Discriminant Coefficients	
In the Function			
Anxiety (Patient Report)			-.31
Pathology (Patient Report)			.04
Personal Incompetence (SO Report)			-.23
Anxiety (SO Report)			-.20
Discomfort with Living Situation			.05
Feelings of Stigma (Patient Report)			.21
Social Relationships (SO Report)			.09
Employment Since Discharge			.13
Admission Status (Involuntary)			-.55
Duration, Most Recent Hospitalization			-.21
Occupation (White Collar, Laborer, None)			.22
Age			-.22
Religion (non-Protestant)			.14
RELATIONS			
FUNCTION: EIGENVALUE	RELATIVE PERCENT	CANONICAL CORRELATION ²	FUNCTIONS DERIVED
.45	100%	.31	0
WILKS LAMBDA			
.68			
CHI-SQUARE			
73.96			
DEGREES OF FREEDOM			
13			
SIGNIFICANCE			
.000			
PERCENT OF TOTAL			
ACTUAL GROUP	n (%)	PREDICTED GROUP 1 (%)	PREDICTED GROUP 2 (%)
Rural	105 (32%)	66%	34%
Urban	227 (68%)	15%	85%
PERCENT OF TOTAL CORRECTLY CLASSIFIED:			78%
FUNCTION 1			-.75
FUNCTION 2			+.41

Correct classification of the smaller group, rural patients, was 66% -- better than chance, although 36 of 105 rural patients were wrongly predicted to be among the urban group. Wilks Lambda, prior to derivation of the function, was statistically significant (.68), suggesting the array of available measures offered respectable discriminating power. The canonical correlation squared indicated about one third of variance (31%) in the groups was explained by the function. Overall, then, there is an identifiable gulf between urban and rural patients with respect to their demography, their hospitalization history and experiences, their post-release situation and functioning.

However, the discriminant function is not a cohesive, singular dimension, owing to the complex nature of the urban-rural difference. The function, better viewed as an equation or "model", is comprised mainly of measures of psychiatric symptoms and characteristics of the most recent hospitalization, with occupation and age representing the only reasonably strong demographic discriminators.

Roughly in order of discriminating power, patients can be differentiated as follows: Rural patients were more likely than urban patients to have been admitted involuntarily and to have stayed in the hospital longer. Confirmed by both patient and SO indices, rural patients were more anxious and also more personally incompetent after discharge; however, they did not experience feelings of social stigma and rejection as did the urban patients. Demographically, rural patients were older than urban (consistent with Eaton's 1974 observation that hospitalization occurs at a later age among rural persons). They were more likely to claim an occupation, white collar or blue collar, than urban patients, but there was a better chance that the urban patient with an occupation would have been employed after discharge. Rural patients were more likely to be Protestant while the urban group was heavily represented by Catholics and a small number of Jewish persons.

Social role performance did not seem to vary by urban-rural region, except that urban patients were seen as having slightly more successful, interactive social relationships than rural patients.

Barely separating the groups at all, there was a slight tendency for urban patients to be more uncomfortable with their living situations (which were somewhat more likely to be non-familial settings) and to report a greater level of general psychopathology (bizarre thoughts, hallucinations, memory impairment, etc.).

DISCUSSION

Observations based on these data are generally consistent with other research documenting different manifestations of mental disorders between urban and rural settings, in which rural patients

appear to be more afflicted with the functional psychoses (see Dohrenwend, 1975).

In addition to the nature of illness, urban and rural patients appear to be processed differently by their respective institutions. Succinctly, the urban person is a quickly expedited, relatively young voluntary patient while the rural citizen is likely to be an older involuntary patient and to be confined longer, perhaps reflecting a personal situation that in fact tolerates deviant individuals longer but ultimately uses more coercion. An interesting variable, which these data do not contain, is the degree to which patients in urban settings are processed in and out of the hospital exclusively by social and psychiatric agencies, while in rural settings, family and community maintain greater control over the decision to hospitalize. The "professional" decision to hospitalize may be met with greater patient compliance, particularly if it has also facilitated earlier detection of the problem. On the other hand, the "family" decision to hospitalize could evoke patient resistance, feelings of betrayal, and the like, resulting in involuntary procedures and longer confinements.

