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Bipolar Disorder and Locus of Control: Implications for Treatment Compliance

Linda J. Ryan-Cox

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Linda J. Ryan-Cox, R.N.C., B.A.

An Abstract Presented to the Faculty of the Graduate School
of Lindenwood University in Partial Fulfillment of the
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Abstract

Theoretically, a paradigm shift in the 1960s made community-based care and out-patient treatment an acceptable alternative to institutionalization of the chronically mentally ill. Utilizing the Levenson Multidimensional Locus of Control Scale for Psychiatric Patients, the author conducted a causal-comparative study to determine if a link exists between having bipolar disorder, a chronic mental illness, and an external locus of control, a link which might explain the inability of this population to maintain their optimal level of mental health utilizing the out-patient treatment model. Though the study failed to demonstrate any significant differences in external measures of loci of control between the control group and the bipolar disorder group, it also failed to demonstrate a significant difference in measure between the groups on the internality scale. This leads the researcher to further hypothesize that the solution to improving out-patient treatment compliance may lie in strengthening and reinforcing the patient's internality rather than focusing on significant measures of externality found in several other researchers' findings. Additionally, the author provides a view of bipolar disorder and the barriers which conflict with activities of daily living and health maintenance for this population.

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COMMITTEE IN CHARGE OF CANDIDACY

Anita Sankar, Assistant Professor,
Committee Chairperson and Faculty Advisor

Nancy Fawcett, Ph.D., Adjunct Professor

Marilyn Patterson, Ph.D., Associate Professor

Dedication

In loving memory of
Edward Nicholaus Ehlers
1924-1978

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Chapter 1

Introduction

In 1990, a National Institute of Mental Health Task Force defined chronically mentally ill individuals as persons who have severe and persistent disabilities that result from mental illness. The term *severe* was defined as functional limitations in activities for daily living, social interaction, concentration, and adaptation to change in the environment. *Persistent* was defined as likely to last for 12 months or more (Coursey, Alford, & Safarjan, 1997). Of the 15 leading causes of disability in the developed countries, five are mental health problems; bipolar disorder ranks in these five severe and persistent mental problems (Neugebauer, 1999).

Bipolar disorder, commonly referred to as manic-depressive disorder, is a potentially fatal disease. Classified by the American Psychiatric Association (1994) in Diagnostic and Statistical Manual of Mental Disorders, this illness is characterized by the individual's cycling between depressive, euthymic, and hypomanic or manic mood fluctuations. In addition to depression or mania, the episodes may be accompanied by psychosis, violent behavior, and self-harming behavior or suicide. The illness is chronic and debilitating.

Before 1800, the chronically mentally ill were generally cared for by their families or by local officials who assumed responsibility for their well-being. Others were boarded out with families willing to accept them; still others were kept in public almshouses. After 1820, however, public

mental institutions or asylums and private "madhouses" proliferated throughout America. By the mid-nineteenth century, "insanity" came to be viewed as the consequence of immorality, improper living conditions, or an upset in the natural balance between the individual's predisposition and his defective environment. Institutionalization was a sine qua non because it severed the link between the patient and the improper environment (Bootzin and Acocella, 1988; Grob, 1996). During the first half of the twentieth century, the number of institutionalized patients skyrocketed. State care acts had redefined organicity and senility in psychiatric terms and aged persons began to be admitted to mental hospital beds for long-term treatment. By the 1950s, it was evident that the vast psychiatric institutional complex could no longer support its population of 550,000 patients (Grob, 1996; Ray, 1983). Simultaneously, phenothiazines were introduced. These antipsychotic agents were far more effective than earlier classes of drugs in managing psychotic behavior. These drugs rapidly began to play a major role in deinstitutionalizing America's chronic mentally ill and their discovery has proven to be a milestone in the history of psychiatric treatment (Bootzin and Acocella, 1988; Ray, 1983).

Psychiatric hospital populations declined rapidly after 1955. A paradigm shift had made community-based care and out-patient treatment, at least in theory, an acceptable alternative to institutionalization (Grob, 1996). In reality, however, as we begin a new millennium, there remains an absence of longitudinal responsibility for meeting the needs of the chronic mentally ill.

The community-based/out-patient treatment model exists upon several assumptions: (1) patients have homes, (2) patients have

sympathetic families or other individuals willing and able to assume long-term responsibility for their care, (3) communities would accept the mentally ill living among them, and (4) community mental health centers were prepared and willing to accept responsibility for patients' diverse needs (Grob, 1996; Scheid-Cook, 1991). A study conducted in 1960 by M. Kramer (as cited in Grob, 1996) demonstrated 48% of the mental hospital population was unmarried, 12% was widowed, and 13% was divorced or separated. The assumption that patients could always reside in the community with their families was not realistic. Additionally, the treatment model presumes all psychiatric patients are always capable of cooperating with their prescribed out-patient treatment regimen all of the time. Such a presumption is paradoxical to the nature of some of the chronic mental disorders, including bipolar disorder, which may intermittently interfere with the patient's insight or impair cognitions or produce paranoia or apathy disabling the patient's ability or desire to comply with care. In one study by Ley and Llewellyn (1995. as cited in Hughes & Hill, 1997), the overall average non-compliance rate for self-administering psychiatric medication was slightly above 40%. This study is particularly significant in that antimanic drugs must be administered regularly in order to maintain the therapeutic blood level required to prevent relapse.

An important construct derived from social learning theory, health locus of control, may be a useful framework from which to examine the problem of out-patient treatment compliance amongst chronically ill individuals diagnosed with bipolar disorder. The construct, defined from

a multidimensional typology, includes "internal," "powerful others," and "chance" loci of control. Individuals with an internal locus of control believe that reinforcements are a result of personal effort and take responsibility for themselves, whereas individuals with an external locus of control (i.e., "powerful others" and "chance") believe reinforcements occur as a result of forces outside their personal control and ability to maintain responsibility (Marks, 1998; Sharf, 1996). With regard to medication compliance, an individual with an internal locus of control would be inclined to believe he was capable of minimizing his chances of relapse by complying with prescribed medications. An individual possessing a strong belief in powerful others locus of control may respond by either readily adapting to the enforced treatment compliance or he may reject the powerful other's supervision altogether. The individual possessing a chance locus of control is likely to believe he has little control over his illness and with or without medication compliance, the illness will recur in a 'whatever will be, will be' manner.

While several chronic psychiatric populations have been affected by the dramatic change in the treatment model for mental illness, this study will focus exclusively on those individuals diagnosed with bipolar disorder. The author will examine the clinical course and prognosis, epidemiology, etiology, morbidity, comorbidity, and treatment and management of this disorder. Examining this disease process in conjunction with the locus of control construct of motivational behavior, the author will examine the ability of the bipolar disorder patient to adhere to an individualized out-patient health maintenance treatment model.

Significance and Rationale for Study

It is estimated that two million people living in the United States have bipolar disorder (Jamison, 1996; Lewis, 1996). The illness causes significant pain and severe and long-lasting repercussions for the individual's personal, social, and occupational functioning. It is estimated that more than two-thirds of those with bipolar disorder are not receiving medical treatment and of those untreated individuals, 20% will eventually end their lives in suicide (Jamison, 1996). This mortality rate illuminates the necessity for long-term treatment compliance and prevention of relapse. Mental health professionals continually struggle to engage this chronic psychiatric population in out-patient treatment programs as well as in psychopharmacotherapy compliance. Because of the significant degree of out-patient treatment noncompliance, in-patient recidivism, and suicide, it is important to explore the issue of locus of control to determine if there is a significant difference in locus of control measures of individuals with and without bipolar disorder.

Knowledge of the etiology of patient noncompliance will aid mental health professionals and, perhaps, familial caregivers to identify strategies for engaging the bipolar individual in consistent, effective maintenance treatment.

Theoretical Framework

The disease process of bipolar disorder will be examined from an organic medical model while examination of the bipolar individual's behavior will be approached from a social learning perspective utilizing the aforementioned locus of control construct.

Social learning theory focuses on the study of covert behaviors which take place within the individual and cannot be easily observed. The theory, introduced by Albert Bandura in the 1960s, proposes a reciprocal interaction system between the individual's environment, beliefs, anticipations, self-perceptions, and behaviors. At the center of this system are cognitive structures of self-awareness, self-reinforcement, and self-efficacy which influence one's thoughts, behaviors, and feelings in addition to one's perception of how capable he is of dealing with life tasks. Bandura believes that reinforcement is insufficient to explain learning; he states much learning occurs through observing and modeling. He further believes that reinforcement does not have to be external but may come from within the individual in the form of vicarious or self-reinforcement. Self-efficacy, or perception of one's ability to deal with different types of situations, is another important component of Bandura's theory (Sharf, 1996).

Applied to the bipolar patient, both the social learning framework and locus of control construct provide a roadmap for treatment planning. If treatment noncompliance stems from psychiatric patients' higher scores on external locus of control, as demonstrated in studies by Shybut (1968. as cited in Levenson, 1973) and Cromwell, Rosenthal, Shakow, and Zahn (1961. as cited in Levenson, 1973), the individual may benefit from cognitive behavioral therapy to identify possible cognitive distortions. Restructuring cognitions may re-empower the individual to assume self-responsibility and develop an internal locus of control. On the other hand, if an external locus of control does not play a significant role in the chronic psychiatric patient's functional ability, as indicated in a study completed by Harrow and Ferrante (1969. as cited in Levenson, 1973),

the mental health professional may examine the individual's need for re-education about his illness or, perhaps, provide counseling to encourage the client to discuss barriers to self-responsibility. Consistent with social learning theory, group support or individual counseling may be recommended to assist the client to develop a stronger sense of self-efficacy as well as to provide him with the opportunity for learning by observation and modeling.

Research surrounding locus of control proliferated during the latter half of the 1960s and the decade which followed. Since then, however, interest in the topic has waned. Similarly, during the same time period, much research was generated in the wake of the paradigm shift and transition of chronic mental patients from institutionalization to community-based treatment. Likewise, concern about this population's quality of care and quality of life has waned. But, it is obvious from data on treatment noncompliance and relapse and suicide rates that ongoing concern and problem-solving is necessary to provide adequate care for chronically mentally ill bipolar individuals.

Statement of Purpose

The purpose of this study is to determine if there is a link between bipolar disorder, a chronic mental illness, and locus of control. Dissecting the root of the problem, obstacles to self-responsibility for long-term treatment, should lead to solutions for improving treatment compliance and overall quality of life.

Statement of Hypothesis

It is hypothesized that individuals diagnosed as having bipolar disorder, a chronic mental illness, will demonstrate a significantly greater

measure of "powerful other" and "chance" loci of control than individuals who have never experienced a diagnosed mental disorder.

Operational Definitions of Variables

This causal-comparative study will compare two independent variable groups: one group will consist of 30 individuals who have been medically diagnosed as meeting the DSM criteria for bipolar disorder. The subgroups, Bipolar I and Bipolar II, differ in symptomatology and will be further discussed in the review of literature. However, for the purposes of this study, they will be collectively referred to as a singular entity, bipolar disorder. As this study will explore the possible effects of the chronicity of the disease, a stipulation for inclusion in this sample will include a history of two or more prior in-patient psychiatric hospitalizations. The other sample group will consist of 30 individuals who have never been diagnosed with a mental disorder.

The dependent variable is locus of control. Locus of control is a construct defined as an individual's beliefs about the location (internal or external) of controlling forces in their life. This variable will be operationalized via measurement with the Levenson Multidimensional Locus of Control Scales for Psychiatric Patients (MLOCP) which measures the locus of control of adjustment and empowerment.

Chapter 2
Review of the Literature
Introduction

History of Treatment of the Chronically Mentally Ill

Throughout time, mankind has struggled to explain and control abnormal behavior. The attitudes toward and the treatment of the chronically mentally ill have varied across time and across cultures. Historically, victims of mental illness have been viewed as "possessed," "mad," "insane," "lunatics," "deviants," and, at times, as "ill."

During the stone age, deviant behavior was viewed as the product of supernatural forces such as the movement of the stars, the vengeance of the gods, or the operation of evil spirits. It was believed that trephining a hole in the skull would allow the trapped evil spirits to escape from the head (Bootzin and Acocella, 1988).

Descriptions of the ancient disease now called bipolar illness appear in the biblical Old Testament (El-Mallakh, 1997). Descriptions of psychoses also appear in many of the writings of the Babylonians, Egyptians, and ancient Hebrews who believed mental illness to be caused by evil spirits; incantations to ward off the spirits have been found in their existing writings (Murray, 1988).

Later, another accepted cure for possession, exorcism, was used to coax or force the evil spirits out of their victim. Cruel techniques such as whipping, starving, or prolonged submersion in water were utilized in an effort to make the afflicted individual's body a less comfortable habitation for the devil (Bootzin and Acocella, 1988).

With Hippocrates' classification of mania and melancholia as mental disorders, a period of more humane treatment was ushered in. It is recorded that Hippocrates' prescribed treatment for melancholia involved rest, exercise, a bland diet, and abstinence from sex and alcohol. During this period, it was also believed that an excess of blood gave rise to rapid shifts in mood: too much black bile made people melancholic while too much yellow bile produced irritability and aggressiveness. Thus, the practice of bleeding the mentally disturbed was used to restore the proper balance among the humors, or vital fluids, of the body. This gentler and more dignified treatment philosophy continued to be supported by Plato who also insisted that the mentally disturbed should not be held accountable or punished for their irrational acts. With the fall of Rome in the fifth century, however, progress halted and the study of mental illness was laid aside (Bootzin and Acocella, 1988; Murray, 1988).

As the Christian church continued to gain power, deviant behavior was once again attributed to the work of the devil. Barbarous treatments were sanctioned by the church and regarded as quite proper by most people, including the humane and the educated (Murray, 1988).

