

THE RELATIONSHIP BETWEEN INSURANCE COVERAGE
AND MENTAL ILLNESS TREATMENT

by

Jeanne M. Heinen, B.A.

A thesis submitted to the Graduate Council of
Texas State University in partial fulfillment
of the requirements for the degree of
Master of Arts
with a Major in Sociology
August 2014

Committee Members:

Toni Watt, Chair

Patti Giuffre

Ollie Seay

COPYRIGHT

by

Jeanne M. Heinen

2014

FAIR USE AND AUTHOR'S PERMISSION STATEMENT

Fair Use

This work is protected by the Copyright Laws of the United States (Public Law 94-553, section 107). Consistent with fair use as defined in the Copyright Laws, brief quotations from this material are allowed with proper acknowledgment. Use of this material for financial gain without the author's express written permission is not allowed.

Duplication Permission

As the copyright holder of this work I, Jeanne Heinen, authorize duplication of this work, in whole or in part, for educational or scholarly purposes only.

ACKNOWLEDGEMENTS

I would like to express my deep gratitude to Dr. Toni Watt, my thesis chair and mentor, for her patient and professional guidance throughout my career as a student at Texas State as well as for her enthusiastic encouragement and useful critiques of this research project. I would also like to thank Dr. Patti Giuffre, for her advice and assistance in keeping my academic progress on schedule and for equipping me with tools to better my analytical thinking skills. Thank you to Dr. Ollie Seay for her contributions and constructive recommendations on this research.

I wish to thank various people for their contribution to making my time at Texas State a memorable experience; Dr. Susan Day for sparking my interest in Sociology and providing encouragement to seek not only an additional Bachelor's in Sociology but my Master's as well; Dr. Audwin Anderson for encouraging me to challenge myself and to remain confident in my abilities; Dr. Gloria Martinez for her valuable support; Dr. Kotarba for his encouragement to pursue a career in research; Dr. Susan Morrison for fostering an environment centered on learning and understanding the importance of discussion centered on women's issues.

Thank you to all of my classmates for the continuous moral support and nurturance and for assisting in creating an atmosphere centered on mutual understanding, respect, and admiration for one another. Thank you to my closest friends and family members for believing I could accomplish something so commendable. Finally, thank you to my daughter, Alaya Heinen, for giving me a reason to strive for excellence.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iv
LIST OF TABLES	vi
ABSTRACT	vii
CHAPTER	
I. INTRODUCTION	1
II. LITERATURE REVIEW	4
History of Mental Illness and Forms of Treatment	4
Psychopharmacology	9
Antipsychotics	9
Benzodiazepines	15
Antidepressants	16
Drug Cocktails	18
Current Access to Mental Health Care and Treatment	20
III. THEORETICAL FRAMEWORK	30
IV. STUDY PURPOSE	35
V. METHODS	37
VI. ANALYSIS	40
Univariate Analysis	40
Bivariate Analysis	42
Multivariate Analysis	43
VII. DISCUSSION	48
REFERENCES	53

LIST OF TABLES

Table	Page
1. Univariate Analysis-Demographic Variables	40
2. Univariate Analysis-Key Independent and Dependent Variables	41
3. Chi Square Analysis-Insurance and Form of Treatment.....	42
4. Chi Square Analysis-Insurance and Alternative Treatment.....	43
5. Logistic Regression-Any Form of Treatment	44
6. Logistic Regression-Medication Only Compared to Other Treatment.....	45
7. Logistic Regression-Alternative Treatment.....	46

ABSTRACT

Rising rates of mental illness leave researchers questioning the accessibility and effectiveness of mental healthcare. Individuals most at risk for narrow treatment protocols include our most socially and economically vulnerable groups. The purpose of this study is to analyze how insurance coverage (private, public, and uninsured) affects treatment patients with mental illness receive including therapy, medication, and alternative treatments. The National Survey on Drug Use and Health (2009) was used to analyze a representative sample of adults with a self-reported mental illness in the past year. Three regressions were run analyzing effects of insurance on treatment received controlling for basic demographic variables as well as mental illness severity (mild, moderate, and severe). Results confirm that uninsured adults are considerably less likely to receive mental health treatment compared to those with insurance. Several governmental safety-net policies have been implemented in order to control for discrepancies in the form of healthcare accessibility among underprivileged groups. However, this study reveals there is still a high percentage of uninsured individuals going without treatment. Findings contribute to the understanding of inequality by revealing the ways in which insurance mediates the mental healthcare market, leaving the uninsured population at the greatest risk for receiving no treatment.

CHAPTER I

Introduction

Mental illness affects the lives of one in four Americans today and despite treatment innovations made within the past fifty years, rates of diagnosis continue to rise (Nwokeji, Bohman, Wallisch, Stoner, Christensen, Spence, Reed, and Ostermeyer 2012; Marth 2009; Snorkin, Pham, and Ngo-Metzger 2009; Grazier, Mowbray, and Holder 2005; Busfield 2004). Since the 1950's mental health care has changed, beginning with the deinstitutionalization of American asylums (Grazier et al. 2005). This process of deinstitutionalization placed the responsibility of mental illness treatment within the community and called for a reconceptualization of symptom management. At this time, psychopharmacology was introduced as a way to ease the transition of individuals with mental illness from mental hospitals to the community. The American Psychiatric Association's first *Diagnostic and Statistical Manual* (DSM 1952) was published shortly after this social movement with new categories of illness making the diagnostic and prescribing processes more efficient (Szalavitz 2012; Whitaker 2010). The deinstitutionalization of America, the introduction of psychopharmacology, and the publication of the DSM were believed to be improvements in healthcare and the management of mental illness. Since the 1950's when all of these alterations took place, rates of diagnoses have increased (Nwokeji et al. 2012; Marth 2009; Snorkin et al. 2009; Grazier et al. 2005; Busfield 2004). Some researchers suggest the rising rates in mental illness can be attributed to managing the mental illness problem more effectively. Others are suspicious of the increasing number of categories of diagnoses in the DSM, harmful

side effects of long-term psychotropic drug use, and the monetary influence behind the psychiatric industry (Whitaker 2010; Conrad 2007; Harrow 2007; Szasz 1961).

Psychotropic medication has become particularly controversial. A growing body of researchers as well as practitioners have provided evidence for significant physical, emotional, and financial risks of this approach to treatment and argue that the short-term benefits do not outweigh these costs (Whitaker 2010; Kirsch 2010; Harrow 2007). There are also “Open Dialogue” projects in Finland and the US that seek to limit the use of psychotropic medication as a first course of treatment, but rather to offer it after alternative approaches have proven ineffective (Whitaker 2010). This strategy has been the position the American Psychological Association has held since 2006 regarding the treatment of mental health disorders in children and adolescents (Brown, Antonuccio, DuPaul, Fristad, King, Leslie, Pelham, Piacentini, and Vitiello 2006). However, psychotropic medication is the most common first course of treatment and many people are prescribed medication without being informed of these other available treatment options or the significant risks posed by the drugs (Kirsch 2010; Whitaker 2010; Harrow 2007). Individuals most at risk for this narrow treatment protocol may be our most socially and economically vulnerable groups (Bazargan, Bazargan-Hejazi, and Baker 2004).

Current debates on forms of treatment highlight disparities in the accessibility to mental healthcare as well as knowledge on alternative methods of treatment (Eack and Newill 2012; Snorkin et al. 2009; Ruiz 2004). Accessibility to health care and alternative forms of treatment varies according to dimensions of stratification including age, race and ethnicity, sex, disability, income and educational attainment, poverty, and insurance

coverage (Eack and Newill 2012; Snorkin et al. 2009; Roy-Byrne 2006; Thoits 2005; Ruiz 2004; Adda, Chandola, and Marmot 2003). Mental healthcare accessibility is linked to the quality and form of care made available to individuals from various social and economic backgrounds and since a certain social status may hinder an individual from receiving care, it remains imperative to study contributing factors. This study will focus on one dimension of inequality leading to disparity in healthcare access that affects mental health treatment, insurance. The study will examine the relationship between the type of insurance/lack of insurance and the treatment individuals receive to address their mental health problems. Particular attention will be paid to how insurance relates to the use of psychotropic medications relative to non-pharmacological interventions.

CHAPTER II

Literature Review

History of Mental Illness and Forms of Treatment

In 1684, the first English physician to write on the concept of madness was Thomas Willis (Scull 1989). Admired for his investigations on the nervous system, Willis conceptualized patients with mental illness as animal-like, lunatics that needed to be dominated or broken. The thought process at the time was to physically weaken these individuals (Cullen 1805). Methods of therapy included bleeding, purges, emetics, and nausea-inducing procedures. Starving patients was also a form of management utilized and was viewed as a way to distract patients from their mental turmoil, forcing them to focus on their physical pain (Kraepelin 1962). Remedies altered in 1774 with the passage of the Act for Regulating Madhouses, Licensings, and Inspection, which required physician certification of someone as mentally ill prior to institutionalizing them (Battie 1969).

The regulation of madhouses led to the introduction of Moral Treatment in 1812 (Grob 1994). Philippe Pinel, appointed by King Louis XVI to govern asylums, believed patients suffering from mental illness did so due to negative life outcomes such as disappointment, poverty, relationship dilemmas, and business letdowns (Pinel 1962). Pinel's politics along with Quaker ideals rooted in religious beliefs worked together to form Moral Therapy. Moral Therapy was centered on treating individuals with compassion and nurturance instead of physical restraint and aggression. Eventually, this form of treatment moved to America where institutionalizations sought to keep low numbers of patients admitted in order to better serve their conditions (Scull 1989). Since

the Quakers were in charge of running these asylums, physicians had little to do with managing care. In 1844, the Association of Medical Superintendents of American Institutions for the Insane was formed granting physician access into mental institutions, requiring chief executive officers to be medically trained (Deutsch 1937). Shortly after this was put in to place, institutions became over-populated with syphilitics, alcoholics, and the senile elderly, making Moral Therapy physically and financially difficult to maintain. Syphilis deemed untreatable at the time led critics to believe that Moral Therapy was flawed. This assumption along with patient-to-physician ratios being high and wages remaining low led many asylum employees to lose sight of their Moral Therapy work ethic (Grob 1995). Coercion and brute force took the place of compassion and therapy as a cheaper, easier alternative.