Urban-rural patient differences, then, appear to be based on a complex interaction of degree and type of symptoms and institutional processing. Of these two aspects of the urban-rural differential, the one that has been least investigated is the latter: the workings of rural versus urban social agencies, courts and hospitals and the implications for patient identification, patient labeling, and modes of intervention. This encourages an organizational focus that subsequent studies need to take in considering regional and administrative differences in mental health care patterns, including hospitalization and aftercare.

With respect to aftercare, rural patients seem to be an older, longer institutionalized, less socially adept, and more impaired group. They also report occupations but are less likely to be employed after release. This argues for development of rural psychosocial rehabilitation programs with provision for long term involvement with patients, which can focus on minimal vocational skills, transitional and/or sheltered employment, and social activities. Supervised living could also aid this older, more handicapped group, along with medication maintenance and psychiatric supervision.

To date, however, comprehensive long-term psychosocial programs offering the full array of vocational preparation, sheltered work settings, social opportunities, supervised living as needed, and psychiatric aftercare have developed for the most part in metropolitan areas. Good examples are Fountain House in New York City and Fellowship House in Miami, Florida. Fellowship House, for instance, is a multi-site organization providing chronic mental patients permanent membership in a system offering a wide variety of social activities and recreation, places to live with varying degrees of

supervision, sheltered employment, training for competitive employment, and "transitional" employment which bridges the gap from Fellowship House's own work programs to the competitive job market. At Fellowship House diagnoses and treatment are irrelevant concepts. All "members" are seriously and chronically disturbed and medical intervention is aimed at chemotherapy maintenance only. The program's goals are to engage individuals on a long term basis and to enhance quality of social life, capacity for independent functioning, social adjustment and level of productivity within the real limits imposed by the psychiatric handicaps.

Urban patients were somewhat more sensitive to feelings of stigma after discharge; for them, aftercare programs might orient toward socially easing the transition back to the community by putting released patients in contact with self-help groups of other mental patients and by counseling families and significant others to minimize pejorative stereotypes and to help shape realistic expectations of the patient. The urban group -- younger, with briefer hospital histories, greater social skills, less psychiatric disability -- also evidenced a somewhat better likelihood of employment if they had occupations.

Thus, it appears that the urban patients could be relatively well served within the existing network of service if that network were systematically pursued. There are, in metropolitan areas, existing resources for self-help group involvement, outpatient counseling for patients and families, medication maintenance, and vocational preparation. The key to effective delivery of these services is, of course, that hard-to-attain level of coordination required to bring multiple services from multiple agencies to an individual.

An alternative is again offered by psychosocial rehabilitation programs such as Fellowship House, where comprehensive aftercare is provided within one program. For the urban patient, psychosocial rehabilitation might emphasize more work with the individual's own social and family network, rather than replacing it with program structured social and residential life. Also, a vocational thrust aimed at training and preparation for competitive employment as opposed to long-term sheltered work may be more feasible.

Hence, for rural patients, aftercare should focus in part upon providing a nurturing social environment, enhancing independent functioning and social adjustment, and locating opportunities for individuals to engage in some degree of productive activity. A rural application of psychosocial rehabilitation would be desirable, with emphasis on social and residential programming, along with sheltered work or competitive employment situations in which patients' existing occupational capabilities could be used. For urban patients, aftercare should focus in part upon providing new

skills to enable individuals to engage in productive activity and upon modifying existing social networks to maximize the patient's ability to be maintained within them. Psychosocial rehabilitation models, such as Fellowship House, again are promising urban systems, if emphasis is directed somewhat less toward total maintenance of the patient and more toward development of the patient's own vocational and social strengths, and the patient's optimal autonomy.