During the Renaissance period, from the fifteenth to the seventeenth centuries, many of the mentally ill were labeled as "witches" and well over 100,000 witches were executed, most commonly by public burning (Bootzin and Acocella, 1988). The witch hunts were officially sanctioned by the Catholic church, receiving approval in the Malleus Maleficarum of 1487-1489 (Murray, 1988). During the same period, however, much as in the Middle Ages, evidence suggests that the majority of the deranged were still regarded as sick people whose care fell upon the community. It is also during the period of Renaissance that we see,

in England, the first major effort to practice community care or the supervision of the mentally ill within the community but outside of the hospital (Bootzin and Acocella, 1988).

The trend in treatment ideologies swung again during the eighteenth and nineteenth centuries. More and more of the insane became institutionalized in the public hospitals and privately owned "madhouses" which flourished during this period. Though some offered decent care, many others were little more than prisons. In London's Bethlehem Public Hospital, the curious public bought tickets to view the starving psychotics as they laid chained, naked and howling in their own excrement (Bootzin and Acocella, 1988).

In the latter part of the nineteenth century, the pendulum swung again as Pinel, a French physician, did away with treatments such as bleeding, purging, and cupping (blistering the skin with small hot cups). Pinel advocated for "moral treatment." Moral treatment implied kind, individualized care without threat of physical violence and only rare use of any type of mechanical restraints (Grob, 1996).

Meanwhile, in America, the concept of moral treatment rapidly rose and fell. As mental hospitals rapidly proliferated, there were not enough advocates of moral therapy to staff them. The new mental asylums built throughout America were placed in isolated rural areas and, to the public mind, these huge fortresses concealed the freakish, the dangerous, and the unknown. Numerous "treatments" again arose for the mentally ill. One such treatment for the depressed person was being rapidly spun 360 degrees in a rotating chair. Another treatment consisted of dangling the individual in a chest harness from the ceiling. Other treatments

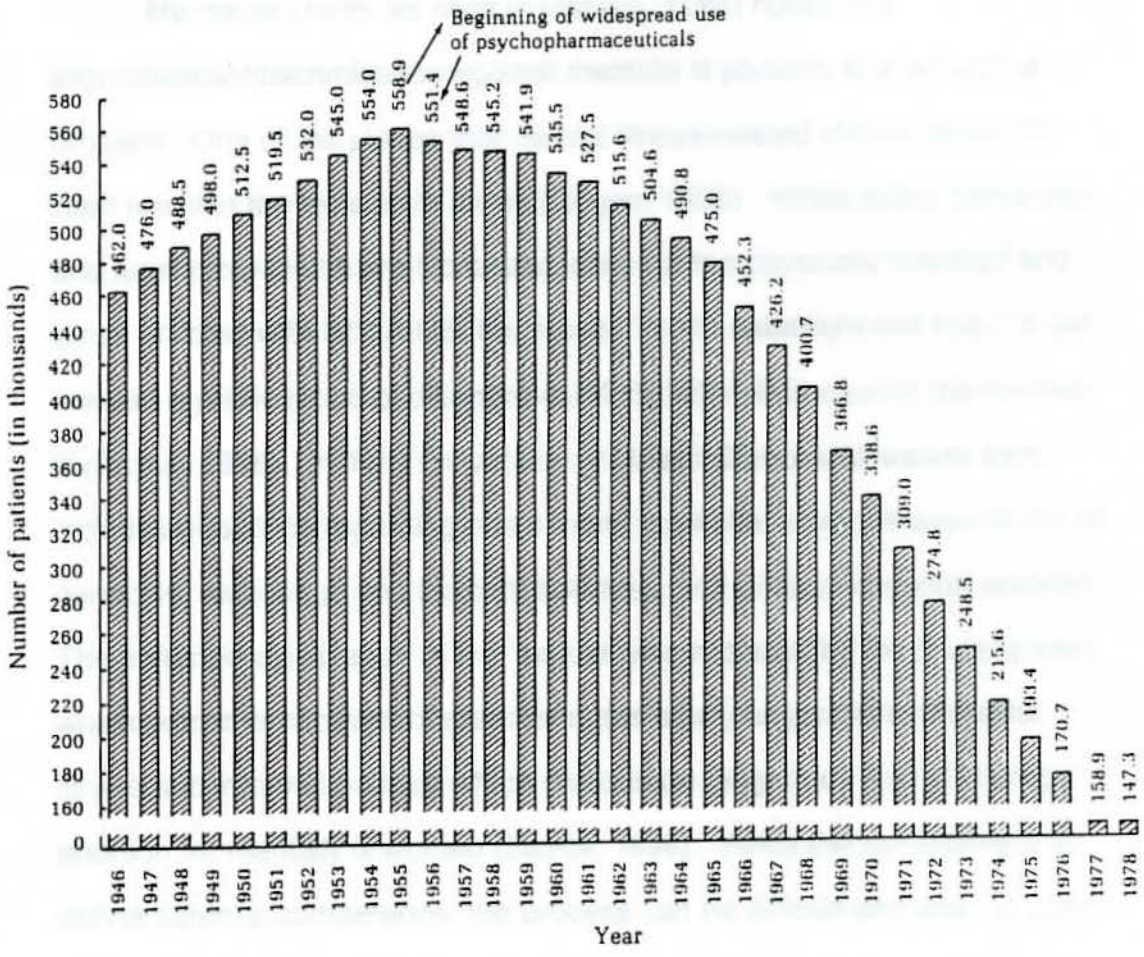
included sudden immersion into ice-cold baths as well as physical restraint by straightjacket or in a crib (an enclosure half the heighth of a coffin with crib rails on each side to allow the exchange of breathing air). Near the end of the nineteenth century and first half of the twentieth, America continued the frequent practice of psychosurgery, lobotomy, as well as insulin shock therapy to induce convulsions and, ultimately, modify the behavior of the violent or depressed individual (Bootzin and Acocella, 1988). Insulin shock treatments were usually administered in a series of 50. The treatments were extremely dangerous; if the coma was allowed to continue too long, it became irreversible (Stuart & Sundeen, 1991).

Suddenly, during the middle of the twentieth century, phenothiazines, belonging to a new class of drugs called neuroleptics, were discovered. A milestone in the long history of treatment of psychotic patients had been reached. The often brutal treatments delivered since the dawn of mankind could come to an end. Overnight, these drugs began playing a major role in deinstitutionalizing America's chronic mentally ill (See Table 1). In theory, the new class of drugs made the shift to community-based care and out-patient treatment an acceptable alternative to institutionalization in America.

The rapid demise of the mental health care system proved premature however. The innovative policies and community mental health centers did not meet all of the needs of the chronically mentally ill. The consequences of the innovations were at best mixed. Overlooked was the need to provide supportive services for those seriously and chronically mentally ill. The new system emphasized therapy but essentially left responsibility for the care unassigned. With the mass exodus of patients from the institutions, there was an absence of longitudinal planning and

Table 1

Number of Resident Patients in State and Local Governmental Mental Hospitals in the United States



Based on U.S. Public Health Service Data. Cited in Oakley, R. (1983). Drugs, Society, & Human Behavior (3rd ed.). St. Louis: The C. V. Mosby Company.

responsibility for meeting some of their basic needs such as housing, medical care, welfare, and social support services (Grob, 1996). As the United States currently undergoes a "second generation" of downsizing state hospital systems, the current status of mental health care in America is one of fragmentation of services and a general lack of concern for the chronically mentally ill population (McGrew & Wright, 1999).

Chronic Mental Illness and Social Problems

Mechanic (1996. as cited in Garske, 1999) noted that stigmatization/discrimination against mentally ill persons is a pervasive problem. One of the places that mental illness-related stigma manifests itself is within the legislative arena (Cogan, 1998). While public sensitivity and legal protection have increased lately for the physically disabled and those afflicted with HIV/AIDS, the mental health establishment has not yet created a public mood of disapproval of discrimination against the mentally ill (Sayce, 1998). In the 21st century, a United States visa waiver form includes questions regarding one's moral turpitude, previous experience of genocide, espionage and terrorist activities, and *history of mental disorder.* The enforced sterilization of the 'insane' was replaced by the existing laws which permit termination of parental rights solely on grounds of mental illness and informal policies which discourage pregnancy and encourage abortion for mentally ill women (Sayce, 1998). While the law attempts to define parental competence, the process can be difficult and open to great subjectivity; mothers with chronic and serious mental illness may be too quickly judged as incompetent or neglectful (Cogan, 1998).

Of the estimated 40 million Americans diagnosed with psychiatric impairments, four to five million adults are considered seriously and chronically mentally ill (Garske, 1999). The prevalence, disability burden,

and costs of chronic mental disorders advocate strongly for increased public health attention to these disorders (Neugebauer, 1999).

The poorly planned, rapidly effected 1960s shift in treatment models for mental health care had significant social impact. The new community-based system was underfunded, undermonitored, and largely ineffective (Gronfein, 1985. as cited in Cook & Cohler, 1997). The deinstitutionalization effort of the 1960s and 1970s resulted in the discharge of many thousands of severely mentally ill into communities that were neither prepared nor willing to accept them (Gerhart, 1990. as cited in Garske, 1999). Patients were discharged despite a scarcity of housing options and lack of services, including transportation, designed to establish and support independent community living. It has been estimated that approximately 40% of the individuals discharged from psychiatric treatment returned to live with family members (Manderscheid & Barrett, 1987. as cited in Johnson, 1998). Many of those chronically mentally ill who were unable to adapt to their changed living environments became homeless. Today, the crisis in housing for the mentally ill population remains evident. Social stigma remains an important barrier for people with psychiatric disabilities, affecting community reintegration (George, 1992. as cited in Ogilvie, 1997). Service system inadequacies force many families to assume demanding responsibilities as "kin-keepers" for which they remain ill-prepared.

But many families are unable to assume this responsibility. At the beginning of 1990, statistics indicated that for every one mentally ill individual remaining in a mental hospital, there were more than two schizophrenic or bipolar disorder individuals residing in public shelters or on the streets (Torrey, Erdman, Wolfe, & Flynn, 1990. as cited in Garske,

1999). In the United States, individuals having a chronic mental illness have a 25% to 50% risk of becoming homeless. This is 10 to 20 times the risk of homelessness for the general population (Jahiel, 1992. as cited in Susser & Valencia, 1997). Stated another way, as many as one-third to one-half of all homeless individuals have chronic mental illness (Bachrach, 1996. as cited in McGrew & Wright, 1999). Needless to say, these mentally ill homeless are exposed to additional adversities such as becoming a victim of crime or contracting a serious medical illness such as tuberculosis or acquired immune deficiency syndrome. Homelessness has also been correlated with noncompliance with mental health treatment and increased substance abuse which has been found to accelerate psychiatric decompensation and increased police contact (Drake, Wallach, & Hoffman, 1989. as cited in Wolff & Diamond, 1997; Mulvey, 1994. as cited in Wolff & Diamond, 1997). Though medicaid provides supervised housing for individuals with mental retardation, the government program denies such coverage for persons with chronic mental illness (Hatfield, 1990. as cited in Noe, 1997).

What of the family caregivers who suddenly find themselves responsible for providing demanding and unrelenting around-the-clock care for a mentally ill loved one? They must be able to provide structure; learn to identify and reverse sequences of behavior that precede threatening, intimidating, or violent behavior; differentiate between psychotic and personality-disordered behavior; identify the needs of their loved one as well as monitor their medication and treatment compliance; establish and enforce appropriate expectations and limitations; cope with the unpredictability and inevitably of future episodes; and, in many instances, accept the progressive deterioration and increasing caretaking

burden resulting from each successive episode (Hayde, 1997; Miklowitz & Goldstein, 1997). The chances of families receiving adequate, if any, training to provide this necessary care and contend with the impact upon the family are miniscule.

On the employment market, people with a history of severe mental illness experience many difficulties. Although this population is covered by federal mandates for vocational services, social service agencies have paid little attention to their employment needs. Stereotyping remains a barrier to their employment (Noe, 1997) and employers are usually quite reluctant to hire an individual with a psychotic history. A study by Marshak, Bastick, & Turton (1990. as cited in Garske, 1999) demonstrated individuals with serious psychiatric disability experience only about half of the employment success rates measured in persons with physical disabilities. Though there is a consensus among rehabilitation professionals that employment is an important part of life for persons with mental illness, The National Institute on Disability and Rehabilitation Services (1993. as cited in Garske, 1999) estimates an *un*employment rate of 85 percent for the working-age members of the chronically mentally ill population. It is widely assumed that these individuals are less productive as well as more costly to the company in terms of health benefits and use of sick leave (Schneider, 1998). This vast number remain economically dependent on mental health disability rolls. The fiscal drain on society is enormous. In 1992, the estimated costs of depression alone totaled $43 billion, mostly from reduced or lost worker productivity (Nemeroff, 1998).

Another social issue concerns law enforcement. Approximately 38% of all people with psychiatric disabilities residing at home are

assaultive and/or destructive (Tardiff & Koenigsberg, 1985. as cited in Hayde, 1997). Families are commonly subjected to threats, intimidation, and violent behaviors. While many families attempt at all costs to avoid the embarrassment of seeking assistance from law enforcement officials, other families fear that seeking such assistance from law enforcement will only result in a very short hospital stay accompanied by a very large hospital cost. Families who take the necessary route of seeking law enforcement assistance for a family member who is behaviorally out of control often complain that police and judges will not act until the violent episode has taken place (Hayde, 1997). For all families contending with the stress of these encounters, a progressive decline in the well being of family members occurs while, simultaneously, the hoped for therapeutic environment of the home also deteriorates. When this occurs, exacerbation of the patient's mental illness is inevitable (Swan & Lavitt, 1988. as cited in Hayde, 1997; Turkat & Buzell, 1983. as cited in Hayde, 1997).