In 1883, Francis Galton introduced the idea of Eugenics suggesting mental illness was due to inheriting bad genes (Chase 1980). People with bad genes included socially stigmatized individuals such as criminals, mental illness patients, immigrants, paupers, and imbeciles. This theory sought to blame individuals' dishonor on their genetic makeup. This perpetuated social class dichotomies by creating a wedge between those exhibiting good genes versus those with faulty DNA (Kevles 1985). Since immigration to America was rampant at the time, many blamed immigrants for the spread of corrupt genetics also known as social bacteria (Grob 1994). Individuals viewed as social invalids lost their right to marry in 1896, were subjected to forced sterilization prohibiting them from reproducing, and were institutionalized at higher rates than others.

Henry Cotton was the first to begin experimenting with other forms of treatment and introduced his theory on teeth removal in the early 1900s (Hinsie 1929). Going along

with the notion of bacteria being harbored by the body and causing brain malfunctions expressed as mental illness symptoms, Cotton believed by removing patients' bacteria-ridden teeth, symptoms would lessen or disappear. This rationale led to the removal of infected organs including tonsils, colon, gall bladder, appendix, fallopian tubes, uterus, ovaries, cervix, and seminal vesicles (Cotton 1919). According to Cotton, upon the removal of these teeth and/or organs, his patients appeared to be doing better and experienced a decrease in symptomology. Though his patients had a 43% death rate, Cotton had other physicians convinced he was curing mental illness. However, when other psychiatrists attempted to replicate his studies, they did not have the similar outcomes leading them to question Cotton's methods (Scull 1989).

The search for a better treatment continued and the next remedy that surfaced was the use of barbiturates to keep patients asleep for days or even weeks at a time in hopes of restoring their nervous system (Scull 1989). After the use of sleep remedies, came the use of shock therapy meant to control patients at a cheaper cost (Sakel 1937). This treatment presented problems as it caused hemorrhages in the brain destroying nerve tissue in the cortex. According to physicians at the time, this form of therapy was quick, easy, cheap and reliable making it easier to treat larger numbers of patients (Sullivan 1940). Physicians then began experimenting with insulin, investigating the nature of insulin-induced comas and seizures meant to restore brain functioning. This, like many other treatment experiments, did not fare well.

In 1935, Antonio Egas Moniz introduced the first psychosurgical procedure known as the lobotomy (Scull 1989). Lobotomies were used as a way to treat those suffering from psychosis by severing connections between the brain and the prefrontal

cortex through the eye sockets. This form of surgery at the time gained a lot of prestige leading Moniz to win a Nobel Prize in 1949. Walter Freeman, M.D. later took over as the expert by championing this procedure in the US, performing over 3,000 lobotomies. After receiving this surgery, many patients were left dependent upon others and unable to empathize or hold personal relationships due to the inability to express or experience emotion. Negative side effects, such as skyrocketing death rates led critics to question the safety of this surgical procedure. Despite these criticisms, the lobotomy was the most common form of treatment up until the end of World War II.

WWII shed light on American hypocrisy (Young 1967). The American military was sent to Europe to help free individuals who were experiencing maltreatment due to principles centered on Eugenics. Many felt mental institutions at the time closely mirrored Nazi concentration camps leading to the criticism of the institutionalization logistics (Cole 1959). Some argued that people with mental illness should be served in the community rather than in asylums. In 1949, Congress created the National Institute of Mental Health (NIMH) to oversee this modification (Grob 1994). Pharmaceutical firms then began developing new medications including anesthetics, sedatives, and antihistamines all assumed to help better serve mental illness in the community (Garrett 1995). These pharmaceutical innovations were thought to provide evidence of how scientists were improving the manufacturing of chemical compounds in order to benefit the central nervous system. In 1954, Thorazine was introduced providing patients with what was compared to a chemically induced lobotomy, kicking off the psychopharmacological revolution (United States' Department of Health and Human Services 1999).

Shortly after the introduction of Thorazine, minor tranquilizers were marketed and used for quieting hospitalized patients (Valenstein 1998; Swazey 1974; Ayd 1970). Miltown was later promoted to the general population as a way to control anxiety. In 1957, Marsilid was introduced as a psychic stimulant and was used to treat Tuberculosis patients by lifting their spirits (Valenstein 1998). By the end of the 1950's, there were several different forms of psychotropic medication believed to lessen symptoms of schizophrenia, depression, and anxiety and with the Durham-Humphrey Amendment act, most of these drugs were available by prescription to the public giving physicians control over the public's access to medicine (Valenstein 1998; Mintz 1965).

In 1952, the American Medical Association quit publishing its yearly book on useful drugs and instead allowed pharmaceutical companies to advertise new drugs (Mintz 1965). At the time, federal approval of drug effectiveness was not necessary in order to put a drug on the market. Scientists were only required to verify their chemicals were not toxic (Swazey 1974; Mintz 1965). This meant that a majority of the time scientists researched the effectiveness of the drug after physicians had already distributed it among their patients in the form of treatment and failed to find any disease process or brain abnormality prior to implementation (Mintz 1965). Treatment preceded knowledge of diseases.

Eager to learn more about mental illness and how the brain plays a part in symptomatology, scientists began conducting brain research in the early 1960's (Chakos 1994; Azmitia 1991). Theories on mental illness surfaced regarding chemical brain imbalances due to an increase or decrease of one or both of the two brain chemicals known as serotonin and dopamine. Psychotropic drugs began to be marketed as a way to

balance brain chemicals and manage symptoms of mental illness (Mendels 1974). The *Diagnostic and Statistical Manual III* (APA) was published in 1980 detailing symptoms linked to different forms of mental illness diagnoses and creating more categories of illnesses (Healy 2002). This made the diagnostic process more efficient as general practice physicians and psychiatrists were able to better categorize their patients and prescribe treatment accordingly. The American Psychiatric Association (APA) teamed with pharmaceutical companies in search of proper treatment for mental illness. Very quickly, psychotropic medications became the predominant treatment for mental disorders and today is still the most widely utilized mental illness remedy (Whitaker 2010; Kirsch 2010; Harrow 2007).

Psychopharmacology

Robert Whitaker, a renowned journalist, conducted an epidemiological analysis of the history of psychotropic medications in his book *Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America* (2010). His book outlines the history of psychotropic drugs. He first chronicles the introduction of each form of new drug including antipsychotics, benzodiazepines (or antianxiety medications), mood stabilizers, stimulants, and antidepressants. He then goes on to describe studies performed on the effectiveness of these drugs including both historical accounts as well as more recent experiments. His work produces a core meta-analysis of the research of the effectiveness and safety of psychotropic medication.

Antipsychotics

Thorazine was the first drug to be marketed as a way to treat mental illness in patients with schizophrenia in the early 1950's (Boyle 1990). It was assumed to function

similarly to a chemical lobotomy, lessening psychotic symptoms, leading to greater manageability of patients with mental illness. Prior to the introduction of Thorazine, patients with schizophrenia were treated with natural remedies (Cole 1959). The NIMH conducted a study on first-episode patients with psychosis admitted to Warren State Hospital in Pennsylvania from 1946 to 1950 and found that 62 percent of patients with schizophrenia were discharged within a year and 73 percent in three years. Lehrman (1961) found in a study conducted in the Hillside Hospital in Queens, NY that 87 percent of schizophrenic patients were discharged by 1950 and only 20 percent of the patients were continuously hospitalized. These positive results lead to national optimism about recovery from schizophrenia prior to the implementation of psychotropic drugs.

In 1961, the California Department of Mental Hygiene reported rates of release on 1,413 patients with schizophrenia hospitalized in 1956 (after Thorazine was introduced) and found that 88 percent of patients who did not take Thorazine left the asylum within eighteen months compared to 74 percent of those treated with the antipsychotic (Epstein 1962). Researchers concluded that drug-treated patients tended to stay hospitalized for longer periods of time compared to those not on Thorazine. Higher rates of discharge occurred after the enactment of Medicare and Medicaid in 1965 (Silverman 1968). This legislation provided federal subsidies for nursing home care but failed to do so for mental institutions. In hopes of saving money, patients with mental illness were transported to other facilities. Although at the time the declining number of patients with schizophrenia in mental facilities was attributed to the effectiveness of Thorazine, it appears these patients were not being released back into the community but rather into other facilities.

This lessening of the amount of asylum inhabitants actually reflected a rising number in nursing home residents, which is not evidence of the effectiveness of the new drug.

At the time, scientists were not required to prove the effectiveness of drugs prior to placing them on the market (Swazey 1974; Mintz 1965). This changed when the NIMH appointed Jonathan Cole to head studies measuring the effectiveness of Thorazine (Cole 1959). Cole came up with what is now known as a placebo-based study in which an active drug is compared to an inactive (sugar) pill known as a placebo. The rating scales used in his studies measured symptom characteristics such as the reduction of anxiety, hostility, and suspiciousness. The drug would pass as being effective if it significantly reduced symptoms in six weeks suggesting short-term decline in symptoms as confirmation of the drug's effectiveness. Cole found that the drug worked in reducing symptoms when compared to the placebo in all of his trials. Another researcher by the name of Schooler (1967) found patients who received the placebo treatment were less likely to be rehospitalized than those on the antipsychotic. Only seven percent on the placebo relapsed compared to 65 percent of patients taking Thorazine before the drug was withdrawn. He concluded that drugs may be effective in immediately relieving symptoms but were making patients more prone to psychosis over long-term usage leading to higher rehospitalization rates. Withdrawal from Thorazine led to harsh symptoms including nausea, vomiting, diarrhea, agitation, insomnia, headaches, and motor tics suggesting the possibility of psychosis returning upon the cessation of medication (Cole 1959).

