

# Health Care of the Chronically Mentally Ill: The Culture Broker Model

*Brenda Schwab, Ph.D.*  
*Robert E. Drake, M.D., Ph.D.*  
*Elisabeth M. Burghardt, M.Ed.*

**ABSTRACT:** The chronically mentally ill tend to receive inadequate medical care for nonpsychiatric illnesses and to have poor health care status. Their medical problems lead to excessive morbidity and mortality and adversely affect their adjustment to psychiatric illness. The authors argue that many of the barriers to medical care for these patients can be overcome by using case managers as "culture brokers"—persons who provide bridges between the worlds of the chronically mentally ill and medical providers. This paper presents the culture broker model and its roots in anthropology, and illustrates its application to the medical care of the chronically mentally ill with case examples.

With the advent of deinstitutionalization, medical care as well as psychiatric care of the chronically mentally ill has shifted to the community. Although increasingly sophisticated models for psychiatric treatment and psychosocial rehabilitation have evolved, a clear model for providing medical care to these patients has not emerged (Lieberman & Coburn, 1986). The only exception to this generalization is the development of medical outreach clinics for the homeless mentally ill in urban areas (Brickner et al., 1984).

At the same time, it has become increasingly clear that these patients are in poor physical health (Farmer, 1987; Roca, Breakey, & Fisher, 1987) and that poor health care status adversely affects their adjust-

---

Dr. Schwab, Dr. Drake and Ms. Burghardt are affiliated with the Dartmouth Medical School. Address requests for reprints to Dr. Schwab, 2 Reservoir Rd, Hanover N.H. 03755.

ment in a variety of ways (Adler, Drake & Stern, 1984; Tessler & Manderscheid, 1982). The chronically mentally ill carry an increased risk of developing nonpsychiatric, medical illnesses (Eastwood, 1975; Koranyi, 1979; 1980). Their medical problems are often unrecognized (Koranyi, 1979; Muecke & Krueger, 1981), and their morbidity and mortality rates are disproportionately high (Alleback & Wistelt, 1986; Eastwood, 1975; Martin et al., 1985; Tsuang, Woolson, & Fleming, 1980; Kendler, 1986). In addition, their medical illnesses are associated with increased length of psychiatric hospitalizations (Allodi & Cohen, 1978), diminished social and vocational adjustment (Tessler & Manderscheid, 1982), and increased psychiatric symptomatology (Koranyi, 1980).

The factors that underlie increased vulnerability to medical illness and poor medical care among long-term psychiatric patients remain largely speculative. A number of possibilities have been suggested: On the patient's side, psychiatric services are often used inappropriately for primary care (Koranyi, 1980). Patients may ignore pain (Kampmeier, 1977) and often fail to report symptoms accurately (McCarrick et al., 1986). They frequently focus on their psychosocial situation to the exclusion of physical symptoms (Koranyi, 1980). Self-administered questionnaires for psychiatric patients are not reliable indicators of health status (Koranyi, 1979). Disorganized behavior, the absence of financial resources, mistrust of caregivers, and anxiety about interpersonal contact prevent visits to medical doctors when necessary (Karasu et al., 1980). Psychiatric patients often misunderstand their diagnoses or instructions from their physicians (Karasu et al., 1980).

On the physician's side, disordered mood or behavior may be incorrectly attributed to psychiatric illness (Hall, Beresford, & Gardner, 1982; Koranyi, 1980). Psychiatrists are often reluctant to perform physical examinations (Anderson, 1980), and other physicians are sometimes unwilling to provide medical care to the severely mentally ill (Leeman, 1975). In addition to psychiatric symptoms, abuse of drugs and alcohol (Hall, Beresford, & Gardner, 1982) as well as side effects of psychotropic medications (McCarrick et al., 1986) complicate medical diagnosis. Addressing poor health habits and behaviors, such as smoking and obesity, is often not included as part of routine medical care for chronically mentally ill patients (Masterson & O'Shea, 1984, McCarrick et al., 1986).

Improving the nonpsychiatric health care of the chronically mentally ill requires linking patients with resources, a networking function similar to others provided by case management (Dancy, 1972). The

purpose of this paper is to define conceptually and practically the case manager's role in advocating for medical care. We conceptualize this role as a "culture broker" who provides a bridge between the worlds of the chronically mentally ill patient and the medical care providers. A culture broker is at once an advocate for the patient, a translator between patient and doctor, and an expert in the psychosocial world of the chronically mentally ill. We shall present three cases that illustrate the culture broker's role and then elaborate on the concept, its development, and its relevance for community mental health.