Viewing this issue from a different perspective, research indicates a growing number of persons with serious mental illness have become the responsibility of the law enforcement system rather than the mental health system (Torrey, 1993. as cited in Wolff & Diamond, 1997). The single most widely accepted explanation for police contact with mentally ill persons is the failure of the mental health system to provide adequate treatment; individuals who go untreated progressively decompensate, increasing the likelihood of violent and illegal behavior (Link, Andrews, & Cullen, 1992. as cited in Wolff & Diamond, 1997). Failure of the social service network to provide housing and employment has also been linked

as a contributing factor necessitating police intervention with this population (Durham, 1989. as cited in Wolff & Diamond, 1997). Most persons with serious mental illness are poor, unemployed, and often forced to live in areas where police contacts are more frequent (Wolff & Diamond, 1997).

Persons with mental illness are not reimbursed by private insurance companies to the same degree as other health disorders. Even Medicaid, a combined federal and state program, has placed limits on mental health coverage, similar to private insurance companies. In-patient stays are shorter and lifetime coverage is less.

Whether one examines housing, employment, access to justice, social inclusion, or insurance and health care, there is clear evidence that widespread discrimination exists against people with mental illness (Sayce, 1998). The ineffective manner in which American society has attempted to deal with the mentally ill population has produced a rippling effect of social problems. Whereas discrimination results from the actions of others and tends to play out in the social arena, stigma, discussed below, attaches itself to the individual (Sayce, 1998).

The Experience of Chronic Mental Illness

What is the impact of chronic mental illness upon the individual? While many have supported understanding of the experiential aspect of chronic *medical* conditions, the experience of chronic mental disorders upon quality of life have received comparatively little attention. Knowledge of a disease-specific nature is essential if health professionals and, ultimately, the general public, are to comprehend the true "lived reality" of the mentally ill population (Hayne & Yonge, 1997; Trauer & Duckmanton,

1998). The lives of chronic mentally ill individuals living in unsafe and/or unwelcoming environments are often difficult, stressful, and unrewarding, so much so that some have suggested that their lifestyles are as disabling as their mental illnesses (Segal & VanderVoort, 1993. as cited in Cook, 1997).

It would be hard to overstate the degree of stigmatization faced by individuals diagnosed with severe and persistent mental illness; it is pervasive in society, rampant in the media, and, sadly, common within the medical profession (Jamison, 1998). The stigma against individuals with mental illness is believed to have four underlying explanations. Social distancing appears to result from the belief that the severely mentally ill are dangerous and violent (Link, 1987. as cited in Hayward & Bright, 1997). The idea of attribution of responsibility implies a belief, on the part of the lay public, that the mentally ill 'choose' to behave as they do (Weiner, Perry, & Magnusson, 1988. as cited in Hayward & Bright, 1997). Norman and Malla (1983. as cited in Hayward & Bright, 1997) found that social rejection was correlated with the belief that mental illness has a poor prognosis. Another possible cause for stigma exists in the belief that those who suffer from mental illness do not fit into normal patterns of social interaction. In Goffman's classic book, Stigma (1968. as cited in Hayward & Bright, 1997), is a vivid detail of the way 'normals' avoid those with mental illness because they feel uneasy interacting with them possibly, in part, due to the expectation that the mentally ill may act unpredictably and not follow accepted social rules.

What is the impact of this social stigmatization upon the individual? Behavioral studies completed by Farina, Gliha, Boudreau, Allen, & Sherman (1971. as cited in Hayward & Bright, 1997) demonstrated that

when mental patients believed the person they were interacting with knew of their psychiatric illness, their behavior deteriorated. Stigmatization undoubtedly adds to the burdens of having a mental illness. Similarly, Littlewood (1998) finds evidence that individuals' understanding of mental illness and, thus, their social response may determine the prognosis of severe mental illness, independently of medical treatment. Sayce (1998) agrees stating, ". . . symptom reduction will not address discrimination; and discrimination itself forms part of the experience of mental health problems, often increasing their intensity and duration" (p. 339). Noe (1997) cites several studies (Caton, Koh, Fleiss, Barrow, & Goldstein, 1985; Liberman, 1992; Nuechterlein & Dawson, 1984) indicating attitudinal barriers against persons with mental illness increase stress and precipitate relapse. The National Institute on Disability and Rehabilitation Services (1993. as cited in Garske, 1999) stated the handicapping effects of stigma may often be more powerful than the disability itself.

In addition to the recurrent pain of each episode of illness, the individual must endure the impact of the illness upon his relationships, his ability to provide for himself and his family, and the repeated injury to his self esteem, status, and independence (Graves, 1993; Littlewood, 1998; Schneider, 1998). Clients with serious mental disorders, such as bipolar disorder, are known to have relatively fewer environmental supports than individuals with less serious and chronic disorders. Patients who are symptomatic over a long period of time strain their support system often leading to withdrawal of necessary support (Bedell, Hunter, & Corrigan, 1997). Divorce rates for bipolar patients are two to three times higher than in the general population; their occupational status is twice as likely to deteriorate (Coryell, Scheftner, & Keller, 1990. as cited in Milner,

Amburgey, Cameron, 1998). Many individuals with bipolar disorder also live in constant fear of losing control of their behavior (Graves, 1993). A point easily forgotten is that illness episodes are in themselves stressful life events for the individual. Many patients' lives are damaged (financially, legally, socially, emotionally) during an episode of illness. Patients often experience shame and guilt and repercussions long after an episode of illness has ended. The author will now narrow the focus examining more closely one of the most serious chronic mental disorders: bipolar disorder.

Bipolar Disorder

Bipolar Disorder Defined

Bipolar disorder is classified in the DSM-IV (American Psychiatric Association, 1994) as a mood disorder. Though grouped with several other diagnoses whose common feature is the patient's mood, this definition does not imply a common etiology (Klerman, Weissman, Markowitz, Glick, Wilner, Mason, & Shear, 1994). Bipolar disorder is a discrete condition, not related to unipolar depression, characterized by clinically marked mood swings between mania or hypomania and depression (El-Mallakh, 1997). The DSM-IV classification further differentiates between two major subtypes of bipolar disorder called bipolar I and bipolar II. The bipolar I subtype is characterized by the occurrence of one or more manic episodes or mixed episodes in addition to one or more major depressive episodes. In contrast, the bipolar II subtype is characterized by the occurrence of one or more major depressive episodes accompanied by at least one hypomanic episode. If this individual demonstrates a manic or mixed episode, the diagnosis is changed to bipolar I disorder (American Psychiatric Association, 1994).

As indicated, both bipolar I and bipolar II disorders require the occurrence of at least one major depressive episode (see Table A1). Clinical depression is quite different from the blues everyone experiences at one time or another. It is also different from the grief of bereavement. The overwhelming sadness of clinical depression is both debilitating and dangerous. The individual may be plagued by guilt or a sense of hopelessness or worthlessness, or preoccupied with suicide. He may experience difficulty taking pleasure in anything. The individual may experience anxiety or demonstrate apathy and feel totally drained of energy (Miklowitz & Goldstein, 1997; Nemeroff, 1998; Walsh, 1998).

A hypomanic episode is defined as a distinct period during which an individual experiences an abnormally and persistently elevated, expansive, or irritable mood that lasts four days and is accompanied by at least three additional symptoms defined as criteria for hypomania by the DSM-IV (American Psychiatric Association, 1994) (see Table A2). The subjective experience of hypomania includes a heightened feeling of well-being with increased motivation, inflated self-esteem, and expansive sociability. In addition to a general elevation of mood, irritability may easily be evoked (Daly, 1997). In contrast to a manic episode, the hypomanic mood disturbance is not severe enough in intensity or duration to cause marked impairment in social or occupational functioning or to require hospitalization, and there are no psychotic symptoms present (Miklowitz & Goldstein, 1997; Milner, Amburgey, Cameron, 1998).

A manic episode is defined as a period of at least one week (or less if hospitalization is required) during which the individual experiences an abnormally and persistently elevated, expansive, or irritable mood accompanied by at least three additional symptoms defined as criteria for

mania by the DSM-IV (American Psychiatric Association, 1994) (see Table A3). Individuals with mania often do not recognize their illness and resist efforts to be treated. An episode of mania may begin abruptly, over the space of a few hours or days, or more gradually over weeks. The subjective experience of deepening mania includes hyperactivity with decreased need for sleep, hypertalkativeness usually accompanied by rapid speech, intrusiveness, flight of ideas or racing of thoughts, high impulsivity, irritability and/or distractibility, paranoia, grandiose ideas, overspending, hypersexuality, hyperreligiousity and, in general, self-destructive and socially embarrassing behavior (Daly, 1997; Miklowitz & Goldstein, 1997; Walsh, 1998). Up to two-thirds of individuals experiencing mania experience psychotic symptoms. Delusions occur more commonly in manic psychosis than hallucinations (Daly, 1997).

A mixed episode (see Table A4) is characterized by a period of time (minimally one week) in which criteria are met nearly every day for both a manic and major depressive episode. This individual experiences coexisting or rapidly alternating moods of sadness, irritability, and euphoria during different periods of the day (Daly, 1997; Miklowitz & Goldstein, 1997). The mixed type of bipolar disorder is associated with a poorer prognosis (Walsh, 1998).

Clinical Course

Seldom does bipolar disorder consist of discrete episodes of mania and depression, with periods of normality in between; indeed, it is the minority of patients who show this pattern. Bipolar disorder can follow many different course patterns. Within any particular individual, the course may vary during different life stages. Many patients cycling in and out of

episodes never fully return to their prediagnosed level of functioning (Miklowitz & Goldstein, 1997).

Bipolar disorder is an episodic, recurrent, disabling illness. As the number of episodes increases, the intervals between episodes tends to decrease (Daly, 1997; Hales, Yudofsky, & Talbott, 1994). There is also a tendency for later-onset bipolar disorder to be associated with shorter cycle lengths (Hales, Yudofsky, & Talbott, 1994).

Predicting the course of the disorder is difficult. There is great variation in cycling patterns in bipolar disorder. Episodes may occur irregularly or be linked together in a mania-depression-euthymia or a depression-mania-euthymia pattern. Rapid cycling has been arbitrarily defined as at least four episodes occurring within a year. Rapid cycling has been reported in 10% to 30% of bipolar patients (mostly women) (Goodwin & Jamison, 1990; Hales, Yudofsky, & Talbott, 1994). Rapid cycling patients usually face the toughest challenges. They are the most difficult patients to treat pharmacologically. Rapid cycling, however, does not tend to be a lifelong pattern, but usually represents a temporary phase of the illness (Keck, 1996. as cited in Miklowitz & Goldstein, 1997). Daly (1997) states that, in general, an increase in depressive episodes and decrease in manic episodes are associated with advancing age. He also indicates that a positive family history of mania is predictive of more manic recurrences over time.

Epidemiology

Prevalence. Studies of lifetime prevalence vary. Bipolar I ranges from .04% to 1.6% whereas Bipolar II has a prevalence of .05% (Walsh,

1998). Though figures vary widely, bipolar disorder is thought to comprise about 20% of all cases of major mood disorder (Hales, Yudofsky, & Talbott, 1994). It is estimated that 2.2 million Americans have bipolar disorder (Jamison, 1996; Lewis, 1996). Recent epidemiological data demonstrates the number of individuals diagnosed with manic-depressive illness is increasing (Gershon & Rieder, 1992. as cited in George, 1998).

An interesting seasonal pattern of bipolar disorder prevails. There is an unexplained pattern in occurrence of spring/summer mania or hypomania linked to a fall/winter depression. The reverse pattern is also observed in some individuals (Daly, 1997; Hales, Yudofsky, & Talbott, 1994).

Age. Bipolar disorder is uncommon in prepubertal aged children but does occur (Hales, Yudofsky, & Talbott, 1994). Although the disorder is typically diagnosed in late teens or early 20s, new cases of bipolar disorder have been diagnosed in children below the age of ten and adults over the age of 70 (Daly, 1997; Goodwin & Jamison, 1990). When bipolar disorder appears in children, the symptoms are often confused with those of hyperactivity and vice versa. Careful differential diagnosis is indicated (Jamison, 1996). While studies vary, meta-analysis of data from several older studies showed a median age at onset in the mid-20s. A cohort effect, similar to that seen with major depressive disorder, of earlier age at onset is found in those born more recently (Hales, Yudofsky, & Talbott, 1994).

Gender. Bipolar disorder is equally common in both genders (Daly, 1997; Hales, Yudofsky, & Talbott, 1994). In rapid cyclers, however, women are overrepresented (Hales, Yudofsky, & Talbott, 1994). Daly (1997), in fact, proports women are approximately three times more likely

than men to experience rapid cycling. In terms of gender, men are more likely to initially experience a manic episode while women are more likely to experience an initial episode of depression (Kahn, Ross, & Rush, 1998; Walsh, 1998). Over the course of lifetime, men tend to have an equal number of manic and depressive episodes while women are more susceptible to a greater number of depressive episodes (Hales, Yudofsky, & Talbott, 1994) and mixed mood states (Daly, 1997).

Other Demographic Correlates of Bipolar Disorder. Studies have found an association between the disorder and higher educational class (Hales, Yudofsky, & Talbott, 1994). Sederer (1983) states "Bipolar disorder is linked with superior education and occupational achievement" (p. 39). Similarly, studies have found an association between bipolar disorder and upper socio-economic class (Daly, 1997; Hales, Yudofsky, & Talbott, 1994).

With regard to race, recent studies have found no significant differential incidence by race (Hales, Yudofsky, & Talbott, 1994; Walsh, 1998). Bipolar disorder is found in individuals in all parts of the world ("What Are The New Treatments. . .?", 1998).

A study was completed in 1997 by Itzhak, Kohn, Golding, & Weissman regarding the incidence of bipolar disorder among various religious sects. The study demonstrated there were no religious differences found between Jewish, Protestant, Catholic, and individuals claiming 'no religion' who were diagnosed with bipolar disorder.

An interesting link in the occurrence of manic-depressive illness is found in its 10 to 20 times greater incidence among creative people than among those in the general population. Gifted artists, writers, poets, and composers who suffered the illness include Robert Schumann,

Walt Whitman, Tennessee Williams, Mark Twain, Edgar Allen Poe, Alfred Lord Tennyson, and Vincent van Gogh to name but a few (Lewis, 1996). Jamison (1997) also cites numerous corroborative studies which confirm that highly creative individuals experience bipolar disorders significantly more often than other groups in the general population.