Relapse rates of the 1960s spurred research interests in the 1970s once again leading to studies examining discharge rates of patients with schizophrenia both on and

off antipsychotics (Carpenter 1977). In these studies conducted by the NIMH, researchers had similar findings of patients treated with drugs and without. Only 35 percent of those not on drugs relapsed compared to 45 percent of medicated patients. Non-medicated patients showed greater long-term improvements by being able to adjust better in the community after leaving mental hospitals. The NIMH concluded that patients with mental illness on drugs are less able to cope with life stressors leading them to a greater chance of relapsing post discharge (Rappaport 1978).

It was not until the late 1970s that Americans were introduced to a possible explanation as to why patients on medication appeared to be more vulnerable to psychosis (Chouinard 1978). Chouinard (1978) discovered that antipsychotics were designed to block 70 to 90 percent of all D2 receptors in the brain forcing the brain to compensate for this blockage. The density of the postsynaptic neurons increases as well as the density of the receptors making the brain supersensitive to its psychosis mediator (dopamine). Antipsychotics such as Thorazine slow down dopamine transmission forcing the brain to accelerate dopamine production. If the drug is withdrawn abruptly, the brake on the dopamine is released and the dopaminergic pathways in the brain become critically out of balance. Neurons in the basal ganglia fire rapidly causing patients who are withdrawing from the drug to suffer psychomotor agitations. Before this theory, symptoms accompanied by withdrawal were assumed to be signs that the disease was resurfacing after patients ceased taking the drug leading many to assume the drugs were abating symptoms of the disease and that these symptoms return because the medicine is not in the patient's system anymore. Chouinard's research on dopaminergic pathways proves withdrawal from the drug elicits these symptoms rather than the return of the

disease. He further reiterates the possible, irreversible damage done on the brain if patients continue taking antipsychotics long-term by stating dopaminergic pathways may become permanently dysfunctional due to their constant hyperactive state, leading to tardive dyskinesia, or the inability to control tongue movements, and tardive psychosis (Myslobodsky 1993).

The World Health Organization (WHO) conducted a cross-cultural study evaluating the difference in antipsychotic drug use between developed and underdeveloped nations (Jablensky 1992). This study found that patients in underdeveloped countries fared better than those in the richer countries. At first, researchers attributed this difference in outcomes to compliance suggesting that persons in underdeveloped countries were more compliant in taking their medicine than those in the developed countries. Further analysis proved the opposite. People in the poorer countries were less compliant in taking antipsychotics than patients in the developed countries. In countries where patients had not been regularly maintained on antipsychotics, most recovered, suggesting negative health outcomes to be associated with psychotropic drug use.

Eager to understand effects of psychotropic drug use on brain chemistry, researchers began conducting Magnetic Resonance Imaging (MRI) studies in the 1980s (Gur 1998; Chakos 1994). Nancy Andreasen, a psychiatry professor and editor in chief of the American Journal of Psychiatry, conducted a longitudinal MRI study on over 500 patients with schizophrenia assessing effects of long-term antipsychotic usage on brain chemistry (Andreasen 2005). Andreasen noticed patients at the initial time of diagnosis did in fact have smaller frontal lobes than normal. Over the next three years, this area of

their brain got even smaller. This reduction in brain volume appeared to be related to the worsening of psychotic symptoms leading her to conclude this disorder to be neurodevelopmental. Antipsychotics seemed to be therapeutically ineffective in treating such a disorder. As patients' frontal lobes shrank and their psychotic symptoms worsened, their ability to think declined. Andreasen states in her research that antipsychotics block basal ganglia activity restricting necessary prefrontal cortex input. This reduces symptoms in the beginning but eventually causes the prefrontal cortex to weaken. The weakening of the prefrontal cortex makes psychotic symptoms return at a harsher degree, ultimately leading to cognitive impairment.

Martin Harrow also conducted a longitudinal study assessing the effects of long-term psychotropic drug usage on overall health and recovery from psychosis (2007). He broke up time intervals in thirty month, four and a half year, and fifteen year increments to see how patients' overall health changes according the length of drug usage. Harrow found that at the end of two years, patients with schizophrenia not on antipsychotics were doing slightly better than those using antipsychotics. By the end of four and a half years, 39 percent of those not on drugs were in recovery and more than 60 percent were employed. Of those on antipsychotics, only six percent were in recovery and very few were working. After fifteen years, 40 percent of patients not on drugs were recovering compared to 5 percent of those being treated with antipsychotics. He concluded that medicated patients had one-eighth the recovery rate of those not being treated with antipsychotics suggesting an association between lack of recovery and psychotropic drug use.

Benzodiazepines

Shortly after the introduction of antipsychotics such as Thorazine, came the introduction of benzodiazepines as a way to cure neuroses felt by anxious individuals (Hollister 1975). Miltown was the first minor tranquilizer to be marketed as a way to cure bad nerves in the 1960s. Negative side effects of this drug appeared almost immediately with people complaining of becoming sick shortly after beginning the medication suggesting the possibility of addiction (Essig 1964). Greenblatt and Shader (1971) found in 26 well-controlled trials that only five of them proved Miltown was more effective than the placebo for calming nerves.

Similar to studies of antipsychotics, many scientists began studying effectiveness and side effects of anti-anxiety agents (Solomon 1978). In 1978, Kenneth Solomon at Albany Medical College in New York reviewed 78 double-blind trials of benzodiazepines and found that drugs proved to be more effective than the placebo in only half of them (1978). Arthur Shapiro at Mt. Sinai School of Medicine in New York found in his study on anxious patients that Valium was only superior to the placebo in the first week with effectiveness decreasing in the second week and disappearing altogether by week six (Shapiro 1983). Not only was effectiveness questionable, but side effects of these drugs appeared to be harmful as well (Maletzky 1976). Many patients complained of suffering from an increased intensity in anxiety upon quitting the drug often termed rebound anxiety. Other patients complained of dry mouth, hot and cold symptoms, insomnia, seizures, tremors, headaches, blurred vision, sensitivity to noise, nightmares, and hallucinations (Petursson 1981). Depression also appeared to be a reoccurring symptom of patients on benzodiazepines.

Benzodiazepines affect brain chemistry like antipsychotics do (Cowen 1982). This form of medication affects a neurotransmitter in the brain known as GABA, which inhibits neuronal activity acting similar to a braking system of the brain. When a benzodiazepine binds to a GABA receptor, the central nervous system is suppressed. In response to this, the brain decreases output of GABA and decreases the density of receptors in an attempt to restore normal functioning. When this type of drug is withdrawn, the brain becomes hyperactive leading to negative symptoms experienced by patients ceasing treatment.

Long-term side effects of taking benzodiazepines include depression, panic attacks, long-term damage of the cerebral cortex and cognitive impairment (Pelissolo 2007; Patten 1995; Golombok 1988). Many researchers find that the dosage of benzodiazepines is related to the risk of impairment meaning that higher dosages are linked to greater risk of experiencing harsh side effects of long-term usage. Many people using anti-anxiety drugs long-term suffer poor coping skills leading to a poor quality of life and poor performances in work and in their social life (Caplan 1985). Researchers conclude that there is no evidence to support long-term use of benzodiazepines as a way to cure anxiety disorders (Whitaker 2010).

Antidepressants

Antidepressants are the next psychotropic drug to be analyzed. Introduced in the 1950s as well, iproniazid and imipramine made their way to the psychopharmacological market in America (Medical Research Council 1965). Almost immediately after their introduction, people became skeptical of their effectiveness. In 1969, NIMH conducted a review of well-controlled studies in which they found antidepressants to play a minor role

in improving the clinical course of the illness (Smith 1969). Placebo-based trials began running their course in assessing the effectiveness of antidepressants and in 1982, researchers introduced an active placebo into trials in order to better control for biased outcomes (Thomson 1982). In six out of seven trials using active placebos, there was no difference between active placebos and the active drugs. Many concluded that only severely depressed patients fared better on antidepressants rather than an active or regular placebo (Elkin 1990). Antidepressants lost popularity until the late 1980s when Prozac was marketed as a way to make people feel fewer side effects linked to depression.

In 2010, Irving Kirsch, a psychologist at the University of Hull in the United Kingdom analyzed new generation antidepressants (including Prozac) and found that symptoms of medicated patients dropped 9.6 points compared to 7.8 points for the placebo group (Kirsch 2010). This difference is only 1.8 points. According to the National Institute for Clinical Excellence in Britain three points difference is required in order for the pill to be deemed as effective and able to be marketed as a form of treatment. This meant that there was no difference between older antidepressant and the newer forms. Other studies of antidepressants, similar to studies researching antipsychotics and benzodiazepines, found that people who were never treated with active drugs fared better than those prescribed antidepressants (Patten 2004; Ronalds 1997). Long-term use of antidepressants is associated with an increased risk of permanent disability rendering patients suffering from depression incapable of remaining gainfully employed (Patten 2004).

Along with the risk of being permanently disabled, comes the presence of harsh physical and emotional side effects of antidepressant use (NIMH The Numbers Count

1998). These symptoms include major depressive disorder, sexual dysfunction, muscle tics, fatigue, emotional blunting, and apathy. Memory impairment as well as problem-solving difficulties and loss of creativity are associated with long-term use (Fava 2006). After reviewing these symptoms, it becomes clear why patients on antidepressants are at a greater risk of losing their jobs and remaining unemployed as it appears almost impossible to work under such incapacitating conditions.