### *Case 1*

Mr. M is a 26-year-old, white male who lives at home with his mother. He has not worked since developing schizophrenia at the age of twenty. At baseline the patient is extremely paranoid and suffers from constant auditory hallucinations. He exhibits a number of bizarre mannerisms, beliefs, and rituals. He watches TV in his home most days. He is unable to participate in day treatment because of his extreme paranoia. Antipsychotic medications reduce his belligerence but not his psychosis. He has refused medical attention as well as psychosocial rehabilitation. His mother is also suspicious and generally reinforces his world view. She is, however, quite concerned about his physical health.

On several occasions, Mr. M's mother brought him to the hospital emergency room because of vomiting and stomach pain. When Mr. M denied symptoms and claimed that a demon occupied his body, he was sent home. Since he continued to suffer from periodic vomiting and epigastric pain, his case manager suspected that he must have some medical disorder. The patient, on the other hand, rejected any form of medical care. In his mind, doctors were part of a complex persecutory system.

The case manager worked diligently with the patient, his mother, and an internist to arrange medical care by educating all three about what to expect. When the patient finally did see his physician, as a result of his mother's insistence, his case manager served as a translator. She helped the physician to understand that the demon in the patient's stomach was a sharp pain, and she reassured Mr. M that he would not be harmed by the doctor. On examination the patient was found to have a duodenal ulcer, and he responded to conservative medical treatment. Mr. M learned to take his medicine in order to "calm the demon" in his stomach and recovered rapidly.

### *Case 2*

Ms. W is a 29-year-old, single, white female who lives with her parents in a rural area. She has carried the diagnosis of schizophrenia since late adolescence and has also been disabled by somatic complaints since then. Ms. W attends a day treatment program, but has never been able to live independently or to work for long. She has had a number of psychiatric hospitalizations but none for the past three years.

Ms. W seems to have learned at home and during her early hospitalizations that medical illnesses and complaints lead to a caring response from parents and caregivers. She denies any psychiatric illness but instead explains her hospitalizations and disability in terms of medical problems. She frequently compares notes with other patients and has been noted on several occasions to report medical symptoms that other patients were reporting. She has relationships with several medical doctors, and at the time she entered our program, she was experiencing severe short-term memory problems as a result of taking 13 prescribed medications.

Ms. W's treatment includes a careful coordination of medical, psychiatric and rehabilitation care by her case manager, who accompanies Ms. W on all medical and psychiatric visits to ensure that the patient and family are informed about and understand the treatment plan and the need to avoid unnecessary medications. Medical care has been consolidated with one physician who consults regularly with the case manager. This physician understands Ms. W's tendency to somatize psychological distress. He discusses all of Ms. W's symptoms with her case manager and attempts at all times to minimize medication use. Ms. W now takes one medication, an antipsychotic drug, and has experienced a clearing of her sensorium and decrease in her anxiety and depression. Her case manager helps the family and the day treatment staff to avoid reinforcing her style of expressing emotional pain in terms of somatic complaints and helps Ms. W to practice talking directly about her feelings, fears, and needs. With this plan, she has become increasingly functional in day treatment and has been working part-time. She is developing an interest in male friends for the first time and is able to speak up and participate in peer groups. Her visits to medical doctors have dramatically decreased.

### *Case 3*

Mr. T is a 40-year-old, married, white male with a 15 year history of schizophrenia and drug abuse. He lives with his wife, works only sporadically as a manual laborer, and spends most of his time wandering the streets, peripherally involved with a group of mildly sociopathic drug and alcohol abusers. He takes fluphenazine and occasionally attends a program for psychosocial rehabilitation. His extensive use of various substances clearly exacerbates his auditory hallucinations, violent and threatening behaviors, and difficulties with his wife. When he abuses drugs and threatens her, she often has to call the police and obtain a restraining order.

Over the years, Mr. T has abused a variety of drugs and medications, but he has settled on trihexyphenidyl as a favorite drug. He typically obtains trihexyphenidyl from physicians and takes large quantities to get "high." As the drug effects resolve, he exhibits agitated, threatening, and drug-seeking behavior. These episodes of drug abuse often culminate in psychiatric hospitalizations. The patient obtains trihexyphenidyl easily by reporting extrapyramidal side effects from fluphenazine to a variety of doctors in offices and emergency rooms. Usually he does not have any side effects, but he knows that most physicians will prescribe trihexyphenidyl for side effects if he reports or feigns them. In addition, he convinces other patients to obtain trihexyphenidyl for him from physicians in a similar manner or simply trades medications with other patients.