Etiology

It is rarely possible today to make psychiatric diagnoses based on physical examination or laboratory tests or even to confirm them at necropsy (Owen & Cardno, 1999). However, the extraordinary accumulation of discoveries, particularly in the past several years, is fueling optimism that the major neurobiochemical determinants or pathogenetic mechanisms of the disorders can be understood.

Pathophysiology. The pathophysiology of bipolar disorder reveals these individuals may have lower plasma norepinephrine, urinary MHPG, and platelet serotonin uptake and higher RBC/plasma lithium ratios than individuals who demonstrate unipolar depressions (Hales, Yudofsky, & Talbott, 1994). There is also evidence of dysregulation of the body's hypothalamicpituitaryadrenal (HPA) axis, which manages the individual's response to stress. This dysregulation results in hypersecretion of cortisol in depressed individuals (Nemeroff, 1998).

Viral. Though a viral etiology has not been identified, an intriguing association exists between bipolar disorder and the herpes simplex virus. Both are episodic clinical conditions which appear to be precipitated by environmental stress. It is known that Lithium has well-established acute and prophylactic effects in treating bipolar disorder and also inhibits the replication of DNA virus. Herpes simplex is a DNA virus; the mucocutaneous outbreaks of herpes simplex respond favorably to acute

topical and long-term systemic lithium treatment. Though inconclusive, evidence suggests that lithium works on an as yet unidentified "bipolarity virus" (Hales, Yudofsky, & Talbott, 1994).

Genetics. Geneticists have provided some of the oldest proof of a biological component. Manic-depression frequently runs in families, and mania shows greater heritability than any of the other major psychiatric disorders. A greater than 10-fold risk for morbidity among first degree relatives as opposed to the general population supports a theory of genetic transmission (Sederer, 1983). Concordance rates for monozygotic twins are about 70% (Daly, 1997) and, among identical twins raised in very different environments, the probability of both suffering bipolar disorder is 66% (Lewis, 1996). An individual with two parents diagnosed with bipolar disorder has a 75% chance of also developing the disorder ("Mood Disorders: An Overview -- Part 1," 1997). The Amish community, in particular, demonstrates an extensive history of manic-depression and has played an important role in genetic studies of this disorder (Nemeroff, 1998).

Unfortunately, in no case is the statistical evidence for linkage sufficiently strong enough yet to be certain the chromosomal regions identified contain the bipolar susceptibility genes (Owen & Cardno, 1999). Many genetic findings await replication.

Neurochemical. As geneticists continue their searches, other investigators continue focusing on neurochemical aspects. Much of that work focuses on neurotransmitters, the chemicals produced by nerve cells called neurons which pass signals through the brain. These chemicals are released into the space between two neurons (the synaptic cleft) and attach themselves to molecules called receptors embedded on the surface

of the next neuron's cell membrane. In this way, signals are transported from one cell to the next. The most common chemical transmitters involved in mood regulation, monoamine neurotransmitters, norepinephrine and serotonin, are either excitatory or inhibitory. When a neuron receives the message, it is either activated or comes to rest. In individuals who are vulnerable to depression or mania, this biochemical transmission system is inefficient. Especially when under stress, too much or too little of the transmitters may be released, and receptors may respond ineffectually or too intensely ("Mood Disorders: An Overview -- Part 1," 1997; Nemeroff, 1998).

One of several findings linking impoverished synaptic neurotransmitter levels to depression is revealed by postmortem studies citing increased densities of certain norepinephrine receptors in the cortex of depressed suicide victims (Nemeroff, 1998). Another study cited by Nemeroff (1998) supports a link between low synaptic serotonin levels and suicide: cerebrospinal fluid in depressed, and especially in suicidal, patients contains reduced amounts of a major serotonin by-product (signifying reduced levels of serotonin in the brain itself).

The ability of psychosocial stressors to perturb neurotransmitter systems is well recognized. The sensitization model of mood disorders suggests that the experience of an affective episode and its associated neurotransmitter and peptide alterations may leave behind memory codes which predispose to further episodes (Hales, Yudofsky, & Talbott, 1994).

Hormones. Equally compelling are the studies which involve dysregulation of brain circuits which control the activities of certain hormones. Hormonal alterations in mood disordered patients have long been evident. Moods are affected by the endocrine glands which regulate

bodily functions by releasing hormones into the bloodstream. The endocrine system is governed by the pituitary gland, which receives directions from the hypothalamus located at the base of the brain. The two most important organs under its control are the adrenal glands which mobilize the mind and body when alertness and vigilence are required and the thyroid gland which regulates the body's energy consumption ("Mood Disorders: An Overview, Part I," 1997; Nemeroff, 1998).

Stress-diathesis hypothesis. This leads us to another etiological theory for the mood disorders: the stress-diathesis (experience/inborn predisposition) hypothesis (also called the vulnerability-stress model). This model provides a framework for viewing the disorder as a result of genetic, biological, and social factors interacting to precipitate episodes of mood instability (Miklowitz & Goldstein, 1997). Nemeroff (1998) cites a study in which he maternally deprived newborn rats who then exhibited rises in stress-induced adrenocorticotropic hormone (ACTH) secretion and elevations of corticotropin-releasing factor (CRF) concentrations in the brain. Levels of the newborn rats' corticosterone (cortisol) also rose. His findings suggest that a permanent increase in CRF gene expression and thus CRF production occurred due to early life stress. Neurobiologists, thus, suggest a partial model for how people who endure traumatic childhoods may develop mood disorders later in life. Abuse or neglect may produce permanent changes in the developing brain--changes that continue to increase the output of, and responsiveness to, CRF thereby increasing the individual's lifelong vulnerability to depression (Nemeroff, 1998).

Anatomical. Imaging tools are just beginning to be applied to the anatomical study of mood disorders. Scanning techniques have already

provided some insight into our understanding of the workings of the brain in depression and mania. Utilizing positron emission tomography (PET), scientists observed one patient who cycled rapidly between depression and mania over several days. Imaging revealed the global activation pattern varied dramatically in the two states (Nemeroff, 1998). Positron emission tomography, single photon emission computed tomography (SPECT), and magnetic resonance imaging (MRI) suggest there are interrupted or deteriorated connections in the cerebral networks which regulate mood. Also, the volume of various brain structures, among these the hippocampus which is involved in emotion and memory, is reduced in individuals who are chronically depressed compared to same-age individuals with no history of mood disorder. This finding is consistent with animal research which demonstrated that chronic oversecretion of cortisol (as occurs in many depressed individuals) can destroy hippocampal cells (Nemeroff, 1998). Patients demonstrating depression have demonstrated higher than average brain metabolic activity but low activity in the left prefrontal cortex which governs judgment. Imaging tools provide not only a valuable view into the brain but, more importantly, a view of the actual working of the structure.

Social and Developmental. There is a sparsity of research which attempts to demonstrate a link between bipolar disorder and social and developmental factors. Though causal connections could not be established, one such study by Cohen, Baker, Cohen, Fromm-Reichman, and Weigert (1954. as cited in Miklowitz & Goldstein, 1997) revealed that mothers of bipolar individuals were described as highly reliable, though cold, domineering, and impersonal while fathers were described as weak,

inept, and unreliable. The study cited above was conducted during the 1950s when investigators were attempting to prove that disturbed family dynamics played a causal role in the etiology of schizophrenia and bipolar disorder. While it claims little direct empirical support, it offers some intriguing insights.

Similarly, investigators have studied the expressed emotion (EE) in families of individuals with chronic mental disorders. EE is a measure of emotional attitudes among relatives of these psychiatric patients. It is usually assessed when the patient is in an acute phase, and familial stress is at its highest. Families (usually parents or spouse) are classified as high in EE if one or more individuals (1) express six or more critical comments, (2) show evidence of hostility, or (3) show evidence of emotional overinvolvement or overconcern regarding the patient. Families in which no relative has these attitudes are called low in EE. A 1988 study by Miklowitz, Goldstein, Neuchterlein, Snyder, and Mintz (as cited in Miklowitz & Goldstein, 1997) demonstrated that manic patients who were discharged from in-patient treatment to high-EE parents had recurrence rates at 9-month follow-up which were almost twice the rate (90%) of patients with low-EE parents (54%). Other studies (Brown, Birley, & Wing, 1972. as cited in Johnson, 1998; Vaughn & Leff, 1981. as cited in Johnson, 1998) have supported the theory that high EE levels (especially negative emotion) in families correlated strongly with patient relapse/rehospitalization. Family stress has been linked repeatedly to mood disorder episodes, though its mechanisms of action remain unclear.

A full understanding of the etiology of bipolar disorder seems a long way off, but has become the target of several converging lines of investigation that are constantly yielding new discoveries.

Morbidity

Morbidity statistics are quite high for bipolar disorder. Of those diagnosed with the disorder, it is expected that 95% will experience recurrent episodes of depression and mania throughout their lives (Goodwin & Jamison, 1990. as cited in George, 1998). On average, the individual diagnosed with bipolar disorder experiences four episodes of mania or depression during the first ten years of the illness (Kahn, Ross, & Rush, 1998). In the United States, bipolar depressive episodes are usually viewed as having a poorer prognosis and being more difficult to treat and prevent than mania (Keller, Lavori, & Coryell, 1986. as cited in El-Mallakh, 1997). With each episode of bipolar disorder, the probability of experiencing further episodes increases despite treatment. As the disorder progresses, the duration of symptoms can outweigh periods of remission (George, 1998). Additionally, the more episodes a person has, the harder it is to treat each subsequent episode; this phenomenon is sometimes called "kindling" for once the fire has started, the harder it becomes to put out (Kahn, Ross, & Rush, 1998). Examining hospital records of bipolar patients in the prepharmacologic era, Cutler and Post (1982. as cited in Miklowitz & Goldstein, 1997) also substantiated that episodes became more frequent and intervals of wellness shorter as the illness progressed. Furthermore, bipolar disorder appears to manifest a phenomenon known as "anticipation." This is a worsening of the disease with successive generations. It is thought that this phenomenon may be related to a specific nucleic acid abnormality (El-Mallakh, 1997).

Beyond the pain and disability the disorder brings, it is a lethal disease. Goodwin & Jamison (1990. as cited in George, 1998) state that

between 25 and 50% of all individuals diagnosed with bipolar disorder will attempt to kill themselves at least once during their lifetime. As many as 15% of those diagnosed with bipolar disorder succeed in suiciding each year (Nemeroff, 1998). Most investigators, however, believe these statistics to be a gross underestimate. Many people who kill themselves are given another diagnosis on the death certificate; for example, some fraction of automobile accidents are concealed suicides (Nemeroff, 1998).

Comorbidity

The presence of comorbid illness in bipolar individuals can adversely affect the outlook for treatment. Commonly occurring comorbid illnesses of bipolar disorder are alcoholism and substance abuse. The overall lifetime prevalence for substance abuse/dependence in the bipolar individual is alarmingly high: 61% (compared with 27% for the major depression only population) (Hales, Yudofsky, & Talbott, 1994). There is an increase in acting out behaviors as well as poorer medication compliance among substance abusing clients (McCarrick, Manderscheid, & Bertolucci, 1985. as cited in O'hare, 1992). There is also evidence of a poorer prognosis, particularly for rapid cyclers, who abuse alcohol and drugs (George, 1998). Furthermore, alcohol and substance abuse increase risk of suicide considerably (Daly, 1997; Klerman, 1994).

Depression, frequently exhibited in the bipolar individual, has also been linked to a higher susceptibility of heart attack and stroke. Serotonin is a neurotransmitter which appears to be linked to depression. Studies demonstrate individuals with depression are particularly sensitive to signals issued by an imbalance in serotonin to activate the production of blood platelets which can contribute to the formation of thrombi capable of

clogging blood vessels and interrupting blood flow to the brain and heart (Nemeroff, 1998). In a study cited in the Harvard Mental Health Letter ("Mood Disorders: An Overview -- Part I," 1997), pessimism in hospitalized post myocardial infarcted patients predicted death better than artery blockage, hypertension, cholesterol levels, or heart muscle damage.

Treatment and Management

Bipolar disorder is sometimes difficult to differentially diagnose. The symptoms of bipolar disorder can also be a result of thallium or mercury poisoning, hyperthyroidism, B12 deficiency, brain tumors, steroids, and multiple sclerosis ("What Are The New Treatments. . . ?", 1998). Quite frequently, it is only over a prolonged period of observation that the diagnosis can be established with reasonable certainty ("Bipolar Disorder: A Treatable Illness," 1996; Daly, 1997). On average, people with bipolar disorder see three to four doctors and spend eight or more years seeking treatment before they receive a correct diagnosis (Kahn, Ross, Rush, 1998).

At the present time, the disease continues to be viewed by medical physicians as a disorder of genetic and biological origin and, aside from pharmacotherapy, has received little in the way of other approaches to treatment ("Bipolar Disorder: A Treatable Illness," 1996; George, 1998). Additionally, despite a plethora of new psychopharmaceutics, only two drugs, lithium and valproic acid, have been approved specifically to treat bipolar disorder since the 1950s ("Bipolar Disorder Is Neglected. . . ," 1998). Bipolar disorder has long been understudied because drug companies perceive conducting placebo-controlled trials of these patients as too risky (Keck, 1998).

Psychopharmacotherapy. Without psychopharmacotherapy, the outlook for bipolar patients is grim. Once diagnosed, the majority of bipolar patients will go on to have recurrences of the disorder. Nearly all bipolar patients will need maintenance medication for their entire lives to avoid repeated hospitalization and other symptomatology ("What Are The New Treatments. . .," 1998). Mood stabilizing drugs called "thymoleptics" are generally first-line therapies for bipolar disorder. The American Psychiatric Association (APA) recommends the prescription of lithium, valproic acid and carbamazepine as first-line therapies ("Bipolar Disorder Is Neglected. . .," 1998).