Drug Cocktails

Recent studies on bipolar disorder shed more light on how harmful psychotropic medications can be over the long-term and when mixed with other chemicals such as other psychotropic medications (Healy 2008). Bipolar disorder first showed up in the *DSM III* in 1980 and since then diagnoses have increased significantly. The NIMH reports that today, bipolar illness affects one in every forty adults in the United States and is believed to be onset by drug use – both legal and illegal (NIMH 2008). The increase in diagnostic categories affects part of the increase in diagnoses while the other half of the story lies in drug use and the tendency for chemicals to alter brain chemistry leading to permanent imbalances (Baethge 2005). Manic symptoms appear to surface a lot of the time after the introduction to antidepressants, and stimulants such as cocaine, marijuana, and hallucinogens (Goldberg 2008; Angst 1985). Yale University School of Medicine conducted a study reviewing records of 87,290 depressed and anxious patients and found that those treated with antidepressants converted to bipolar diagnoses at a rate of 7.7% annually (Martin 2004; Goldberg 2001).

If treated with psychotropic drugs, bipolar disorder requires a cocktail of prescriptions (Healy 2008). This cocktail includes an antidepressant, an antipsychotic, a

mood stabilizer, a benzodiazepine and sometimes a stimulant as well. The more medicine a patient receives, the greater the risk of impairment leading to disability, unemployment, and lack of social support. Patients with bipolar disorder also suffer from more physiological symptoms as well including cardiovascular problems, diabetes, obesity, and thyroid dysfunction all assumed to be side effects of drug toxicity (Kupfer 2005).

In Harrow's study on long-term use of psychotropic drugs, he compares outcomes of patients with schizophrenia with those of patients with bipolar disorder (2007). At the thirty-month mark, he finds differences in patients on drugs and off drugs. Each set of patients off drugs fared slightly better than those on drugs. However, at the four and half year mark, Harrow finds schizophrenia patients off drugs are markedly better than manic-depressive patients on drugs. Given that schizophrenia is known to be a more severe mental disorder, it remains puzzling that patients with bipolar disorder are faring far worse. This provides further insight on how debilitating psychotropic drug cocktails can be over the long-term.

Though each psychotropic drug is different and aims to treat a different form of mental illness, similar patterns of effectiveness emerge raising questions regarding benefits (Whitaker 2010). Over the last fifty years, studies have consistently found little evidence proving effectiveness and have also found lower rates of recovery among patients staying on psychotropic drugs long-term. As summarized by Whitaker (2010), monetary gains experienced by pharmaceutical companies and physicians may help explain why psychotropic drugs are continuously prescribed, despite the overwhelming evidence of lack of effectiveness and harmful physical side effects.

Current Access to Mental Health Care and Treatment

With the rise in rates of mental illness and the increase in people on Social Security Income (SSI) and Social Security Disability Income (SSDI) due to mental illness diagnoses, healthcare access remains a topic of importance (Eack and Newill 2012; Whitaker 2010; Snorkin et al. 2009; Ruiz 2004; U.S. Department of Health and Human Services 1999). There are many dimensions of stratification that affect mental healthcare access in a variety of complex ways (Eack and Newill 2012; Snorkin et al. 2009; Ruiz 2004). Some of these factors of interest include age, sex, race and ethnicity, poverty, and form of insurance coverage. Socially and economically disadvantaged groups such as women, children, the elderly, racial and ethnic minorities, and people belonging to a lower economic class, are likely to experience barriers in their attempts to access care (Harris et al. 2012; Eack and Newill 2012; Nwokeji et al. 2012; Nejtek et al. 2011; Anglin et al. 2008; Lesser et al. 2007; Anglin, Link and Phelan 2006; Bazargan, Bazargan-Hejazi and Baker 2004; Uehara 1994). The form of healthcare available may be different for those belonging to an underprivileged social class, affecting the type of treatment they receive as well as their rate of recovery and symptom management (Rost et al. 2011; Lesser et al. 2007; Stevens, Harman and Kelleher 2005).

Age and sex affect the accessibility of mental healthcare leaving individuals of underprivileged groups with a greater risk of experiencing inequality (Virnig et al. 2013; Harris et al. 2012; Nwokeji et al. 2012; Horvitz-Lennon et al. 2009; Lesser et al. 2007; Stevens et al. 2005). Thoits (2005) found, in her study on prevalence of mental disorders, that women are more likely than men to suffer from emotional turmoil leading to a diagnosis. These rates could be linked to an increase in the prevalence of life stressors

among women such as economic inequality, single parenting, and lack of social support (Nwokeji et al. 2012). Thoits (2005) also found people who are not married to be at a greater risk for experiencing mental illness than those who are married further providing further proof that lack of social and economic support provided through marriage may cause single individuals to experience emotional despair to a greater degree. Researchers note that men are less likely to seek help due to the stigma associated with the inability to manage emotions, which could also contribute to higher reported rates of mental illness rates among women (Nwokeji et al. 2012; Thoits 2005). Another study done by Lesser et al. (2007) finds women are more likely to be publicly insured also affecting their accessibility to mental healthcare as well as available forms of treatment, hindering access to equitable care.

Several studies have been done on psychotropic drug use among children and elderly individuals suggesting rates to be higher for these groups compared to the general adult population (Virnig et al. 2013; Harris et al. 2012). In a study done by Harris et al. (2012) researchers found that children on psychotropic drugs are typically not receiving any other form of treatment, suggesting the possibility of disparity in available treatment options presented to this group. Both Lesser et al. (2007) and Nwokeji et al. (2012) found age to be a significant indicator of persons receiving drug treatment for mental and emotional disorders stating that older persons are more likely to be on medication. Thoits (2005) found that older individuals on Medicare are more likely to be hospitalized for a mental illness. Since hospitalization requires a mental illness diagnosis from a medical authority, one can assume that the older population contains individuals more likely to be diagnosed as having a severe mental illness. It remains important to note that inpatient

therapy does not necessarily suggest better treatment and also suggests higher rates of psychotropic drug use (Horvitz-Lennon et al. 2009).

These age groups remain reflective of populations more likely to be using public insurance programs including Medicare and Medicaid (Virnig et al. 2013; Rost et al. 2011). The lack of diversity among health care options due to form of insurance may lead elderly individuals as well as children into disparate healthcare settings. These healthcare settings reflect a higher rate of inpatient services, higher rates of psychotropic drug use, and lower rates of alternative therapy, likely hindering rate of recovery and increasing the chances of experiencing alternative medical, economical, and social issues and injustices (Virnig et al. 2013; Harris et al. 2012; Nwokeji et al. 2012; Horvitz-Lennon et al. 2009; Lesser et al. 2007).

Racial and ethnic minorities are also at a greater risk for suffering emotional turmoil leading to a mental illness diagnosis due to racial discrimination and the stress this can cause physically, financially, and emotionally (Conner et al. 2010; Bazargan et al. 2004; Ruiz 2004). The inaccessibility of mental health care can be viewed as a consequence of several barriers. Public and internalized stigma on mental illness diagnoses remains to be a prominent theme in existing literature (Conner et al. 2010; Conner, Koeske, and Brown 2009), along with the mistrust racial minorities have in the healthcare system and with physicians – both primary and psychiatric (Kranke et al. 2012; Copeland and Snyder 2011; Conner et al. 2010; Whitaker 2010; Ruiz 2004). Cultural beliefs centered on spirituality and inner strength necessary to be a functioning member of society add to the pressure to avoid seeking treatment (Kranke et al. 2012; Conner et al. 2010; Anglin et al. 2008; Ruiz 2004). Other difficulties in accessing care

include the inaccessibility of transportation, poor quality housing, poor quality care by physicians lacking psychiatric expertise, and the presence of substance abuse further complicating existing mental disorders (Eack and Newill 2012; Nejtek et al. 2011; Anglin et al. 2008; Anglin, Link and Phelan 2006; Uehara 1994).

Kranke et al. (2012) found not only the illness to be shameful but also psychotropic drugs as treatment to be equally as stigmatizing. Risk of dependence and negative side effects contribute to doubts of effectiveness of psychotropic drugs as a form of treatment (Kranke et al. 2012; Diaz, Woods, and Rosenheck 2005). This information might be able to explain lower compliance rates found in some studies on mental illness treatment among minority populations (Horvitz-Lennon et al. 2009; Bazargan et al. 2004). Themes of untrustworthiness are still prevalent today and are seen in the unwillingness to access care or comply with mental healthcare treatment regimens for fear that the care being sought is more harmful than helpful (Kranke et al. 2012; Copeland and Snyder 2011; Conner et al. 2010; Whitaker 2010; Ruiz 2004).

Eack and Newill (2012) found that African Americans who do gain access to care receive a different standard of care. This standard of care includes greater use of inpatient services such as hospitalization and less use of outpatient treatment options contributing to a lower quality care (Eack and Newill 2012; Sorkin et al. 2009; Schwartz and Feisthamel 2009). African Americans, if treated in an inpatient facility, are less likely to return to work and less likely to follow up with treatment when compared to white individuals suffering from similar diagnoses. Current literature highlights greater prevalence for African Americans to be involuntarily committed to inpatient facilities compared to whites. Greater chances of being involuntarily committed to inpatient

facilities are accompanied by the tendency for African Americans to be diagnosed as having a psychiatric illness rather than obtaining a mood disorder diagnosis (Horvitz-Lennon 2009; Rost et al. 2011). Since type of illness is associated with form of treatment, one can expect African Americans diagnosed as mentally ill to be more prone to being placed on antipsychotics or other forms of psychotropic drugs. Interesting to note that overall, African Americans are less likely to take psychotropic drugs but once they are granted access into inpatient facilities (sometimes involuntarily), they are more likely to be placed on drugs believed to treat more severe symptoms. This may suggest that access to care for this population leads to the over-prescription of drugs, hindering their rate of recovery and increasing the risk of experiencing other health problems (Harrow 2007; Kirsch 2010).