After repeated confrontations by his case manager, Mr. T admitted his trihexyphenidyl abuse and recognized that the drug destabilized his psychiatric condition. Treatment thereafter focused on the substance abuse. This involved not only drug education and counseling with the patient and his wife but also an extensive educational and networking program with other patients, local physicians and emergency rooms. With the patient's permission, his case manager alerted local physicians that he abused trihexyphenidyl and that his complaints about side effects should be channeled back to the community mental health center (CMHC) psychiatrist. The CMHC psychiatrist maintained the patient's dose of fluphenazine at a level that did not produce side effects and made it clear that he would not receive trihexyphenidyl. This treatment approach led to significant reductions in substance abuse, marital conflict, and psychiatric hospitalization. Local medical doctors were also relieved to have a plan for handling this demanding, difficult patient.

## *DISCUSSION*

The chronically mentally ill tend to receive inadequate medical care that may be insufficient (as in case #1), overextensive and uncoordinated (case #2), or inappropriate (case #3). These problems usually reflect some interaction among several factors: the patient's distorted views of body, illness, and the medical care system; the physician's difficulties in understanding, accepting, communicating with, and formulating an effective treatment plan for the patient; and the patient's particular social matrix, which often includes only family, fellow psychiatric patients, and mental health workers. These cases illustrate how problems in the delivery of medical care to the chronically mentally ill can be ameliorated by using case managers as "culture brokers"—persons who bridge the worlds of the chronic psychiatric patient and the medical care system.

Each patient must of course be assessed individually regarding capacity to understand his or her own health care issues and to negotiate with the health care system. Our experience indicates, however, that the majority of patients have difficulty obtaining adequate medical care on their own. We therefore believe that an initial evaluation should clarify not only the patient's current health care status but also specific barriers to obtaining adequate health care. The case manager, with help from local doctors and the CMHC nurses and psychiatrist, can complete this assessment and formulate a plan to help the patient obtain medical care and learn appropriate health care behaviors. This plan constitutes an essential part of every patient's treatment.

### *THE CULTURE BROKER MODEL*

A culture broker serves as more than a patient advocate or translator between the chronically mentally ill patient and his or her doctor during the medical visit. The culture broker must also offer a knowledge resource for both patient and doctor. Illness and treatment regimens must make sense to the patient in terms of his or her intrapsychic and social worlds; similarly, some of the patient's private and social worlds must be explained to the doctor.

The concept of the culture broker derives from the anthropological tradition and refers to persons who serve as mediators between two cultural systems (Van Willigen, 1986). The concept was modified and developed by Weidman and colleagues as an intervention strategy in

the delivery of mental health services to several ethnic populations in the Miami, Florida area (Lefley & Bestman, 1984; Van Willigen, 1986; Weidman, 1982). The goals of the Miami Health Ecology Project were to increase providers' knowledge of the culture of the client population, to improve the client population's access to resources, and to enhance communication between providers and clients (Van Willigen, 1986).

The culture broker model reflects the anthropological (and social psychiatric) perspective that beliefs and behavior "make sense" when viewed in their natural social contexts and from the point of view of the people involved. This perspective proves valuable in health care settings where the patients' way of life, beliefs, customs, and social relationships must be understood and incorporated into care rather than circumvented, ignored, or negated (Harwood, 1981; Kleinman, Eisenberg, & Good, 1978). Anthropologists have found that people's ideas about health and illness as well as their health behaviors are tied to all other aspects of their lives, including religious beliefs, economic role requirements, and family systems.