Lithium (Lithobid, Eskalith) was the first drug ever approved for the treatment of severe mental illness. Its discovery in 1949 was also eventful in that it turned researchers' attention to the biochemical aspect of mental illness focusing, for the first time, away from Freudian explanations ("More Uses For 'Miracle Drug,'" 1999). The drug was not approved, however, by the Food and Drug Administration for use in the United States until 1969. Its use is not recommended for children younger than age eight (Walsh, 1998).

Though the exact mechanism of action of Lithium in treating bipolar disorder remains unknown, several biochemical theories exist (Gelenberg & Hopkins, 1993. as cited in Walsh, 1998). Today, Lithium remains the most widely prescribed medication for the treatment of bipolar illness (Walsh, 1998).

The effectiveness of lithium is well documented. A study by Gelenberg (1988. as cited in El-Mallakh, 1997) determined that lithium has extended the average life span of a typical bipolar woman by 6.5 years and reestablished ten years of otherwise lost life activity. Recent research

demonstrated that ongoing lithium treatment reduced suicidal behavior in bipolar patients by 77%; however, when patients discontinued the treatment, suicide attempts increased 14 times, and the rate of completed suicides was almost 13-fold (Baldessarini, Tondo, & Hennen, 1999. as cited in "More Uses For 'Miracle Drug,'" 1999).

Pharmacotherapy of bipolar depression resembles, at times, that of major depressive disorder. Lithium appears more effective (79% response), however, in the treatment of bipolar depressive episodes than in the treatment of depressive episodes diagnosed as major depression (36% response) (Goodwin & Jamison, 1990). While lithium has proven to reduce the frequency, severity, and duration of both manic and depressive episodes, a somewhat better outcome for mania or rapid cycling types of bipolar disorder has been demonstrated (Gelenberg, 1989. as cited in Hales, Yudofsky, & Talbott, 1994; Keck & McElroy, 1996. as cited in Walsh, 1998; Miklowitz and Goldstein, 1997). Approximately 40% of patients who receive maintenance Lithium have recurrences of mania or depression within one year; this number rises to 75% over a five year period (Gitlin, Swendsen, Heller, & Hammen, 1995. as cited in Miklowitz & Goldstein, 1997).

Human bodies handle a given dose of lithium differently due to variations in absorption into the bloodstream, distribution to the body, and excretion by the kidneys. Thus, the same oral dose may produce quite different blood levels in different individuals. Like many drugs, lithium is only effective as long as a consistent and therapeutic blood level is maintained. Levels between .6 and 1.2 mEg (milligram equivalents per liter of plasma fluid) are considered therapeutic for most individuals. Levels greater than 2.0 indicate toxicity. It is important that clients avoid

dehydration and salt depletion while taking lithium since these conditions may increase the individual's blood level to toxic amounts. Common side effects of lithium therapy include thirst, fatigue, weight gain, mild hand tremors, increased urination, gastrointestinal upset, nausea, and diarrhea (Saklad, 1998; Walsh, 1998). Another common side effect, occurring as frequently as 59% in individuals, primarily women, who have been on lithium treatment more than six months, is lithium-induced hypothyroidism. The side effect is usually treated with thyroxine (Milner, Amburgey, & Cameron, 1998). It is particularly important to monitor kidney functioning in individuals receiving lithium since only the kidneys are capable of excreting lithium from the body ("Bipolar Disorder: A Treatable Illness," 1996). Potentially serious effects resulting from toxicity may include slurred speech, blurred vision, dizziness, persistent muscle weakness or spastic muscle movements, convulsions, confusion, delirium, kidney failure, permanent neurologic impairment, cardiac arrhythmia, and circulatory collapse (Milner, Amburgey, & Cameron, 1998; Walsh, 1998). And, because toxic levels of lithium in the human are potentially life-threatening, the risk of administering the drug to patients capable of exhibiting rapid mood swings and potentially suicidal behavior is high.

Discontinuation of lithium following successful maintenance therapy is associated with a high recurrence rate. Known as "lithium discontinuance-induced refractoriness," this sensitization theory suggests that an increase in previous affective episodes predisposes the individual to an increase in subsequent affective episodes. Sensitization presents as progressive deterioration in a poorly controlled illness (Post, 1986. as cited in El-Mallakh, 1997). In a 1991 study, Suppes (as cited in Hales,

Yudofsky, & Talbott, 1994) found a 28-times higher risk of recurrence of bipolar I after lithium discontinuation. More disturbing was the observation that some long-term lithium responders failed to respond to retreatment with lithium (Post, Leverich, Altshuler, 1992. as cited in El Mallakh, 1997).

During the 1960s, researchers began noticing that brain activity is similar in seizure disorders and in mania. This observation gave hope to the idea that anticonvulsants might also relieve symptoms of mania (Lewis, 1996). Eventually, two other medications, valproic acid and carbamazepine, both anticonvulsants, were recommended by the APA as first-line treatments for bipolar disorder. Like lithium, the mechanisms of action of the anticonvulsant drugs in controlling mania are not clear. One theory holds that they control a kindling process; it is speculated that in mania, as in epilepsy, a repetitive application of low-grade electrical or chemical stimuli gradually rewires the brain by changing the composition of the affected brain cells. The altered cells become sensitive to more subtle stimuli and respond with activity, producing a manic episode. An implication of this kindling theory is that drugs that are effective in early treatment of bipolar may be less effective later (Walsh, 1998).

Valproic acid (Depakote) discovered in the 1960s was approved by the Food and Drug Administration in 1995 for short-term treatment of bipolar disorder. The drug is thought to be helpful for 30% to 40% of bipolar individuals who do not respond to lithium. Depakote has also proven to relieve symptoms in the most severe type of bipolar disorder, the rapid-cycling form (Lewis, 1996).

Another anticonvulsant, carbamazepine (Tegretol), is frequently used by medical practitioners though the Food and Drug Administration has never approved it for use in treating bipolar disorder ("Bipolar Disorder

Is Neglected. . . ," 1998).

Overall response rates for the anticonvulsant drugs are similar to lithium; a client may fail to respond to one of these and respond well to another. An advantage the anticonvulsants have over lithium is a faster onset of action; they begin to stabilize the patient's mood in two to five days whereas Lithium's full therapeutic effect is achieved following two to three weeks of use (Walsh, 1998). Another advantage in using carbamazepine over lithium is related to safety; no fatalities have been reported from overdoses of carbamazepine (Kaplan & Sadock, 1996. as cited in Walsh, 1998). Yet, another advantage of using the anticonvulsants is they do not seem to potentiate a rebound mood episode with sudden discontinuation (Post, Ketter, Demicoff, Pazzaglia, Leverich, Marangell, Callahan, George, & Frye, 1996. as cited in Walsh, 1998).

Even when an effective mood stabilizer is found for bipolar patients, many still require other medications such as antidepressants or neuroleptics to help control depression or mania ("Mood Disorders: An Overview--Part II," 1998). As a general rule, however, long-term antipsychotic treatment for bipolar disorder is not advised (Keck, 1998).

Electrotherapy. Electroconvulsive therapy (ECT) is the passage of a low voltage electrical current through the brain to produce a seizure. The exact mechanism of action is unclear though it is thought that the stimulation of large groups of neurons firing slowly in unison results in biochemical changes in the brain causing increased levels of norepinephrine and serotonin. Many seriously depressed and manic patients who fail to respond to or experience severe side effects to drugs recover rapidly when given ECT ("Mood Disorders: An Overview--Part III," 1998). ECT is 80% effective for bipolar patients experiencing either mania

or depression (Daly, 1997; Walsh, 1998). It is a particularly valuable option for bipolar patients who may be pregnant and unable to take medication due to possible teratogenic effects or for those individuals demonstrating a high potential for suicide (Hales, Yudofsky, & Talbott, 1994). However, while ECT provides a prompt remission of symptoms, it provides no guard against relapse. ECT can be administered on a maintenance regimen if indicated (Milner, Amburgey, & Cameron, 1998; Walsh, 1998). In terms of safety, most experts consider ECT safer than pharmacotherapy; ECT has never been shown to cause brain damage ("Mood Disorders: An Overview--Part III," 1998).

Psychotherapy. Opinions vary widely regarding the value of psychotherapy in the treatment of bipolar disorder. The psychotherapeutic approach involving a high level of social participation is usually considered countertherapeutic for management of hospitalized acute manic patients (Klerman et al., 1994)

For clients receiving maintenance treatment, the trend today is toward an integrated treatment approach. Klerman et al. (1994) believe psychotherapy alone is ineffective; they contend, however, that psychotherapy may have a facilitative effect when combined with pharmacotherapy. Similarly, medications facilitate psychotherapy by making the patient more accessible; by reducing the patient's symptoms and affective discomfort, medications enable him better able to communicate and participate effectively in psychotherapy.

Pharmacotherapists generally agree psychotherapy does not affect etiologic mechanisms but continue to value psychotherapy as an ameliorative treatment which corrects secondary effects of the illness. Patients often have difficulty accepting this debilitating illness; their

recurrent episodes of mania and depression are often devastating to their interpersonal relationships as well as their occupational or educational lives. Additionally, education about the illness and its symptoms, as well as medication education frequently take place in the therapy setting. From this viewpoint, psychotherapy is rehabilitative rather than therapeutic (Klerman, 1994).

Traditionally, bipolar individuals have been considered particularly poor candidates for group psychotherapy (Yalom, 1983. as cited in Graves, 1993). More recently, however, several studies have demonstrated patients receiving group therapy were more compliant with treatment and demonstrated greater social adjustment and less frequent in-patient hospitalization (Graves, 1993; Klerman, 1994). Graves' (1993) findings demonstrate the usefulness of a directive, reality-based, noninterpretative approach. Bedell, Hunter, & Corrigan (1997) believe a "cognitive-behavioral social skills training approach is the single most important innovation" (p. 220) and "hopefulness. . . is an essential ingredient" (p. 219). Hales, Yudofsky, & Talbott (1994) cite research by Miklowitz (1991) stating "while no particular type of psychotherapy has proven uniquely effective, preliminary work. . . suggests that behavioral family treatment combined with lithium substantially reduces relapse rate compared with lithium therapy alone" (p. 487).

Concluding an exploration of the disease process, this thesis will now focus upon the challenges to out-patient treatment management of the chronically mentally ill bipolar population.

Challenges to Out-Patient Treatment Management

Compliance Research

The Health Belief Model is the most frequently used psychological model of compliance. This model is based upon the common-sense notion that patients' decisions as to whether or not to comply with out-patient healthcare instructions are based on a cost-benefit analysis. The model, however, fails to consider the social and personal costs of compliance (Smith & Hughes, 1999). A study completed by Morris & Schulz (1993. as cited in Hughes & Hill, 1997) demonstrated that patients evaluate medications on how they affect all aspects of their lives as well as their clinical effectiveness. For example, an antidepressant which decreases libido and interferes with sexual performance may be satisfactory to a client in the throes of depression and unsatisfactory to the client on maintenance therapy in remission from the illness.

A recent study by Budd, Hughes, & Smith (1966. as cited in Hughes & Hill, 1997) determined that susceptibility to relapse was the factor most predictive of noncompliance; individuals who complied believed they were more susceptible to relapse than noncompliers. The importance of early, intense education about the disease course is clearly indicated.

With regard to bipolar disorder, however, it is a frequent clinical finding that hypomanic symptoms are associated with poor compliance (Bartko, Herczeg & Zader, 1988. as cited in Hughes & Hill, 1997; Van Putten, Crumpton & Yale, 1976. as cited in Hughes & Hill, 1997). Many bipolar individuals enjoy the euphoria and feeling of well-being that accompany these episodes and deliberately attempt to capture the hypomanic mood state.

Hughes and Hill (1997) cite the tendency of practitioners to label patients as having 'good' or 'bad' compliance. These authors claim that "compliance is not an all-or-nothing phenomenon" (p. 474). In so doing, Hughes and Hill (1997) cite a study by Pullar & Feely (1990) indicating most patients do not have 100% treatment compliance but tend toward 'sloppy' compliance taking 70%-80% of prescribed treatment. Another study specifically measuring compliance rates for psychotherapeutic medications was completed by Ley & Llewellyn in 1995 (as cited in Hughes & Hill, 1997); these researchers found a noncompliance rate for psychotropic medications at slightly above 40%. Needless to say, the implications of noncompliance with drug treatment vary depending on the desired therapeutic outcome. A bipolar individual who takes the prescribed thymoleptic only 80% of the time will not maintain an adequate blood level to prevent mood instability and symptomatology. Compliance rates of 100% are essential for therapeutic effectiveness of many psychotropic drugs. Effective out-patient health management cannot be achieved for bipolar individuals without total patient compliance.

Only recently have behavioral studies begun to address the issue of achieving long-term adherence to recommendations for preventive health behavior. Although compliance researchers have made useful contributions in identifying risk factors and documenting noncompliance, they have been less successful in explaining and altering noncompliant behavior. Even where compliance research has contributed to our ability to improve compliance, the effects have generally been short lived (Leventhal & Hirschman, 1982). Attempting to maintain behavioral changes over the long term remains the largest problem of behavioral change efforts in out-patient settings. Individuals tend to think about

illness only when they experience symptoms. The findings are clear that symptoms play an important role in motivating people to seek and sustain medical treatment (Safer, Tharps, Jackson, & Leventhal, 1979. as cited in Sanders & Suls, 1982).

The next section examines social learning theory and a construct more intrinsic than the previously examined factors necessary for health maintenance: the individual's locus of control.

Social Learning Theory and Locus of Control

Rotter's (1975) social learning theory asserts that "the potential for a behavior to occur in any specific psychological situation is a function of the expectancy that the behavior will lead to a particular reinforcement in that situation and the value of that reinforcement" (p. 57. as cited in Sanders & Suls, 1982). Beginning in the1950s, Rotter and his colleagues became interested in predicting how reinforcements alter behavior. Subsequently, they developed the locus of control construct which has proven a useful tool for predicting how this occurs. Additionally, when the behaviorist approach was forced to compete with the emerging cognitive psychology during the 1960s, the construct proved a useful mechanism for social learning theorists to combine behavioral and cognitive schools of thought (Marks, 1998).