Some researchers attribute higher rates of inpatient care among African Americans to the misconception of symptoms by diagnosticians (Eack and Newill 2012; Sorkin et al. 2009; Schwartz and Feisthamel 2009). The misdiagnosis, over-diagnosis, and under-diagnosis of mental disorders all play a part in the mistrust, and miscommunication between African Americans with mental illness and their physicians further obstructing accessibility to proper mental healthcare. Researchers state one way to increase trust between a patient and their physician is by matching the ethnicity of the patient with that of their physician (Eack and Newill 2012). Some suggest the misinterpretation of symptoms could be attributed to a barrier in place by racial bias of the physician. Matching ethnicities would help to eliminate the risk of misinterpretation leading to inconsistent patterns of diagnosis, though given the low number of minority mental healthcare physicians available this is rather difficult to accomplish.

Current literature underlines several issues racial and ethnic minorities face in regards to their accessibility to proper healthcare. Solutions offered by some and include an increase in education among people with mental illness, an increase in understanding or proper training of physicians in dealing with persons outside of their racial or ethnic group, and a reconceptualization of mental illness among ethnic and racial minorities taking into account increased stress due to racial discrimination (Eack and Newill 2012; Kranke et al. 2012; Copeland and Snyder 2011; Conner et al. 2010; Ruiz 2004). Because African Americans are so involved in their church, Kranke et al. (2012) suggest psycho-educational programs be present in churches inviting everyone to work together on educating themselves on mental illness, the importance of spirituality, as well as other forms of treatment, while providing role models of resiliency believed to offer hope to those suffering. Researchers highlighting negative aspects of physician-patient relationships suggest more training for physicians in working with people of different cultural and ethnic backgrounds (Eack and Newill 2012; Copeland and Snyder 2011; Ruiz 2004). An increased understanding could lead to a greater chance of empathy increasing the chance of recovery rates for mental health outpatient and inpatient treatment.

Poverty status affects the accessibility of mental healthcare and treatment (Eack and Newill 2012; Nejtek et al. 2011; Anglin et al. 2008; Anglin et al. 2006; Thoits 2005; Uehara 1994). Barriers include the lack of reliable transportation, poor public housing, homelessness, substance abuse and the risk of seeing a physician lacking expertise in diagnosing and treating mental illness. Poverty is often accompanied by unemployment, lack of insurance coverage or the use of public assistance programs, lack of

transportation, and (at its worst) homelessness believed to increase chances of substance abuse (Nejtek et al. 2011).

It is important to note how lack of economic resources can affect individuals who are at a greater chance of facing stigma by highlighting their inability to work their way out of an undesirable lifestyle (Eack and Newill 2012; Nejtek et al. 2011; Anglin et al. 2008; Anglin et al. 2006; Uehara 1994). Unemployment leads to a cycle of poverty difficult to escape especially when accompanied by symptoms of mental illness.

Treatment for mental illness varies and can be controversial. Critics suggest the use of psychotropic drugs can be permanently debilitating, stating long-term use may result in permanent placement on SSI or SSDI (Whitaker 2010). Whitaker (2010) summarizes many studies done on the harmful side effects of psychotropic drugs and notes most people who remain on them long-term have greater chances of remaining financially dependent due to poor health conditions that appear as a result of medication use. People at a greater risk for being prescribed psychotropic drugs may share other lifestyle aspects such as similar socio economic standings and insurance coverage (Rost et al. 2011).

Financial standing is related to insurance coverage, which affects mental healthcare access in a variety of complex ways (Rost et al. 2011; Lesser et al. 2007; Roy-Byrne et al. 2006; Thoits 2005; Wagner et al. 2005; Grazier et al. 2005; Bazargan et al. 2004). Private insurance in the United States is tied exclusively to employers suggesting those covered through private vendors are either gainfully employed or married to someone who is (Grazier et al. 2005). Individuals who are privately insured have greater access to physicians in a vast majority of fields increasing the likelihood that they are made aware of alternative forms of treatment. Public forms of insurance such as

Medicaid and Medicare are offered to certain groups of individuals who have a household income below the poverty line.

Public forms of insurance, though helpful in assisting individuals of a lower socioeconomic status, are at times restrictive in physician choices which is linked to a decrease in the variety of available treatment options (Thoits 2005). In a study done on children enrolled in Medicaid, Harris et al. (2012) found there were a substantial number of children utilizing antipsychotic medication without the use of any other forms of treatment such as therapy when compared to those covered by private insurance. It is suggested by these critics that parents should be made aware of other forms of treatment placing less emphasis on antipsychotic use with their children and more on therapy as well as alternative forms of mental illness treatment. Stevens, Harman, and Kelleher (2005) found different results in their study on children with ADHD. Children with private insurance and Medicaid are more likely to be diagnosed than those who are uninsured, and thus private insurance was associated with an increase in prescriptions of stimulants. Stevens, Harman, and Kelleher (2005) suggest the uninsured children are at the most risk for under-diagnosis and under-treatment in regard to ADHD. Though these research designs capture differences in psychotropic drug use according to insurance coverage, their population includes children and not adults and covers only a few specific diagnoses (ADHD and schizophrenia) as well as specific drugs associated with managing alleged symptoms (Harris et al. 2012; Stevens et al. 2005). Harris et al. (2012) state they are unsure if their findings can be generalized to individuals not on public assistance.

In another study done by Horvitz-Lennon et al. (2009), researchers found poorer quality care to be associated with greater use of psychiatric inpatient services, such as

hospitalization. As suggested before, the use of psychiatric inpatient services requires a severe mental illness diagnosis with psychotropic drugs as a form of treatment suggesting those being treated with inpatient services are more likely to be prescribed medication (Horvitz-Lennon et al. 2009; Thoits 2005). Further, Rost et al. (2011) found in their study on insurance coverage and patients with schizophrenia that people on Medicare and Medicaid are more likely to be hospitalized compared to those who have private insurance. They also found individuals who lack insurance coverage have a decreased chance of hospitalization. Since inpatient services are related to a lower quality of care and individuals with public insurance are the most likely to be hospitalized, research suggests the publicly insured are at a greater risk for experiencing substandard treatment, affecting their use of psychotropic drugs as well as their rates of recovery (Rost et al. 2011; Horvitz-Lennon et al. 2009).

Another aspect of insurance coverage is the type of practitioner available (DeLeon et al. 2003). Researchers state primary health care clinics treat disadvantaged groups at higher rates than a private physician such as a psychiatrist. The type of doctor an individual sees is related to suggested treatment regimens. A primary care doctor may not be as knowledgeable on psychiatric diagnoses and available treatment options as would a psychiatrist. Rost et al. (2011) found in their study that primary care physicians provided 14% of the visits of their patients of which 62% involved antipsychotic medication. Psychiatrists in this study provided 86% of the visits to patients with a diagnosis of schizophrenia; 85% of these visits involved antipsychotic medication. Rost et al. (2011) also found that those on public insurance are more likely to be hospitalized contributing to higher rates of inpatient treatment use. This study lacks any information

regarding alternative forms of treatment, though, remains to be one of few studies comparing private insurance, public insurance, and lack of insurance and how forms of coverage affects type of doctor seen, inpatient treatment utilization as well as outpatient treatment.

CHAPTER III

Theoretical Framework

Karl Marx's historical sociological theory of capitalism and the subjugation of the proletariat class by the bourgeoisie can be applied to themes of mental healthcare accessibility and suggested treatment regimens (Lemert 2010). Capitalism refers to a societal structure seeking to maximize profits or capital while minimizing cost or risk. Weber refers to the upper class as the bourgeoisie and the lower class as the proletariat. He states that members of the upper class seek to overpower individuals belonging to the lower class as a means of increasing or maintaining their power. Many modes of behavior are utilized in order to carry this notion to fruition including but not limited to racism, sexism and ageism or in other words tying stigma to members of disadvantaged groups in order to create categories of normality and deviance (Goffman 1963). Stigmatized individuals, because they are viewed as unworthy or less than human due to their association with deviance, are restricted from class resources preventing social and economical mobility and limiting access to resources to those categorized as normal or the bourgeoisie.

The conceptualization of mental illness has changed through the years with the latest theme centered on an increase in the number of mental illness categories reflective of an increase in the number of behaviors being defined as deviant (Conrad 2007). Peter Conrad's theory on the Medicalization of society outlines the process of turning behavioral abnormalities into medical disorders calling for symptom management and behavior control (2007). He defines medicalization as a process by which nonmedical problems become defined and managed as medical issues. Conrad's theory suggests the

diagnosing and treating of mental illnesses may be reflective of our society's need to conceptualize and categorize human behavior, medicalizing deviant portrayals. He argues that any human behavioral difference runs the risk of being considered a diagnosable disorder, subject to medical intervention. Medicalization transforms normal life stressors into pathologies, which in turn narrows the scope on tolerable behavior or emotional expression.

Medicalizing behavior and emotions has its benefits for those who are equipped with the power to define, diagnose, recommend, and profit from treatment (Conrad 2007). Those who have the authority to define symptoms reflective of a disorder dictate the constitution of a medical problem. The pharmaceutical industry, for instance, benefits greatly from the increase in mental illness categories since psychotropic medication is used more than any other form of treatment. Daily life stressors and normal levels of social anxiety and fear have now been defined as disorders instilling a need for treatment in the form of medication in individuals who identify as having associated disorders. The pharmaceutical industry goes to great lengths to advertise these disorders as well as the associated drug assumed to manage symptoms. In a sense, drug companies are equipping the public with tools used to self-diagnose their ailments, giving them a medical reason to associate with their emotional discomfort. Patients are now able to transform their list of unclear, unconnected, and mysterious complaints into an organized illness. This contributes to over-diagnosis, an increasing number of mental illness categories in the DSM, and the over-medicalization of mental illness. The medicalization of emotional instability and turmoil labels behavior, providing justification for thinking, feeling, and

behaving in certain ways leading the labeled individual free from responsibility and behavioral accountability.