Ethnographic research indicates that the chronically mentally ill share many patterns of thinking and social interaction. This is partly because over time their social worlds often become restricted to service providers, fellow patients, and family members (Estroff, 1981; Falloon, Boyd, & McGill, 1984; Scheper-Hughes, 1987). They recognize and identify certain styles, attitudes, and problems as characteristic of themselves and fellow patients, and share attitudes toward outsiders and service providers (Estroff, 1981). They also share certain linguistic expressions as a function of their illness, the stigma of mental illness, and their experience with the treatment system (Amarasingham, 1984; Estroff, 1981; Oxman, Rosenberg, & Tucker, 1982). Many share a history of prolonged institutionalization and manifest behaviors that develop in the context of hospital culture (Rosenberg, 1970) and persist when they are deinstitutionalized (Scheper-Hughes, 1987). Younger patients who have not been institutionalized may also share a set of behaviors and norms (Bachrach, 1987). Whether or not their shared characteristics constitute a "culture," chronic psychiatric patients clearly share certain problems and styles of behavior that are often unintelligible to nonpsychiatric physicians and other medical personnel. The model of the case manager as culture broker is conceptually useful for clarifying the bridging actions that are necessary to help these patients negotiate their way through the medical care system and for specifying ways the case manager can facilitate that negotiation.

The culture broker model resembles the consultation-liaison psychiatrist's role in negotiating the different clinical realities of patients and

general medical physicians in the hospital setting. As Kleinman (1978) points out, patients and physicians can hold dramatically different views regarding the cause of physical problems and what should be done about them even when they are members of the same cultural group. The consultation-liaison model has been successful in dealing with communication problems that result from these differing views rather than the patient's psychopathology (Kleinman, 1978). The culture broker model described here specifies the case manager's strategic role in resolving such problems when psychiatric patients need non-psychiatric medical care.

### *THE CASE MANAGER'S ROLE*

Case management is the centerpiece of current community support programs (Stroul, 1986). The essential functions of case management are advocacy, linking patients with appropriate supports and services (Dancy, 1972), and teaching patients the skills to survive and achieve optional adjustments and satisfactions in the community (Stein & Test, 1985). Our case managers, like those in other community support programs (Goldstrom & Manderscheid, 1983), are mental health workers who are willing to help with practical tasks, such as acquiring housing and entitlements, as well as to provide traditional mental health services.

In many ways the psychiatric case manager is ideally situated to become a culture broker in the delivery of medical care to the chronic mental patient. The case manager has established a relationship with the patient based on trust and an understanding of the patient's problems and ways of communicating. The case manager is well acquainted with the daily routines and social network of the patient, has frequent and regular contact with the patient, and knows how the patient expresses physical and psychological distress. The case manager is aware of potential influences other than health status or symptoms on a patient's illness behavior, such as financial problems, home environment, and psychiatric problems. The case manager has access to the patient's medical records, understands the psychiatric medications, and is usually aware of drug and alcohol abuse on the patient's part. The case manager may also be aware of the patient's history of medical contacts and negative attitudes and fears about medical providers. The case manager is able to form relationships with medical providers and has access to CMHC psychiatrists and nurses for medical information and backup.

To insure optimal medical care, the case manager may need to intervene assertively with patient, support system, and medical caregivers. This intervention includes addressing financial, bureaucratic, or transportation problems that limit access to care. It also involves anticipating problems, assertively taking part in important interactions, and providing education, support, and skills training whenever appropriate. For example, modeling and role playing may decrease the patient's fear and resistance before seeing the doctor. Similarly, providing some background and education to a doctor before a visit may facilitate a smoother transaction.

By accompanying the patient to the doctor's office, the case manager supports the patient, helps to remember the physician's comments, and interprets them in terms that are understandable to the patient. He or she negotiates for realistic aftercare plans and helps the patient to comply with treatment. The case manager also ensures that the patient's interests are protected in terms of competence and informed consent.

On the other side, the case manager helps the physician to understand the patient's complaints, to collect a history, to evaluate psychosocial issues, and to formulate a treatment plan that makes sense to the patient. With the patient's consent, the case manager communicates the medical care plan to the family, halfway house staff, or whomever else may need to understand it. The case manager also serves as a contact person when the patient is unreachable for follow-up.

In each of these steps the case manager serves as an auxiliary ego, providing functions not currently available to the patient but encouraging the patient to be as independent as possible (Harris & Bergman, 1987). Teaching the patient to function independently in terms of health care needs becomes part of the treatment plan. In addition to teaching skills directly, the case manager demonstrates a concern for self-care and models effectiveness so that these ego functions can be internalized over time.

There are, of course, pitfalls to using case managers in the culture broker role. Some case managers want to focus on traditional psychotherapy interventions, to provide office-based rather than mobile community-based services, or are reluctant to become involved in medical care issues because of their own fears or feelings. These case managers argue that medical care should be the province of the medically trained staff. They typically need more education and support from the CMHC medical staff to function in the role of culture broker.