According to Rotter's theory, an individual's behavior can be predicted from having knowledge of how they view a situation, the expectancies they have of their behavior, and how they value the outcomes that might occur as a result of their behaviors in that particular situation (Wallston & Wallston, 1982).

Much research was generated during the 1950s-1970s testing Rotter's social learning theory. The construct that has received the

greatest amount of attention has been locus of control.

The basic principle underlying Rotter's construct of locus of control derives from social learning theory and argues that reinforcement may be perceived as either contingent upon one's own behavior or as independent of one's own behavior (Furnham & Steele, 1993; Vandervoort & Luis, 1997).

Rotter's concept was originally conceived as a single dimension in which an individual could be located between the internal and external poles (Hyman & Stanley, 1991). The expectancy that one's outcomes (or reinforcements) are a direct result of one's behavior is termed an *internal* locus of control orientation. Believing that one's outcomes/reinforcements are under the control of powerful other people or are randomly determined by forces of fate, luck, or chance are beliefs which are indicative of an *external* locus of control orientation (Wallston & Wallston, 1982). Individuals' beliefs about the controllability of what happens to them is a core element of their understanding of how they live in the world (Shapiro, Schwartz, & Astin, 1996. as cited in Marks, 1998).

Locus of control beliefs begin taking form in early childhood and are influenced by early learning experiences and family cultural values (Lefcourt, 1980. as cited in Marks, 1998). Schulz, Heckhausen, and Locher (1991. as cited in Marks, 1998) have suggested that generalized, internalized locus of control remains relatively stable over the life course, but beliefs about control over specific domains may change with changing circumstances and continual appraisals by the individual. There may be tremendous situation specificity and thus intra-individual variation across domains of activities and settings. A person may be internal with regard to one type of activities or actions and external in another situation (Furnham

& Steele, 1993). Thus, using domain specific measures would be more accurate as a tool of measurement.

A major contribution by Hanna Levenson (1973) consisted of splitting the externality factor measured by Rotter's instrument into two distinct components: The powerful others health locus of control scale (PHLC) measures an individual's beliefs that his health is determined by powerful other people (for example, doctors, nurses, family). The chance health locus of control scale (CHLC) measures the extent to which the individual believes his health is a matter of fate, luck, or chance. On Levenson's multidimensional instrument, PHLC and CHLC are treated as separate measures of health locus of control beliefs. The internal health locus of control scale (IHLC), as previously indicated, measures the extent to which individuals believe that internal factors or self behaviors are responsible for their health/illness. The rationale behind Levenson's (1973) tripartite differentiation evolved from the reasoning that individuals who believe that the world is unordered (chance) would behave and think differently than those who believe that the world is ordered but that powerful others are in control. Levenson (1973) believes that one of the goals of treatment is the development or strengthening of internal control; thus, an instrument measuring the separate dimensions is an essential tool of the social learning theoretical approach.

It is important to note that low scores on one particular scale of Levenson's instrument do not mean the individual will score high on the opposite scale; the three dimensions measured by the Multidimensional Health Locus of Control Scales are more or less statistically independent and it is quite possible for an individual to simultaneously score high on

two or even three dimensions (Levenson, 1973; Wallston & Wallston, 1982).

The multidimensional scales are superior to Rotter's original unidimensional scales in two ways: Psychometrically, the multidimensional scales are more internally consistent (thus, more reliable). Conceptually, the original scale only contained a single powerful-others item whereas Levenson's multidimensional measure has an entire scale (PHLC) devoted to this important construct (Wallston & Wallston, 1982).

The locus of control construct is strongly affected by cultural beliefs and norms. Differences on measures of locus of control have been demonstrated between and among cultures. Internal locus of control is reported more frequently in majority groups such as EuroAmericans and members of higher socioeconomic groups (Gurin, Gurin, & Morrison, 1978. as cited in Marks, 1998). Lefcourt (1982. as cited in Marks, 1998) found minority groups, such as African Americans, Spanish Americans, and Native Americans, hold external control beliefs more frequently. Yet, other studies (Lau, 1982; Young & Shorr, 1986. as cited in Marks, 1998) demonstrated locus of control was more strongly associated with socioeconomic status than with ethnicity. Despite Rotter's own caution to avoid falsely assuming dichotomous beliefs (internal/good, external/bad), Western cultural ideology has resulted in a cultural bias stating that internal control is always more desirable than external control (Marks, 1998). This bias is demonstrated by numerous studies showing that Americans' beliefs in internal health locus of control are typically stronger than their beliefs in chance and powerful other health locus of control. Most individuals in Western cultures score above the mean on IHLC and below the mean on CHLC (Wallston & Wallston, 1982). This general

tendency must be taken into account when making comparisons between raw scores for an individual.

Indeed, in Western cultures, enhancing self-control seems to be an integral aspect of many counseling theories. A recent publication by Strong, Yoder, and Corcoran (1995. as cited in Marks, 1998) implies that all clients should strive for an internal locus of control. Some others (Frank, 1982. as cited in Marks, 1998; Strupp, 1970. as cited in Marks, 1998) have also suggested that increasing internal control is a primary goal of all counseling approaches. Marks (1998) cautions, however, that counselors should avoid globally applying the belief that internality is always the most beneficial by being sensitive to each client's cultural identity.

A myriad of studies and papers exist on the construct of locus of control. It has generally been the case that--compared to individuals demonstrating an external locus of control expectancy--internals are more potent, competent, effective individuals, likely to assume responsibility for their actions and to take steps to avoid aversive life situations (e.g., relapse) (Lefcourt, 1981. as cited in Sanders & Suls, 1982; Levenson, 1973; Rotter, 1975. as cited in Sanders & Suls, 1982). Other research findings (Holder & Levi, 1988. as cited in Marks, 1998; Petrosky & Birkimer, 1991. as cited in Marks, 1998) demonstrate a significant correlation between having an external locus of control and higher levels of psychological distress. Strickland (1978. as cited in Sanders & Suls, 1982) reports that "instruments suggest that beliefs about internal versus external control are related in significant and even dramatic ways to health-related behaviors" (p. 1192). In other words, individuals who hold

internal as opposed to external expectancies are more likely to assume responsibility for their health.

Some interesting studies have related health locus of control to other constructs. Dishman, Ickes, and Morgan (1980. as cited in Sanders & Suls, 1982) found a significant relationship between health locus of control scores and measures of self-motivation. Individuals scoring in the internal direction on the health locus of control demonstrated a higher degree of self-motivation. In a 1980 study by Nice (as cited in Sanders & Suls, 1982), a significant correlation was demonstrated between individuals who scored high on the chance and powerful others subscales of the MHLC and individuals with situational depression; Nice stated this "measure of depressive affect may provide a valuable extension of the work relating both learned helplessness and external locus of control to depression" (p. 11). A meta-analysis by Presson & Benassi (1996) supports an association between external locus of control and increased levels of depressive symptomatology. Of the many findings studied by Wallston and Wallston (1982), the most consistent relationship is between depressive affect and the belief that an individual's health is unpredictable (i.e., CHLC). An interesting cross-cultural meta-analysis by Boor (1976. as cited in Marks, 1998) concluded "cultures that foster high perceptions of external control also foster high suicide rates" (p. 144). Similarly, Strickland (1978) cites several studies (Lefcourt, 1976; Levenson, 1973, Shybut, 1968) of hospitalized psychiatric patients who demonstrated a relationship between externality and severity of psychiatric diagnosis. Because these studies are correlational and give no indication of direction of causality, there is no way to know if external beliefs accompany a predisposition to psychological illness or if locus of control beliefs result as

a function of the disturbances. Longitudinal studies of these questions would prove valuable.

Nevertheless, Strickland (1978) concludes:

> With some exceptions, . . . individuals who hold internal as opposed to external expectancies are more likely to assume responsibility for their health. Internals appear to attempt to maintain their physical-being . . . to a greater extent than individuals who hold external expectancies (p. 1194).

One can only surmise from the studies cited so far that if: (A) a link exists between having an external locus of control and higher levels of depression/increased severity of psychiatric diagnosis and (B) individuals with an external level of control are less likely to assume self-responsibility for their health, then (C) individuals with higher levels of depression/increased severity of psychiatric diagnosis are less likely to assume self-responsibility for health maintenance in an out-patient treatment setting.

With regard to chronicity of illness, across a variety of chronic patient samples, beliefs in chance and in powerful others as the locus of control for one's health are relatively high. However, since we lack longitudinal studies, one can only hypothesize that such external beliefs arise out of experience with illness. Chronically ill individuals, realizing they did not bring about their illness, may develop an increased belief in chance locus of control. Additionally, individuals with chronic mental illness are more reliant on family members and health professionals, and thus likely to develop high powerful other locus of control beliefs (Wallston & Wallston, 1982).

The distinction between the external subsystems (CHLC and PHLC) seems particularly important in the understanding of adherence behavior. How do these loci of control impact upon the individual's ability to comply with the necessary out-patient treatment regimen? To their detriment, individuals with a strong chance locus of control may believe they have little ability to influence the course of their disease. Consequently, they are likely to demonstrate little initiative and poor motivation to participate in the out-patient treatment model. The powerful other locus of control may be adaptive in the chronically ill bipolar individual. With this locus of control, the individual may be more likely to cooperate with needed treatment administered by the powerful other (e.g., accept medications administered or supervised by the powerful other or accept and cooperate with in-patient hospitalization when indicated). Individuals able to trust a powerful other in their life may be able to accept treatment during times of cognitive distortion and psychosis. An individual believing exclusively in powerful other health locus of control, however, would be completely helpless if the helpful other were not there to assist (Wallston & Wallston, 1982).

Research has provided several studies (Levin & Shulz, 1980; McGrath, 1980; Goldstein, 1980) cited by Sanders & Suls (1982) suggesting that beliefs in internality and in powerful others health locus of control may be conducive to out-patient adherence and compliance. Conversely, Gordon (1980. as cited in Sanders & Suls, 1982) found that high external locus of control may be a barrier to restoration of health since these beliefs work against a patient's maintaining contact with the health care system.

Brief Summary of Literature and Implications for Research

As indicated, mankind has struggled throughout time to understand and control abnormal behavior. From trephining , exorcism, bleeding, cupping, chaining, and execution by burning, mankind advanced to "moral treatments" like straightjackets and cribbing, ice cold baths, insulin shock treatments (minus the benefit of antiarrhythmias, barbiturates, or muscle relaxants), and lobotomy. Not until the mid-twentieth century did mankind advance to psychopharmacotherapeutics, humane, safe electrotherapy, numerous theories of psychotherapy, and deinstitutionalization.

The new system of community-based care and out-patient treatment, however, has many weaknesses. The new treatment model essentially leaves responsibility for the care of the chronically mentally ill unassigned. Those fortunate enough to have a family caretaker become the burden of a family member. Those less fortunate are left with self-responsibility.

There are numerous obstacles and challenges for the chronically mentally ill bipolar individual self-responsible for out-patient health management. The individual's understanding of the disease process and the necessity of 100% compliance with pharmacotherapy are paramount. What happens when this bipolar individual falls into the group of 40% who are medication noncompliant (Ley & Llewellyn, 1995. as cited in Hughes & Hill, 1997)? Equally important is the individual's ability to determine when symptoms require intervention. What of the self-responsible bipolar individual whose symptoms consist of altered thought processes? If he is unable to understand he is symptomatic, will he comply with self-administered pharmacotherapy or even seek treatment when it is most necessary?

Indeed, the self-responsible chronically ill individual with bipolar disorder faces many challenges with regard to health maintenance. Studies (Strickland, 1978; Wallston & Wallston, 1982) indicate that the presence of an internal locus of control is more conducive to an individual assuming responsibility for their health. Because of the significant degree of out-patient noncompliance, in-patient recidivism, and suicide among the individuals diagnosed with bipolar disorder, it was hypothesized that this population of individuals would demonstrate a significantly greater measure of "powerful other" and "chance" loci of control than individuals who have never experienced a diagnosed mental disorder.

Chapter 3

Methods

Participants

The independent variable of this study was the presence or absence of a chronic mental illness, bipolar disorder. One group consisted of 30 individuals who had been medically diagnosed as meeting the DSM-IV (American Psychiatric Association, 1994) criteria for either bipolar I or bipolar II disorder. To ensure individuals met the definition for "chronicity," only those indicating a history of two or more prior in-patient psychiatric hospitalizations were included in this sample. The other sample group consisted of 30 individuals who have never been clinically diagnosed with a mental disorder.

Random selection from among the target population would have been ideal; however, cluster sampling of the accessible population of bipolar disordered individuals and their caretakers attending Depressive and Manic Depressive Association (DMDA) support/educational group meetings provided both comparison groups for this study. Cluster sampling is most useful when the population is spread widely over a geographic area. Hence, to ensure cultural, racial, educational and socioeconomic diversity of both samples, the researcher pooled from subjects attending DMDA meetings in five disparate sections of the Counties of St. Louis and St. Charles. Attending a meeting in inner St. Louis city, the author drew from a mixed racial (African American and Caucasian), low socioeconomic, urban group. Attending meetings in north, west, and south St. Louis county, the author drew from a primarily

Caucasian, mid to upper socioeconomic community with a minimum of 12 years of education. Attending a meeting in far west St. Charles county, the author drew a primarily Caucasian, partially suburban and partially rural, mixed socioeconomic group of participants. Drawing from these varied clusters, the author sought to obtain data producing results which would be generalizable to the population.