According to Conrad, one major danger for the medicalization of behavior as mental illness is that it diminishes our tolerance for and appreciation of diversity by deeming abnormalities as disorders requiring treatment (2007). Treating behavioral differences as medical problems appears to benefit only those in charge of categorizing behaviors into illnesses, which is reflective of Marx's theory of capitalism (Lemert 2010). Conrad also suggests this to be a form of social control. Many sociologists agree that some amount of social control is necessary for a society to function. In this case, medical norms create expectations for bodies, behavior and health which set boundaries and norms assumed to guide and influence behavior (2007). Treating the individual with mental illness is reflective of Conrad's notion of the individualization of social problems (Conrad 2007). He states this to be a consequence of medicalization, which seeks to solve the problem of the individual instead of the social environment. Psychotropic drugs as a form of treatment also serves a form of social control in their ability to alter the behavior, body, and psychic state of the individual taking the prescribed medication. Psychotropic drugs have been viewed as a form of medical social control of deviance.

Forms of treatment available are correlated with insurance coverage (Conrad 2007). When third parties pay for treatment or therapy, this is known as a mediated market. The market is mediated by the coverage policy of the insurance company or governmental program. The form of treatment one receives for the management of mental illness symptoms depends greatly on what is covered through their policy. Most

insurance policies pay the most for psychotropic drugs as a form of treatment offering little compensation for alternative methods and/or therapy.

Given the knowledge we have on the effectiveness of psychotropic drugs as well as risks of harmful side effects, the issue of medicalization of behavior becomes more disconcerting. Psychotropic drugs raise suspicion among researchers who fail to find evidence, proving effectiveness of this form of treatment (Kirsch 2008; Harrow 2007). Short-term relief of symptoms is often misinterpreted as proof of the effectiveness of the drug. Research conducted on effects of psychotropic drugs suggest long-term use leads to physical ailments including but not limited to heart failure, diabetes, obesity, headaches, psychomotor abnormalities, and addiction (Kupfer 2005; Ashton 1991). Cognitive impairment leaves many suffering from mental illness permanently debilitated and unable to remain employed (Harrow 2007). Unemployment leads to rising rates in people on SSI and SSDI as well as those publicly insured and uninsured (Nwokeji et al. 2012; Horvitz-Lennon et al. 2009; Lesser et al. 2007). Insurance is reflective of form of treatment leading many who are on public assistance programs to be overly diagnosed and prescribed psychotropic drugs. This cycle perpetuates inequality by leaving many unemployed and unable to escape poverty due to debilitating effects experienced through use of psychotropic drugs.

Rising rates of mental illness accompanied by rising rates of people on SSI and SSDI leave some questioning reasons behind suggested forms of treatment (Whitaker 2010). Whitaker (2010) theorizes in his extensive review of current and historical literature that monetary benefits associated with pharmaceutical companies are at the root of the medicalization of behavior, the over diagnosing of mental illness and the over

prescribing of psychotropic drugs. His theory ties into Marx's theory on class domination through the restriction of social and economic mobility of lower class individuals, rendering them mentally, physically, economically, and socially debilitated (Lemert 2010). The upper class, or bourgeoisie, benefits economically, physically, and socially by suppressing the proletariat class, or in this case, those suffering from mental illness convinced they need treatment in the form of symptom management.

CHAPTER IV

Study Purpose

My study aims to fill gaps left in existing literature by analyzing how insurance relates to treatment received by adults with a self-reported mental health disorder. The study will examine how insurance is correlated with the presence of mental illness treatment. For those respondents who do receive treatment it will also examine whether they receive psychotropic medication only or other forms of treatment (therapy or medication combined with therapy). Finally it will explore how insurance relates to the use of alternative types of treatment (e.g. herbalism, support groups). All analyses will compare treatment variables such as medication only, therapy and medication, therapy only, and alternative forms of treatment for respondents who are insured by Medicaid or Medicare, receiving VA insurance, privately insured, or uninsured. Multivariate analyses will be conducted to examine if relationships between insurance status and treatment remain when controlling for mental illness severity, age, sex, race/ethnicity, income, and education.

The research question I aim to address in my current study is whether or not treatment varies according to form of insurance. Given information provided by existing literature I have come up with three hypotheses regarding the relationship between mental illness treatment and type of insurance.

- H1: The uninsured are less likely to receive treatment for their mental health problems than people with private or public forms of insurance.
- H2: The uninsured are more likely than those with private or public insurance to be treated with medication only.

- H3: Individuals who utilize alternative forms of treatment differ according to their insurance status.

Given the research on the harmful effects of long-term psychotropic drug use, it remains important to analyze whether insurance influences the types of treatments people with mental health problems receive, particularly if they are receiving less treatment, or treatment which is heavily reliant on protocols with significant risk as opposed to those which pose less risk.

CHAPTER V

Methods

The 2009 National Survey on Drug Use and Health (NSDUH) was used for all analyses and can be identified as a probability sample of the US population. Respondents are age 12 and older. However, for this study, I examined only respondents age 18 and over. For this particular survey, a scientific random sample of households was selected and a professional interviewer made a visit to each household to conduct surveys in person. The interview response rate was 75.56%. The high response rate and random probability sampling design make the sample generalizable to the US adult population. This data set is comprised of responses to survey questions on mental health, form of treatment utilized, insurance coverage, as well as other demographic variables including age, income, education, race and ethnicity, and sex. A subset was pulled from the original data to include only adults who self-reported having a mental illness (non-specific).

Mental illness was measured using a variable created in the data set from a larger number of questions. The 2009 NSDUH used a set of scales in order to measure the prevalence and severity of mental disorders. The Psychological Distress Scale: K6 is a screening instrument for nonspecific psychological distress and was used to capture both past month and past year prevalence. The K6 scales include questions such as: During the past 30 days, how often did you feel nervous? Answer options include: all of the time (4), most of the time (3), some of the time (2), a little of the time (1) and none of the time (0). If a respondent scored 13 or greater, they were classified as having serious psychological distress (SPD). The Functional Impairment Scale: World Health Organization Disability Assessment (WHODAS) was also used to measure functional impairment. This scale

consists of a series of questions assessing disturbances in social adjustment and behavior. A reduced set of 13 questions from the WHODAS was included in the NSDUH 2009. The questions asked respondents if their emotions, nerves, or mental health caused them to have difficulties in daily activities. An example of a question used is: Did problems with your emotions, nerves, or mental health keep you from leaving the house on your own? Answers included: no difficulty (0), mild difficulty (1), moderate difficulty (2), severe difficulty (3), and I do not know or refused to answer (0). Due to time limitations and resources, it was not possible to perform structured diagnostic clinical interviews to assess mental illness on all respondents. Short screener scales – K6 and WHODAS – which, measure psychological distress and functional impairment were used in a statistical model to accurately predict mental illness. Responses from both of these scales were transformed and summed to create total score variables predicting the probability of mental illness. Respondents were given a score of 0-17 indicating the presence of mental illness as well as the level of severity. Four recoded variables assessing the presence and severity of mental illness used in the current study include any mental illness (AMI) in the past year (yes or no), severe mental illness (SMI) (yes or no), moderate mental illness (yes or no), and mild mental illness (yes or no). The subset for this study included respondents who were coded as having any mental illness in the past year. Level of severity was used as a control variable in the three regressions ran and assumes the presence of the need for treatment.

Form of treatment was measured for past year use and captured eight categories: inpatient treatment only; outpatient treatment only; inpatient and outpatient treatment only; medication only; inpatient and medication only; outpatient and medication only;

inpatient, outpatient, and medication; and no treatment. To simplify, I collapsed these items into four categories: therapy only (inpatient and/or outpatient); medication only; therapy and medication; and no treatment. Respondents were also asked about their use of other, non-pharmacological forms of treatment which include herbalism, chiropractic measures, religious and spiritual guidance, and/or group support (both online and in person). These variables were obtained by asking respondents which type of treatment they used in the past twelve months. I recoded this variable to capture any use of alternative treatment, with no regards to specific forms.

Insurance coverage was assessed by asking respondents which type of healthcare they have (e.g. private, Medicaid or Medicare, Military and Veteran Insurance, and none).

Control variables included in the analyses were sex (male and female), race/ethnicity (White, African American, Native American, Asian American, Hispanic, and other), education measured as a four point ordinal scale (less than high school, high school graduate, some college, and college graduate), income measured as a four point ordinal scale (less than \$20,000, \$20,000-\$49,000, \$50,000-\$74,999, and \$75,000 and over), and age measured as a 17 point ordinal scale.

CHAPTER VI

Analysis

Univariate Analysis

Tables 1 & 2 provide the univariate (descriptive) analyses of study variables.