The culture broker model is but one approach to the problems of linking medical care and psychiatric care (Pincus, 1980; 1987). CMHCs

typically use a variety of approaches and often fail to meet the medical needs of their patients (Faulkner et al., 1986). Psychiatrists, physician's assistants, or nurse practitioners are sometimes used to provide primary medical care within the CMHC or linkage with medical care providers outside the CMHC. Other CMHCs attempt to develop a relationship with one doctor or group of doctors in the community. These arrangements may be equally effective as using case managers in the culture broker role. Research is needed to clarify medical needs, barriers to treatment, service provision models, and differential efficacy.

### CONCLUSION

Inadequate medical care and poor health care status adversely affect the community adjustment of the chronically mentally ill. To address these problems, we advocate expanding the usual networking role of case managers. They are ideally suited to function as culture brokers between the worlds of chronic mental patients and medical practitioners. Case managers know how to engage these patients; they understand the patients and their psychosocial worlds; and they can form effective relationships with medical care providers. Our clinical experience suggests that the culture broker model is efficient and effective, but we strongly recommend research to elucidate how psychosocial factors and different models of service provision affect the health care behaviors and medical status of the chronically mentally ill.

### REFERENCES

- Adler, D., Drake, R., Stern, R. (1984). Viewing chronic mental illness: A conceptual framework. *Comprehensive Psychiatry*, 25, 192-207.
- Alleback, P. & Wistelt, B. (1986). Mortality in schizophrenia. *Archives of General Psychiatry*, 43, 650-653.
- Allodi, F., Cohen, M. (1978). Physical illness and length of psychiatric hospitalization. *Canadian Psychiatric Association Journal*, 23, 101-106.
- Amarasingham, L.R. (1984). "This will clear your mind": The use of metaphors for medication in psychiatric settings. *Culture, Medicine and Psychiatry*, 8, 49-70.
- Anderson, W.H. (1980). The physical examination in office practice. *American Journal of Psychiatry*, 137, 1188-92.
- Bachrach, L.L. (1987). The chronic mental patient with substance abuse problems, in Leona Bachrach Speaks: Selected Speeches and Lectures. New Directions for Mental Health Services, No. 35. San Francisco: Jossey-Bass.
- Brickner, P.W., Filardo, T., Iseman, M., Green, R., Conanan, B., Elvy, A. (1984). Medical aspects of homelessness, in *The Homeless Mentally Ill*. Edited by Lamb HR. Washington, DC: American Psychiatric Press.
- Dancy, R.R. (1972). The broker: A new specialist for the community mental health center. *Hospital and Community Psychiatry*, 23, 221-3.