The mean age of the sample diagnosed with bipolar disorder was 41.37 years, while the mean age of the sample with no psychiatric diagnosis was 49.93 years. The bipolar group was 10% African American and 90% Caucasian while the group with no psychiatric diagnosis was comprised of 13.3% African Americans and 86.7% Caucasians. Both the bipolar group and the no diagnosis group consisted of 37% males and 63% females. The bipolar group demonstrated a higher mean level of education with 63.4% attaining 14 or more years of education; the no diagnosis group was comprised of 56.7% attaining 14 or more years of education. Of the individuals in the bipolar disorder group, 46.7% resided within a household whose annual income was less than $10,000 whereas less than 10% of individuals in the no diagnosis group resided within a household having less than $10,000 annual income. (See Table 2 for detailed demographic information.) Chronicity of mental illness was confirmed by statistics revealing 43.3% of the bipolar individuals had two in-patient hospitalizations, and 56.7% of the sample had three or more in-patient hospitalizations for psychiatric disorder.

Instrument

Multidimensional Locus of Control Scales for Psychiatric Patients.

The Multidimensional Locus of Control Scales for Psychiatric Patients (MLOCP) was the instrument used for data collection in this study.

Table 2

Demographic Data

		Bipolar (n=30)	No Diagnosis (n=30)
Age		M=41.37 SD=14.48	M=49.93 SD=10.64
Gender	Male	37.0%	37.0%
	Female	63.0%	63.0%
Race	African American	10.0%	13.3%
	Caucasian	90.0%	86.7%
Education	10 Years	3.3%	3.3%
	12 Years	33.3%	40.0%
	14 Years	26.7%	40.0%
	16 Years	20.0%	10.0%
	18+Years	16.7%	6.7%
Income - annual/household			
	Below $10,000	46.7%	10.0%
	$10,000-19,999	10.0%	3.3%
	$20,000-29,999	13.3%	13.3%
	$30,000-39,999	16.7%	30.0%
	$40,000-59,999	10.0%	23.3%
	$60,000+	3.3%	20.0%

Though the instrument, originally published by Hanna Levenson in the Journal of Consulting and Clinical Psychology in 1973, does not appear in well known testing references such as Buros Mental Measurement Yearbooks, Tests in Print, or PRO-ED's Test Critiques, it is thought to be the most widely used scale of locus of control after that of Rotter's original Internal-External Scale (Furnham, 1993).

Levenson's MLOCP self-report instrument consists of 24 items which measure the individual's beliefs that reinforcement is contingent upon one of three subscales: one's own behavior or internal locus of control (ILC), powerful others' control (POC), or chance control (CC). Beliefs are measured in Likert format on a six-point scale from "1 = strongly disagree" to "6 = strongly agree." Thus, on each of the three subscales, an individual may score between 8 and 48; the higher the measure, the greater the individual demonstrates each particular locus of control. The three dimensions measured are more or less statistically independent and it is possible for an individual to simultaneously score high on two or even three dimensions (Levenson, 1973; Wallston & Wallston, 1982). Levenson (1973) designed the instrument specifically for measurement of adult psychiatric patients.

Normative data for the instrument was based on 165 consecutively admitted psychiatric patients. Ninety-five were male, and 70 were female; approximately 66% of the individuals comprising the sample were white, and 34% were black. The average age of this sample was 37 years old. There is no demographic information reported for the 96 nonpsychiatric subjects (Levenson, 1973).

Regarding empirical norming data, the mean scores for the ILC, POC, and CC were 35.4, 23.8, and 21.7 respectively for the sample of psychiatric patients. The average scores for the nonclinical group were 35.5, 16.7, and 13.9 respectively for ILC, POC, and CC. It is interesting to note that there were no significant gender differences in scoring on the subscales (Fischer & Corcoran, 1994; Levenson, 1973).

The test instructions are relatively simple. The individual is requested to read each of the 24 statements and determine, using a six point Likert format, the degree to which he or she agrees. Administration and scoring require no specialized training instruction. The three subscales are computed separately.

As questions 4, 12, and 20 of Levenson's instrument pertain to the respondent's status as an in-patient, minimal modification of wording was necessary to adapt the instrument for the out-patient psychiatric and no diagnosis populations assessed. Item #4 "My behavior will determine when I am ready to leave the hospital" was changed to "Behavior determines when one is ready to leave the hospital." Item #12 "It is impossible for anyone to say how long I'll be in the hospital" was changed to "When one goes into the hospital, it is impossible for anyone to say how long a stay will be required." And, item #20, "How soon I leave the hospital depends on other people who have power over me" was changed to "How soon one is able to leave the hospital depends on other people who have power over them."

The internal consistency reliability of the instrument was good for two of the three scales. Kuder-Richardson reliabilities (coefficient alpha) were .67, .82, and .79 for the ILC, POC, and CC, respectively (Levenson, 1973). According to Levenson (1973), the moderate alpha measurement

(.67) on the internal locus of control "was to be expected since the items sample a wide variety of situations" (p. 399).

Test-retest reliability over a five-day interval was .74 and .78 for the POC and CC. For the ILC, however, test-retest reliability was extremely low at .08 (Fischer and Corcoran, 1994). Levenson (1973) speculates "control by powerful others and control by chance forces. . . reflect rather stable, meaningful orientations for maladjusted persons. The internal scale, on the other hand, might reflect day-to-day fluctuations in a person's judged competency" (p. 403).

Validity of this instrument was established primarily through known group procedures (Fischer & Corcoran, 1994). Levenson's instrument has been shown to have concurrent and, most importantly, construct validity (Furnham, 1993). There is significant correlation in the validity data between Levenson's scale and Rotter's scale (Hyman, 1991; Levenson, 1973).

Overall, despite some concern regarding the low (.08%) test-retest reliability for Levenson's internal locus of control dimension, the instrument has good internal consistency and validity when correlated with similar instrument measurements.

The Levenson tripartite tool spawned the creation of many other specific, multidimensional scales. It appears to be a highly respected instrument which has withstood the test of time.

Procedures

With regard to administrative procedures, the author received verbal permission from Helen Minth, ACSW, Executive Director, DMDA, to distribute questionnaires to members for the purpose of gathering data for a graduate thesis; in addition, the author arrived early at each of the

DMDA meetings to meet and request permission of the individual in charge of the meeting.

Data collection for both sample groups was as identical as possible and carried out simultaneously at each of the meeting sites. The researcher collecting data was unaware whether a participant belonged to the category of bipolar disordered or no psychiatric diagnosis. The researcher stressed that participation was voluntary, and anonymity was guaranteed. A covered, slotted box was provided for depositing the questionnaires at the close of the meeting. For individuals who preferred to take the questionnaire with them, stamped, addressed envelopes were made available for returning those responses.

To minimize threats to validity, the researcher made no comments that differentiated between the two sample groups being sought and queried simultaneously. In the cover letter (Appendix B), a statement informed participants "whether you have a diagnosed mental illness or no history of mental illness, your participation and input are valuable to this study." Furthermore, there was no overt indication that participants were being measured on locus of control. The cover letter (Appendix B) explained accurately and generally that the study was concerned with maintenance of the individual's optimal level of health. Following collection of data, questionnaires which did not meet the criteria for inclusion in this study were shredded and discarded. The size of the sample was determined by the number of questionnaires obtained from the collection sites which met the stipulation for either (1) absence of history of a diagnosed mental illness or (2) presence of bipolar disorder diagnosis with a minimum of two prior in-patient hospitalizations.

A causal-comparative research design was selected for this ex post facto study. There could be no random assignment of participants to groups; the independent variable group was pre-existent. The presence of bipolar disorder or the absence of any diagnosed mental disorder is a variable which could not be manipulated by the researcher. Thus, this study could not be carried out via experimental design. The causal-comparative study can only attempt to identify a cause-effect relationship between having bipolar disorder, a chronic mental disorder, and an external locus of control. A limitation of this research design was the inability of the researcher to state with certainty that a causal connection existed. Only a *relationship* between the variables could be identified with certainty.

Data analysis for this causal-comparative study began with dividing the questionnaires into the two sample groups. Each instrument was then scored, yielding a measure for each of the three scales (internal, powerful others, and chance loci of control).

All demographic data and the corresponding measures derived from the dependent variable were transferred to a spread sheet for analysis utilizing the Statistical Package for the Social Sciences (SPSS) program. The author examined the gender composition of each of the groups as well as the mean age of the subjects in each independent variable group. Racial proportions as well as highest level of education and socioeconomic status of the groups were also compared. This measure was carried out to ensure equality of the two samples to the extent possible.

After determining the mean score for each group (bipolar/no mental disorder) on each of the three scales (internal, powerful others, and chance), the author conducted an independent t-test to determine the

significance of the difference between the means for each of the three loci of control for the two groups. The p value yielded indicates the probability of chance or random sampling error. If p equaled or was less than .05, the difference in measure was determined to be significant, and the null hypothesis rejected. If p was found to be greater than .05, the null hypothesis was maintained.

Chapter 4

Results

The two groups were compared on each of the three loci of control as assessed by the Levenson Multidimensional Locus of Control Scales for Psychiatric Patients. The higher an individual scored in the range of 8-48, the greater his belief in that health locus of control. The mean score on the internal health locus of control variable was 35.20 for the bipolar group and 36.83 for the no diagnosis group. The mean score on the powerful other health locus of control variable was 24.83 for the bipolar group and 21.93 for the no diagnosis group. The mean score on the chance health locus of control variable was 24.37 for the bipolar group and 23.07 for the no diagnosis sample group. Descriptive statistics for these scores appear in Table 3.

It was hypothesized that the group of individuals with bipolar disorder would have significantly higher measures of external (powerful other and chance) loci of control than the group of individuals never diagnosed with a mental disorder. A t-test for independent samples failed to demonstrate a significant difference between the means scored by the two groups on any of the three variables: internal locus, t (58) = -1.444, $p > .05$ (.154); powerful other locus, t (58) = 1.281, $p > .05$ (.205); and chance locus, t (58) = .782, $p > .05$ (.437). The p value yielded is indicative of the probability of chance or random sampling error. On each variable measured, the p value exceeds .05; thus, the null hypothesis was maintained.

Table 3

Descriptive Statistics: Levenson Multidimensional Locus of Control Scales in Psychiatric Patients

Variable	Group	N	Mean	SD	t	p
Internal	Bipolar	30	35.20	4.45	-1.44	.154
	No Diagnosis	30	36.83	4.31		
Powerful Other	Bipolar	30	24.83	8.60	1.28	.205
	No Diagnosis	30	21.93	8.92		
Chance	Bipolar	30	24.37	6.29	.78	.437
	No Diagnosis	30	23.07	6.58		

Chapter 5

Discussion

The hypothesis states that individuals diagnosed as having bipolar disorder, a chronic mental illness, will demonstrate a significantly greater measure of external (powerful other and chance) loci of control than individuals who have never experienced a diagnosed mental disorder.

The results of this study failed to find a significant difference in the mean scores between the two groups on all loci of control variables. Hence, the null hypothesis was maintained.

The findings of this study failed to support the author's hypothesis that an external locus of control plays a significant role in the chronic mentally ill bipolar patient's inability to maintain an optimal level of wellness within the current out-patient treatment model.

In a review of the literature, the author failed to find any prior research related specifically to locus of control and individuals with bipolar disorder. There exists, however, more generalized research pertaining to locus of control and individuals with depressive symptomatology. A meta-analysis by Presson & Benassi (1996) supports an association between external locus of control and increased levels of depressive symptomatology. A 1980 study by Nice (as cited in Sanders & Suls, 1982) demonstrated a significant correlation between individuals who scored high on the external, chance and powerful other, subscales and individuals with situational depression. Of the many research findings studied by Wallston and Wallston (1982), the most consistent relationship was found between depressive affect and the belief that an individual's health is unpredictable

(i.e., controlled by chance).

More broadly based research further demonstrated a significant correlation between having an external locus of control and higher levels of psychological distress. Two such studies, one by Holder and Levi (1988. as cited in Marks, 1998) and one by Petrosky and Birkimer (1991. as cited in Marks, 1998), demonstrated significant correlations between having an external locus of control and higher levels of psychological distress. Similarly, Strickland (1978) cites studies by Lefcourt (1976), Levenson (1973), and Shybut (1968) which demonstrate a relationship between external loci of control and severity of psychiatric diagnosis. The results of this study failed to support these past research findings.

Notable discrepancies existed between the author's psychiatric group and Levenson's (1973) psychiatric group used for norming the MLOCP instrument. Levenson (1973) utilized a psychiatric population of acutely ill individuals receiving in-patient treatment whereas the author's psychiatric population consisted exclusively of individuals functioning at a level of wellness which enabled them to be treatment managed using an out-patient treatment model. Additionally, the author's psychiatric group consisted exclusively of individuals diagnosed with bipolar disorder and two prior in-patient hospitalizations while Levenson's psychiatric group was not limited to individuals determined to have a minimum of two prior psychiatric hospitalizations nor to individuals with a particular severity of diagnosis. These dissimilarities may account for this author's inability to replicate Levenson's outcome.

Limitations of Study

A limitation of this study involved the use of a volunteer sample of subjects. As volunteers, the groups of individuals may be more highly motivated, more approval seeking, and/or may be more cooperative. Consequently, they may not be characteristic of the target population.

Another limitation of this causal-comparative study involves the author's inability to ensure equality of groups. The inability to randomly select subjects presented a potential threat to validity in that the possibility existed that the two groups may be different on some other unidentified major variable besides the presence or absence of mental disorder. In fact, the groups in this study did differ dramatically on demographic variables of income and education. Of the bipolar disorder sample, 56.7% had annual household incomes of less than $19,999 while only 13.3% of the no diagnosis sample indicated an income less than $19,999. This variance is readily explained by the fact that many of the participants in the bipolar sample have no income other than a governmental disability allotment. With regard to educational level, 36.7% of the bipolar group had attained 4+ years of college while 16.7% of the no diagnosis group made that claim. It is known that "bipolar disorder is linked with superior education. . ." (Sederer, 1983, p. 39). It may be that these sampling discrepancies played some role in the measures of locus of control of the two causal-comparative groups. Analysis of covariance may be one method of overcoming these inherent group differences on extraneous variables.