Table 1. Univariate Analysis-Demographic Variables.		
Variable	%	N
Sex		
• Female	• 62.4%	• 6,188
• Male	• 37.6%	• 3,734
Race		
• White	• 65.7%	• 6,521
• Black	• 11.0%	• 1,094
• Native American	• 1.5%	• 147
• Asian	• 3.7%	• 364
• Hispanic	• 14.0%	• 1,394
• Other	• 4.1%	• 402
Income		
• Less than \$20,000	• 31.7%	• 3,142
• \$20,000-\$49,999	• 34.4%	• 3,413
• \$50,000-\$74,999	• 14.3%	• 1,416
• \$75,000 or More	• 19.7%	• 1,951
Education		
• Less than high school	• 18.2%	• 1,808
• High school graduate	• 32.4%	• 3,215
• Some college	• 31.1%	• 3,089
• College graduate	• 18.2%	• 1,810
Age	11.87 (22-25 years of age)	9,922

Table 2. Univariate Analysis-Key Independent and Dependent Variables.		
Variable	%	N
Insurance		
• Medicare	• 1.4%	• 141
• Medicaid	• 15.6%	• 1,546
• VA Insurance	• 2.4%	• 238
• Private Insurance	• 52.6%	• 5,216
• Uninsured	• 27.7%	• 2,752
• Missing	• 0.6%	• 29
Treatment		
• Therapy Only	• 5.2%	• 515
• Medication Only	• 12.6%	• 1,255
• Therapy and Meds	• 14.4%	• 1,429
• None	• 67.2%	• 6,667
• Missing	• .6%	• 56
Serious Mental Illness		
• No past year	• 74.4%	• 7,381
• Yes past year	• 25.6%	• 2,541
Moderate Mental Illness		
• No past year	• 78.8%	• 7,823
• Yes past year	• 21.2%	• 2,099
Mild Mental Illness		
• No past year	• 46.8%	• 4,640
• Yes past year	• 53.2%	• 5,282
Alternative Treatment		
• Yes	• 16.7%	• 1,653
• No	• 83.2%	• 8,257

The sample chosen for this study (respondents who have experienced a mental health disorder in the past year) is comprised of 9,922 respondents. The majority of these respondents are female and white. The plurality of respondents state their household income is between \$20,000 and \$49,999 and approximately half of the respondents have a high school degree or less. Slightly more than half of respondents are privately insured, though the second to largest group claim to be uninsured at 27.7%. Over two-thirds of respondents report that they received no treatment for their mental illness/disorder within

the past year (67%). The majority of the respondents have mental health disorders that are mild, compared to moderate or serious.

Bivariate Analysis

To test the hypotheses that there is a relationship between insurance coverage and form of treatment, I ran a chi square analysis. The results can be found in the Table 3.

Table 3. Chi Square Analysis-Insurance and Form of Treatment.						
Treatment	Medicare	Medicaid	VA Insurance	Private Insurance	Uninsured	Significance
Therapy Only	7.8%	4.7%	3.8%	5.8%	4.4%	.000
Meds Only	12.8%	15.8%	16.9%	13.3%	9.5%	
Therapy and Meds	33.3%	20.4%	23.3%	14.7%	9.2%	
None	46.1%	59.2%	55.9%	66.3%	76.8%	

With p being less than or equal to .05, there is a significant relationship between insurance and treatment. Table 3 reveals that the uninsured are less likely to receive treatment than those with insurance and the differences between the uninsured and insured are quite substantive. It is interesting to note that the second largest category for the uninsured are those receiving only medication, whereas for all the insurance groups the second largest category is therapy and medication combined. These findings provide some support for my first and second hypotheses. However, the chi-square is not able to tease out these specific group differences (only a broad relationship between the two variables) and it does not control for potential spurious relationships.

To test the hypothesis that there is a relationship between insurance and alternative treatment use, I ran a chi square analysis. The results can be found in Table 4.

Table 4. Chi Square Analysis-Insurance and Alternative Treatment.						
Alternative Treatment	Medicare	Medicaid	VA Insurance	Private Insurance	Uninsured	Significance
No	84.4%	84.7%	80.3%	80.9%	87.2%	.000
Yes	15.6%	15.3%	19.7%	19.1%	12.8%	

With p being less than or equal to 0.05, there is a significant relationship between insurance and alternative treatment. Table 4 reveals that the uninsured are less likely to utilize alternative forms of treatment than those with insurance. Though differences between the uninsured and publicly insured are not that great, it remains interesting that the group with the highest percentage of alternative treatment use is individuals who have Veteran Insurance with respondents who have private insurance as the second largest group. These findings support my third hypothesis. However, the chi-square is only able to capture a general relationship between these variables. In order to control for potential spurious relationships, multivariate analyses were conducted.

Multivariate Analysis

In order to rule out the possibility of spurious relationships, certain variables need to be controlled. Thus, three logistic regressions were conducted. For the first regression whether the respondent received treatment (yes/no) was the dependent variable. The variable for treatment was coded as 1=yes and 0=no. This includes any form of treatment—therapy only, medication only, and a combination of the two. Insurance was measured by five dummy variables and were all coded as 1=yes and 0=no (e.g. Medicare 1=yes and 0=no). No insurance served as the reference category and was left out of the regression. Control variables were sex (1=female and 0=male), race with white being held out as the reference category, income, age, education, and mental illness severity

with mild mental illness being held out as the reference category. Table 5 provides the results of this regression.

Table 5. Logistic Regression-Any Form of Treatment.		
Variables	B	Exp (B)
Insurance		
• Medicare	• .338	• 1.403**
• Medicaid	• .721	• 2.057***
• VA Insurance	• .607	• 1.835***
• Private Insurance	• .250	• 1.285***
Sex (1=female, 0=male)	.441	1.555***
Race		
• Black	• -.963	• .382***
• Native American	• -.324	• .723
• Other	• -.227	• .797
• Asian	• -1.283	• .277***
• Hispanic	• -.643	• .523***
Income	.093	1.097***
Age	.115	1.122***
Education	.062	1.064*
Mental Illness Severity		
• Serious	• 1.309	• 3.702***
• Moderate	• .507	• 1.660***

*p<.05; **p<.01; ***p<.001

This regression explains 19% of the variation in treatment and correctly classifies 71.5% of the cases. According to this analysis, individuals on Medicare are 40% more likely to receive treatment and those on Medicaid are 106% more likely to receive treatment when compared to those who are uninsured. Individuals on military forms of coverage are 84% more likely to receive treatment. Private insurance is associated with a 29% increase in treatment utilization. Results reveal that Hispanics are 48% less likely, Asian Americans 72% less likely, and African Americans 62% less likely to receive treatment than Whites. Individuals who self identify as having a serious mental illness are 270% more likely to receive treatment than individuals who self identify as having a mild mental illness.

The next table reflects results from a binary logistic regression with Medication Only as a dependent variable. The intent was to examine, among those who do receive treatment, which groups are most likely to receive medication only (coded as 1) as compared to other forms of treatment such as therapy or medication and therapy (coded as 0) See Table 6 for more detailed results.

Table 6. Logistic Regression-Medication Only Compared to Other Treatment.		
Variables	B	Exp (B)
Insurance		
• Medicare	• -.380	• .684**
• Medicaid	• -.164	• .849
• VA Insurance	• -.103	• .902
• Private Insurance	• -.028	• .973
Race		
• Black	• -.383	• .681*
• Native American	• -.214	• .808
• Other	• -.166	• .847
• Asian	• -.156	• .855
• Hispanic	• -.190	• .827
Income	.044	1.045
Age	.055	1.057***
Sex	.135	1.145
Education	-.302	.739***
Mental Illness Severity		
• Serious	• -.632	• .531***
• Moderate	• -.298	• .743**

*p<.05; **p<.01; ***p<.001

This regression analysis explains 5% of the variation in the dependent variable and correctly classifies 63% of the cases. Individuals with Medicare are 32% less likely than uninsured individuals to receive medication only as a form of mental illness treatment. African Americans are 32% less likely than Whites to receive medication only. Individuals who self identify as having a serious mental illness are 47% less likely than those who self identify as having a mild mental illness to receive medication only while

those who have a moderate mental illness are 26% less likely to be on medication only with no other forms of treatment.

The last regression reflects an analysis using alternative treatment as a dependent variable (yes=1, no=0). See Table 7 for detailed results.

Table 7. Logistic Regression-Alternative Treatment.		
Variables	B	Exp (B)
Insurance		
• Medicare	• .003	• 1.003
• Medicaid	• .191	• 1.211*
• VA Insurance	• .253	• 1.288
• Private Insurance	• .203	• 1.225**
Sex	.429	1.535***
Race		
• Black	• -.513	• .598***
• Native American	• -.165	• .848
• Other	• .247	• 1.281
• Asian	• -.216	• .805
• Hispanic	• .031	• 1.032
Income	.076	1.079**
Age	.046	1.047***
Education	.275	1.317***
Mental Illness Severity		
• Serious	• .632	• 1.881***
• Moderate	• .211	• 1.234**

*p<.05; **p<.01; ***p<.001

As mentioned previously, alternative treatment includes herbalism, chiropractic measures, religious tactics, and social networking (both online and in person). This regression explains 6.8% of the variation in the dependent variable and correctly classifies 83.3% of the cases.

Individuals on private insurance are 23% more likely than the uninsured to utilize alternative methods of treatment at a significance level of $p<.001$ while people on Medicaid are 21% more likely at a significance level of $p<.05$. African Americans are 40% less likely than Whites to use alternative treatment. Serious mental illness is

associated with an 88% increase in alternative treatment use while moderate mental illness reflects a 23% increase compared to mild mental illness.

CHAPTER VII

Discussion

These findings suggest uninsured patients with mental illness are less likely than patients with insurance to receive treatment for their illness. In addition, this relationship remained when controlling for several other demographic variables often associated with a lack of insurance (e.g. income, education). And the effect sizes were large. Thus the study reveals that there is a strong and independent effect of a lack of insurance on the odds of receiving treatment for a mental illness. These results provide support for my first hypothesis. These findings are consistent with previous studies examining treatment utilization among privately insured, publicly insured, and uninsured mental illness patients (Rost et al. 2011). In their study on inpatient hospitalization rates, Rost et al. (2011) find lack of insurance to be correlated with lower rates of hospitalization when compared to individuals on private insurance. Public insurance (Medicaid and Medicare) was associated with the highest likelihood of hospitalization when compared to private insured patients. In a similar study done by Stevens et al. (2005) on children with ADHD, researchers found private insurance and Medicaid to be strong predictors of mental illness diagnoses and accessibility to treatment. Uninsured children were, in turn less likely to be diagnosed thus less likely to be treated. Though this study was done on children, the current study analyzing treatment utilization of uninsured adults reflect a similar trend. It appears that this study is the only study yet that has found uninsured adults with mental illness are less likely to get treatment when controlling for other demographic factors.