BIBLIOGRAPHY

- Angrist, S., M. Lefton, S. Dinitz, B. Pasamanick
1968 *Women after Treatment*. New York: Appleton-Century-Crofts.
- Becker, C. and S. Kronus
1977 *Sex and Drinking Patterns: An Old Relationship Revisited in a New Way*. *Social Problems*, 24 (4): 482-497.
- Dohrenwend, B.
1975 *Sociocultural and Social-Psychological Factors in the Genesis of Mental Disorders*. *Journal of Health and Social Behavior*, 16 (4): 365-39.
- Eaton, W.W., Jr.
1974 *Residence, Social Class, and Schizophrenia*. *Journal of Health and Social Behavior*, 15 (4): 289-299.
- Faris, R. and W. Dunham
1939 *Mental Disorders in Urban Areas*. Chicago: University of Chicago Press.
- Freeman, H. and O. Simmons
1963 *The Mental Patient Comes Home*. New York: Wiley.
- Katz, M. and S. Lyerly
1963 *Methods of Measuring Adjustment and Social Behavior in the community: I. Rationale, Description, Discriminative Validity and Scale Development*. *Psychological Reports*, 13: 503-535.
- Katz, M.
1966 *A typological Approach to the Problem of Predicting Response to Treatment*. Pp. 85-101 in J. Wittenborn and P. May (eds.), *Prediction of Response to Pharmacotherapy*. Springfield, Illinois: Thomas.
- Katz, M., H. Lowery, J. Cole
1966 *Behavior Patterns of Schizophrenia in the Community*. Pp. 209-230 in M. Lorr (ed.), *Explorations in Typing Psychotics*. New York: Pergamon.
- Katz, M., H. Gudeman, K. Sanford
1969 *Characterizing Differences in Psychopathology Among Ethnic Groups: A Preliminary Report on Hawaiian-Japanese and Mainland-American Schizophrenics*. Pp. 103-115 in W. Caudill and T. Lin (eds.), *Mental Health Research in Asia and the Pacific*. Honolulu: East-West Center Press.

- Klecka, W.
 1975 Discriminant Analysis. Pp. 434-467 in N. Nie, et al. (eds.), SPSS: Statistical Package for the Social Sciences, Second Edition. New York: McGraw-Hill.
- Liem, R. and J. Liem
 1978 Social Class and Mental Illness Reconsidered: The Role of Economic Stress and Social Support. Journal of Health and Social Behavior, 19 (2), June: 139-156
- Michaux, W., M. Katz, A. Kurland, K. Gansereit
 1969 The First Year Out: Mental Patients After Hospitalization. Baltimore: Johns Hopkins.
- Morrison, D.
 1969 On the Interpretation of Discriminant Analysis. Journal of Marketing Research 6 (May): 156-163
- Murphy, H.
 1965 Migration and the Major Mental Disorders. Pp. 5-29 in M.B. Kantor (ed.), Mobility and Mental Health. Springfield, Illinois.
- Nuehring, E. and J. Thayer
 1978 The Aftercare Project: A Report to the Florida Department of Health and Rehabilitative Services. Tallahassee: Florida Department of HRS.
- Nuehring, E.
 1978 Utilization of Psychiatric Aftercare in the Community: Demographic, Hospital and Patient Performance Indicators. Report to the Florida Department of H.R.S. Miami: Barry College School of Social Work.
- Schwab, J., C. Brown, C. Holzer, B. Stevenson
 1970 Coming in the 1970's: An epidemic of depression. Attitude I (January-February): 2-6.
- Tudor, W., Tudor, J.F., and Gove, W.R.
 1977 The Effect of Sex Role Differences on the Social Control of Mental Illness. Journal of Health and Social Behavior, 18 (2): 98-111.