An alternative explanation for the author's finding of insignificant differences between the groups may be found in the newly generated hypothesis that caretakers of chronically ill bipolar individuals may have

concomitantly experienced chronic feelings of helplessness and inability to control their family member's bipolar illness thereby increasing their own measures of external loci of control, possibly to the extent experienced by the patients themselves. In repetition of this study, the author recommends utilizing non-psychiatrically diagnosed, *non-caretaker* individuals selected randomly.

Recommendations for Future Research

Before any other research is undertaken, the author would seek to replicate the findings of this study. To tighten the control, however, the researcher would utilize either matching of the samples or analysis of covariance using the demographic variables of income and education as covariants. Additionally, the researcher would utilize random selection of the no diagnosis sample with exclusion of individuals who have ever received a psychiatric diagnosis or experienced any prior caretaking of a mentally ill individual.

It is also possible that this author's study may have replicated the findings of other researchers if the sample groups had been larger. Identifying and accessing an adequate number of bipolar out-patients was challenging. Some of the individuals presenting with bipolar disorder had less than two prior in-patient admissions and did not meet the criteria for chronicity. Generally, the larger the sample group in any study, the more confidence the researcher may have in the outcome of the research. In repeating this study, the author would speak with the executive director of DMDA to determine if the association's mailing list is accessible; this would surely provide a larger base of participants than accessed by attending the numerous community support/educational group meetings. Additionally,

the increased anonymity of receiving and returning all questionnaires by mail may increase the participation level of this sample group.

A suggestion for further study would involve the comparison of locus of control measures in bipolar diagnosed individuals during periods of satisfactory functioning in the out-patient treatment model and during episodes of illness requiring in-patient treatment. The hypothesis of such a study would be to question the alteration of one's locus of control measures during periods of wellness and decompensation.

Another suggestion for further study might involve separating bipolar individuals who have kinkeepers from bipolar individuals who do not in order to determine the effects of having a caretaker upon the maintenance of health in the chronically mentally ill individual. A study such as this may help to identify high risk individuals who account for high rates of in-patient recidivism and suicide.

Implications for Practice

According to the findings of this study, bipolar individuals do not differ significantly from non-psychiatrically diagnosed individuals in external locus of control. The study, in fact, suggested that the bipolar population does not differ significantly from the no diagnosis population in measure of *internal* locus of control. Individuals with a higher internal locus of control believe that reinforcements are a result of personal effort (Rotter, Seeman, & Liverant, 1962. as cited in Marks, 1998). Compared to individuals who score high on external measures, internals are believed to be more competent, effective individuals, likely to assume responsibility for their well-being and to take steps to avoid aversive life situations (Lefcourt, 1981. as cited in Sanders & Suls, 1982; Rotter, 1975. as cited in Sanders & Suls, 1982). Dishman, Ickes, and Morgan (1980. as cited in Sanders

& Suls, 1982) found that individuals scoring in the internal direction on the health locus of control demonstrated a higher degree of self-motivation. Strickland (1978) stated "individuals who hold internal . . . expectancies are more likely to assume responsibility for their health" (p. 1194) and that "beliefs about internal versus external control are related in significant and even dramatic ways to health-related behaviors" (p. 1192). Several other studies (Levin & Schulz, 1980. as cited by Sanders & Suls, 1982; McGrath, 1980. as cited by Sanders & Suls, 1982; Goldstein, 1980. as cited by Sanders & Suls, 1982) have demonstrated that beliefs in an internal health locus of control may be conducive to out-patient adherence and compliance. The findings of these researchers along with the higher measures of internality demonstrated by both groups in this study suggest perhaps the focus should be placed upon reinforcing the chronically mentally ill individual's internal beliefs rather than attempting to cope with and extinguish his beliefs in externality. This might be done through education which focuses upon empowering the individual and providing essential positive reinforcements for his efforts to maintain treatment compliance and his optimal state of well-being.

Few will disagree that the present system of community-based care and out-patient management of the chronically mentally ill has many weaknesses. Perhaps, however, one of those weaknesses lies in viewing the chronically mentally ill individual as externally controlled, apathetic, or noncompliant rather than viewing the treatment model as failing to recognize, reinforce, and utilize the individual's strength and internality. We need to determine the most effective ways to increase internality and motivate health maintainance behaviors. Because medication compliance is of ultimate concern in providing treatment to mentally ill out-patients, it is

essential to determine the deterrents to medication compliance.

The search must continue for ways to make the out-patient treatment model more effective for victims of severe and persistent mental disorders. Meanwhile, many will die each day. The only question remaining is whether they will succumb to a physiological process such as hallucinations instructing them to end their life or will they succumb to a psychosocial problem such as lack of employment, no place to live, no one who cares, or a lack of hope or reason to continue living?

Appendix A

Table A1

Criteria for Major Depressive Episode

A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.

Note: Do not include symptoms that are clearly due to a general medical condition, or mood-incongruent delusions or hallucinations.

(1) depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful). **Note:** In children and adolescents, can be irritable mood.
(2) markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation made by others)
(3) significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. **Note:** In children, consider failure to make expected weight gains.
(4) insomnia or hypersomnia nearly every day
(5) psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down)
(6) fatigue or loss of energy nearly every day
(7) feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)
(8) diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others)
(9) recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide

B. The symptoms do not meet criteria for a Mixed Episode (see p. 335).

C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

D. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism).

E. The symptoms are not better accounted for by Bereavement, i.e., after the loss of a loved one, the symptoms persist for longer than 2 months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation.

From American Psychiatric Association. (1994). Diagnostic and Statistical Manual of Mental Disorders (4th ed.). Washington D.C.: American Psychiatric Association.

Appendix A

Table A2

Criteria for Hypomanic Episode

A. A distinct period of persistently elevated, expansive, or irritable mood, lasting throughout at least 4 days, that is clearly different from the usual nondepressed mood.

B. During the period of mood disturbance, three (or more) of the following symptoms have persisted (four if the mood is only irritable) and have been present to a significant degree:
   (1) inflated self-esteem or grandiosity
   (2) decreased need for sleep (e.g., feels rested after only 3 hours of sleep)
   (3) more talkative than usual or pressure to keep talking
   (4) flight of ideas or subjective experience that thoughts are racing
   (5) distractibility (i.e., attention too easily drawn to unimportant or irrelevant external stimuli)
   (6) increase in goal-directed activity (either socially, at work or school, or sexually) or psychomotor agitation
   (7) excessive involvement in pleasurable activities that have a high potential for painful consequences (e.g., the person engages in unrestrained buying sprees, sexual indiscretions, or foolish business investments)

C. The episode is associated with an unequivocal change in functioning that is uncharacteristic of the person when not symptomatic.

D. The disturbance in mood and the change in functioning are observable by others.

E. The episode is not severe enough to cause marked impairment in social or occupational functioning, or to necessitate hospitalization, and there are no psychotic features.

F. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication, or other treatment) or a general medical condition (e.g., hyperthyroidism).

Note: Hypomanic-like episodes that are clearly caused by somatic antidepressant treatment (e.g., medication, electroconvulsive therapy, light therapy) should not count toward a diagnosis of Bipolar II Disorder.

From American Psychiatric Association. (1994). Diagnostic and Statistical Manual of Mental Disorders (4th ed.). Washington D.C.: American Psychiatric Association.

Appendix A

Table A3

Criteria for Manic Episode

A. A distinct period of abnormally and persistently elevated, expansive, or irritable mood, lasting at least 1 week (or any duration if hospitalization is necessary).

B. During the period of mood disturbance, three (or more) of the following symptoms have persisted (four if the mood is only irritable) and have been present to a significant degree:
   (1) inflated self-esteem or grandiosity
   (2) decreased need for sleep (e.g., feels rested after only 3 hours of sleep)
   (3) more talkative than usual or pressure to keep talking
   (4) flight of ideas or subjective experience that thoughts are racing
   (5) distractibility (i.e., attention too easily drawn to unimportant or irrelevant external stimuli)
   (6) increase in goal-directed activity (either socially, at work or school, or sexually) or psychomotor agitation
   (7) excessive involvement in pleasurable activities that have a high potential for painful consequences (e.g., engaging in unrestrained buying sprees, sexual indiscretions, or foolish business investments)

C. The symptoms do not meet criteria for a Mixed Episode (see p. 335).

D. The mood disturbance is sufficiently severe to cause marked impairment in occupational functioning or in usual social activities or relationships with others, or to necessitate hospitalization to prevent harm to self or others, or there are psychotic features.

E. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication, or other treatment) or a general medical condition (e.g., hyperthyroidism).

Note: Manic-like episodes that are clearly caused by somatic antidepressant treatment (e.g., medication, electroconvulsive therapy, light therapy) should not count toward a diagnosis of Bipolar I Disorder.

From American Psychiatric Association. (1994). Diagnostic and Statistical Manual of Mental Disorders (4th ed.). Washington D.C.: American Psychiatric Association.

Appendix A

Table A4

Criteria for Mixed Episode

A. The criteria are met both for a Manic Episode (see p. 332) and for a Major Depressive Episode (see p. 327) (except for duration) nearly every day during at least a 1-week period.

B. The mood disturbance is sufficiently severe to cause marked impairment in occupational functioning or in usual social activities or relationships with others, or to necessitate hospitalization to prevent harm to self or others, or there are psychotic features.

C. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication, or other treatment) or a general medical condition (e.g., hyperthyroidism).

Note: Mixed-like episodes that are clearly caused by somatic antidepressant treatment (e.g., medication, electroconvulsive therapy, light therapy) should not count toward a diagnosis of Bipolar I Disorder.

From American Psychiatric Association. (1994). Diagnostic and Statistical Manual of Mental Disorders (4th ed.). Washington D.C.: American Psychiatric Association.

Appendix B

Dear DMDA Members and Visitors,

I am a member of DMDA and also a graduate student in counseling at Lindenwood University. As a final project, I am in the process of conducting original research related to mental health. The attached questionnaire has been designed to obtain information which will enable me to examine the issue of maintaining the individual's optimal level of health in the out-patient treatment setting. Whether you have a diagnosed mental illness or no history of mental illness, your participation and input are valuable to this study.

Please note your response is anonymous. Completed questionnaires may be deposited in the covered box at the main exit following the meeting. Or, if you prefer, you may pick up a self-addressed, stamped envelope to return the form by ____(2 weeks)____.

The confidentiality of individuals' responses will be protected and only group results will be reported. If you are interested in a summary of the results of this study, please complete the name/address slip attached to the corner of this handout. To maintain your anonymity, you may tear this slip off and deposit it separately into the box at the exit door. I will be happy to share the findings of the study with you and hope this study will provide us with useful information concerning the maintenance of mental health and well-being.

Thank you in advance for your participation. If you have questions, please feel free to contact me. I will be available at the close of this meeting or you may contact me at 636-939-3579.

Sincerely,

Linda Cox

Appendix C

Demographic Information

Please provide a description of yourself.

1. Gender: Male _____ Female _____
2. Age: _____
3. Race: African American _____
   Caucasian _____
   Hispanic _____
   Other (please specify) _____
4. Highest level of education (please circle):
   10th gr 11th gr 12th gr 2yrs college 4 yrs college 6+ yrs college
5. Annual income per household:
   Under $10,000 _____ $30,000-39,999 _____
   $10,000-19,999 _____ $40,000-59,999 _____
   $20,000-29,999 _____ $60,000 + _____
6. Have you ever been diagnosed by a physician as having a psychiatric illness? Yes _____ No _____
   If yes, please indicate the diagnosis _____
   Your age when first diagnosed? _____
   How many times have you been admitted to the hospital *as an in-patient* for treatment of this illness? _____

Appendix D

MLOCP

Indicate the extent to which you agree with each of the statements below using the following scale:

1 = Strongly disagree
2 = Moderately disagree
3 = Slightly disagree
4 = Slightly agree
5 = Moderately agree
6 = Strongly agree

_____ 1. Whether or not I get to be a leader depends mostly on my ability.

_____ 2. To a great extent my life is controlled by accidental happenings.

_____ 3. I feel like what happens in my life is mostly determined by powerful people.

_____ 4. Behavior determines when one is ready to leave the hospital.

_____ 5. When I make plans, I am almost certain to make them work.

_____ 6. Often there is no chance of protecting my personal interests from bad luck happenings.

_____ 7. When I get what I want it's usually because I'm lucky.

_____ 8. Even if I were a good leader, I would not be made a leader unless I play up to those in positions of power.

_____ 9. How many friends I have depends on how nice a person I am.

_____ 10. I have often found that what is going to happen will happen.

_____ 11. My life is chiefly controlled by powerful others.

_____ 12. When one goes into the hospital, it is impossible for anyone to say how long a stay will be required.

_____ 13. People like myself have very little chance of protecting our interests when they conflict with those of powerful other people.

_____ 14. It's not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune.

Appendix D

MLOCP

1 = Strongly disagree
2 = Moderately disagree
3 = Slightly disagree
4 = Slightly agree
5 = Moderately agree
6 = Strongly agree

_____ 15. Getting what I want means I have to please those people above me.

_____ 16. Whether or not I get to be a leader depends on whether I'm lucky enough to be in the right place at the right time.

_____ 17. If important people were to decide they didn't like me, I probably wouldn't make many friends.

_____ 18. I can pretty much determine what will happen in my life.

_____ 19. I am usually able to protect my personal interests.

_____ 20. How soon one is able to leave the hospital depends on other people who have power over them.

_____ 21. When I get what I want, it's usually because I worked hard for it.

_____ 22. In order to have my plans work, I make sure that they fit in with the desires of people who have power over me.

_____ 23. My life is determined by my own actions.

_____ 24. It's chiefly a matter of fate whether or not I have a few friends or many friends.

Note. From article by H. Levenson, 1973, Journal of Counseling and Clinical Psychology, 41 (3), 397-404.

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