- Eastwood, M.R. (1975). *The Relation Between Physical and Mental Illness*. Toronto: University of Toronto Press.
- Estroff, S.E. (1981). *Making it crazy: An ethnography of psychiatric clients in an American community*. Berkeley: University of California Press.
- Falloon, I.R.H., Boyd, J.L., McGill, C.W. (1984). *Family Care of Schizophrenia: A Problem-Solving Approach to Treatment of Mental Illness*. New York: The Guilford Press.
- Farmer, S. (1987). Medical problems of chronic patients in a community support program. *Hospital and Community Psychiatry*, 38, 745-749.
- Faulkner, L.R., Bloom, J.D., Bray, J.D., et al. (1986). Medical Services in community mental health programs. *Hospital and Community Psychiatry*, 37, 1045-1047.
- Goldstrom, I.D. & Manderscheid, R.W. (1983). A descriptive analysis of community support program case managers serving the chronically mentally ill. *Community Mental Health Journal*, 19, 17-26.
- Hall, R.C.W., Beresford, T.P., Gardner, E.R. (1982). The medical care of psychiatric patients. *Hospital and Community Psychiatry*, 33, 25-34.
- Harris, M., Bergman, H.C. (1987). Case management with the chronically mentally ill: A clinical perspective. *American Journal of Orthopsychiatry*, 57, 296-302.
- Harwood, A. (1981). Introduction, in *Ethnicity and Medical Care*. Edited by Harwood, A. Cambridge, MA: Harvard University Press.
- Kampmeier, R.H. (1977). Diagnosis and treatment of physical disease in the mentally ill. *Annals of Internal Medicine*, 86, 637-645.
- Karasu, T.P., Waltzman, S.A., Lindenmayer, J.P., et al. (1980). The medical care of patients with psychiatric illness. *Hospital and Community Psychiatry*, 31, 463-472.
- Kendler, K.S. (1986). A twin study of mortality in schizophrenia and neurosis. *Archives of General Psychiatry*, 43, 643-649.
- Kleinman, A. (1978). Clinical relevance of anthropological and cross-cultural research: concepts and strategies. *American Journal of Psychiatry*, 135, 427-431.
- Kleinman, A., Eisenberg, L., Good, B. (1978). Culture, illness and care: Clinical lessons from anthropological and cross-cultural research. *Annals of Internal Medicine*, 88, 251-258.
- Koranyi, E.K. (1979). Morbidity and rate of undiagnosed physical illnesses in a psychiatric clinic population. *Archives of General Psychiatry*, 36, 414-419.
- Koranyi, E.K. (1980). Somatic illness in psychiatric patients. *Psychosomatics*, 21, 887-891.
- Leeman, C.P. (1975). Diagnostic errors in emergency room medicine: Physical illnesses in patients labeled "psychiatric" and vice versa. *International Journal of Psychiatric Medicine*, 6, 533-540.
- Lefley, H.P. & Bestman, E.W. (1984). Community mental health and minorities: A multiethnic approach, in *The Pluralistic Society: A Community Mental Health Perspective*. Edited by Sue S, Moore T. New York: Human Sciences Press, Inc.
- Lieberman, A.A., Coburn, A.F. (1986). The health of the chronically mentally ill: A review of the literature. *Community Mental Health Journal*, 22, 104-116.
- Martin, R.L., Cloninger, R., Guze, S.B., et al. (1985). Mortality in a follow-up of 500 psychiatric outpatients, I. Total mortality. *Archives of General Psychiatry*, 42, 47-54.
- Masterson, E., O'Shea, B. (1984). Smoking and malignancy in schizophrenia. *British Journal of Psychiatry*, 145, 429-432.
- McCarrick, A.K., Manderscheid, R.W., Bertolucci, D.E., et al. (1986). Chronic medical problems in the chronic mentally ill. *Hospital and Community Psychiatry*, 37, 289-291.
- Muecke, L.N. & Krueger, D.W. (1981). Physical findings in a psychiatric outpatient clinic. *American Journal of Psychiatry*, 138, 1241-1242.
- Oxman, T.E., Rosenberg, S.D., Tucker, G.J. (1982). The language of paranoia. *American Journal of Psychiatry*, 139, 275-282.
- Pincus, H.A. (1980). Linking general health and mental health systems of care: Conceptual models of implementation. *American Journal of Psychiatry*, 137, 315-320.
- Pincus, H.A. (1987). Patient-oriented models for linking primary care and mental health care. *General Hospital Psychiatry*, 9, 95-101.
- Roca, R.P., Breakey, W.R., Fischer, P.J. (1987). Medical care of chronic psychiatric outpatients. *Hospital and Community Psychiatry*, 38, 741-745.
- Rosenberg, S.D. (1970). Hospital culture as collective defense. *Psychiatry*, 33, 21-35.
- Scheper-Hughes, N. (1987). "Mental" in "Southie": Individual, Family and community responses to psychosis in South Boston. *Culture, Medicine, and Psychiatry*, 11, 53-78.

- Tessler, R.C. & Manderscheid, R.W. (1982). Factors affecting adjustment to community living. *Hospital and Community Psychiatry, 33*, 203-207.
- Stein, L.I., Test, M.A. (1985). The training in community living model: A decade of experience. *New Directions for Mental Health Services, No. 26*. San Francisco: Jossey-Bass.
- Stroul, B.A. (1986). Models of community support services: Approaches to helping persons with long-term mental illness. Boston: Center for Psychiatric Rehabilitation.
- Tsuang, M.T., Woolson, R.F., Fleming, J.A. (1980). Premature deaths in schizophrenia and affective disorders. *Archives of General Psychiatry, 37*, 979-983.
- Van Willigen, J. (1986). Cultural brokerage, in *Applied Anthropology: An Introduction*. By Van Willigen J. MA; Bergin & Garvey Publishers, Inc.
- Weidman, H.H. (1982). Research strategies, structural alterations and Clinically Applied Anthropology, in *Clinically Applied Anthropology: Anthropologists in Health Science Settings*. Edited by Chrisman NJ, Marezki TW. Boston: D. Reidel Publishing Co.