My second hypothesis asserts that those who are uninsured would be more likely to receive medication only as a form of treatment. I did not find support for this

hypothesis. Those lacking insurance are not more likely to be treated with medication only when compared to patients with mental illness who also had insurance. Questions regarding psychotropic medication use did not capture prescriptions given. Since this study only analyzed psychotropic medication use, it could have excluded patients who were prescribed medication in order to treat mental illness symptoms but who did not take them due to lack of financial feasibility. Previous studies have analyzed inpatient hospitalization rates assumed to be associated with rates of psychotropic medication rates however medication only as a form of treatment was not analyzed (Rost et al. 2011; Thoits 2005). This study adds to the literature by collapsing treatment categories making psychotropic medication use only without the use of other forms of treatment (such as inpatient hospitalization) its own category. Given the theory of Medicalization of society and its explanation of mediated treatment markets dependent on insurance coverage, we can conclude one reason uninsured adults are less likely to be prescribed psychotropic medication only as a form of mental illness treatment may be due to the inability to pay out of pocket for the medication (Conrad 2007).

My third hypothesis assumes individuals who utilize alternative methods of treatment are different than those who do not. Private insurance is associated with an increase in the odds of utilizing alternative methods of treatment. Therefore, my third hypothesis is supported by these findings. In addition, results reveal that individuals who self identify as having a serious or moderate mental illness are also more likely than those who have a mild mental illness to utilize alternative methods. Private insurance is associated with a greater variety of physicians available along with available treatment options. In a mediated treatment market with third party payers dictating what is covered

versus what is not covered, it makes sense that privately insured (more likely to be gainfully employed) patients with mental illness have greater access to a greater variety of less harmful, less risky alternative methods of mental illness treatment (Conrad 2007).

One interesting, unexpected finding included the association between mental illness severity and the use of medication only as a form of treatment. It appears that individuals who self-identify as having a mild mental illness are significantly more likely to use medication only than those who self-identify as having a severe or moderate mental illnesses. Individuals with a more mild form of mental illness could benefit more by using therapy, alternative methods, or a combination of therapy and medication. Since their illness is less severe, resorting to medication only could have more harmful side effects than benefits (Whitaker 2010; Harrow 2007). Research shows that therapy as well as alternative treatment methods are effective in managing mental illness symptoms associated with more mild disorders. The use of medications may not be necessary and may pose greater physical, emotional, and psychological risks than benefits (Harrow 2007). Given the results from this study, it appears the opposite is happening. Further investigation should be done in order to explore why milder forms of mental illness are at a greater risk for receiving more harmful and possibly less effective treatment regimens. Perhaps patients experiencing milder symptoms of mental illness feel medication is a way to quickly manage less severe symptoms before their disorder becomes severe and harder to manage. Our physicians and patients erroneously assume that medication alone is sufficient, and therefore the most desirable option for treating mild forms of mental illness.

Limitations of this study include the issue of self-report. Social desirability bias could be affecting responses to questions regarding the experience of mental illness and treatment received. Since the issue of mental illness as well as forms of treatment are both so stigmatized it makes sense why some may be hesitant to reporting receiving treatment for mental and emotional distress. As mentioned before, the mental illness severity variable is a recoded item based on answers to questions centered on anxiety and mental distress so severe the respondents' daily routine was interrupted. Because of the way this item was recoded, the mental illness severity variable may be excluding individuals with more severe and specific diagnoses such as schizophrenia. Since there is no item asking for a specific diagnosis, this variable appears to be the best way to capture the presence of a mental illness, though limitations are present and accounted for. Though the study is nationally representative, it is highly likely that those with serious mental illness are underrepresented in the data set.

The percentage of individuals with a self-reported mental illness who did not receive any treatment at all in the past year for their illness is the highest in all categories of insurance coverage - the greatest percentage being among those who are uninsured. Even after controlling for all demographic variables as well as need for treatment (mental illness severity), over 70% of people who are uninsured do not receive treatment for their mental illness. Safety net measures such as free clinics and Community Mental Health Centers as well as governmentally assisted insurance programs are assumed to help those in greater financial need for assistance in accessing equitable mental healthcare. Given the percentages of those lacking insurance who failed to receive treatment in the past year, it appears these safety measures are not solving the issue of lack treatment

coverage. According to Conrad's theory of the Medicalization of Society third party payers mediate the mental health treatment market, which affects the form of treatment one receives (2007). Restricting access to mental health care and available treatment options reflects a form of social control also discussed in the theory of Medicalization. Marx's theory on capitalism and restricting resources of those undeserving helps maintain the higher status of the bourgeoisie (Lemert 2010). Since insurance is reflective of economic standing, it is assumed that those who lack insurance are more than likely economically disadvantaged while those who have private forms of coverage are more financially stable. Thus, percentages reflecting lower rates of mental illness treatment - in any form - for uninsured adults with mental illness are reflective of class resource restriction. Further providing proof of this theory is the rates of alternative treatment use being higher for privately insured individuals compared to publically insured patients with mental illness. Access to alternative treatment methods is restrictive and only available to those who are capable of paying for it or whose policies are more willing to pay for a variety of treatment options.

Directions for future research could analyze the effect of the Affordable Care Act on the relationship between insurance and treatment. The act not only works to insure more people, but also works to bring more mental health treatment to primary care clinics as well as clinics that serve low-income uninsured populations. Research attempting to better understand how we can improve access to mental health treatment for the uninsured population is recommended.

REFERENCES

- Adda, Jerome, Tarani Chandola and Michael Marmot. 2003. "Socio-Economic Status and Health: Causality and Pathways." *Journal of Econometrics* 112:57-63.
- Andreasen, Nancy. 2005. "Longitudinal Changes in Neurocognition During the First Decade of Schizophrenia Illness." *International Congress on Schizophrenia Research* 348.
- Anglin, D. M., P. M. Alberti, B. G. Link and J. C. Phelan. 2008. "Racial Differences in Beliefs About the Effectiveness and Necessity of Mental Health Treatment." *American Journal of Community Psychology*, 42(1):17-24.
- Anglin, D. M., B. G. Link and J. C. Phelan. 2008. "Racial Differences in Stigmatizing Attitudes Toward People With Mental Illness." *Psychiatric Services*, 57(6):857-862.
- Angst, J. 1985. "Switch from Depression to Mania." *Psychopathology* 18:140-154.
- Ayd, Frank Jr. 1970. *Discoveries in Biological Psychiatry*. Philadelphia: Lippincott.
- Azmitia, Efrain. "Awakening the Sleeping Giant." *Journal of Clinical Psychiatry* 52(12):4-16.
- Baethge, Christopher. 2005. "Substance Abuse in First-Episode Bipolar I Disorder." *American Journal of Psychiatry* 162:1008-1010.
- Battie, William. 1969. *A Treatise on Madness*. New York: Brunner/Mazel.
- Bazargan, Mohsen, Shahrzad Bazargan-Hejazi and Richard S. Baker. 2005. "Treatment of Self-Reported Depression Among Hispanics and African Americans." *Journal of Health Care for Poor and Underserved* 16(2):328-344.
- Brown, Ronald T., David Antonuccio, George DuPaul, Mary Fristad, Cheryl A. King, Laurel K. Leslie, William E. Jr. Pelham, John Piacentini and Benedetto Vitiello. 2006. "Report of the Working Group on Psychotropic Medications for Children and Adolescents: Psychopharmacological, Psychosocial, and Combined Interventions for Childhood Disorders: Evidence Base, Contextual Factors, and Future Directions." Washington, DC: American Psychological Association.
- Boyle, Mary. 1990. "Is Schizophrenia What It Was?" *Journal of History and Behavioral Science* 26:323-333.
- Boyle, Mary. 1990. *Schizophrenia: A Scientific Delusion?* New York: Routledge.

- Busfield, Joan. 2004. "Mental Health Problems, Psychotropic Drug Technologies and Risk." *Health, Risk & Society* 6(4):361-375.
- Caplan, Robert D. 1985. "Social Effects of Diazepam Use." *Social Science & Medicine* 21:887-898.
- Carpenter, William. 1977. "The Treatment of Acute Schizophrenia Without Drugs." *American Journal of Psychiatry* 134:14-20.
- Chakos, Miranda. "Increase in Caudate Nuclei Volumes of First-Episode Schizophrenic Patients Take Antipsychotic Drugs." *American Journal of Psychiatry* 151:1430-1436.
- Chase, Allan. 1980. *The Legacy of Malthus*. University of Illinois Press.
- Chouinard, Guy. 1978. "Neuroleptic-Induced Supersensitivity Psychosis." *American Journal of Psychiatry* 135:1409-1410.
- Cole, Jonathan. 1959. *Psychopharmacology: Problems in Evaluation*. Washington, DC: National Academy of Sciences.
- Conner, K. O., V. C. Copeland, N. K. Grote, D. Rosen, S. Albert, M. L. McMurray, et al. 2010. "Barriers to Treatment and Culturally Endorsed Coping Strategies Among Depressed African-American Older Adults." *Aging & Mental Health*, 14(8):971-983.
- Conner, K. O., G. Koeske and C. Brown. 2009. "Racial Differences in Attitudes Toward Professional Mental Health Treatment: The Mediating Effect of Stigma." *Journal of Gerontological Social Work*, 52(7):695-712.
- Conrad, Peter. 2007. *The Medicalization of Society*. Baltimore: The Johns Hopkins University Press.
- Copeland, V. C. and K. Snyder. 2011. "Barriers to Mental Health Treatment Services for Low-Income African American Women Whose Children Receive Behavioral Health Services: An Ethnographic Investigation." *Social Work in Public Health*, 26(1):78-95.
- Cotton, Henry. 1919. "The Relation of Oral Infection to Mental Diseases." *Journal of Dental Research* 1:269-313.
- Cowen, Phil. 1982. "Abstinence Symptoms After Withdrawal of Tranquillising Drugs." *Lancet* 2(8294):360-362.
- Cullen, William. 1805. *Practice of Physic*. Worcester, Massachusetts: Printed by Isaiah Thomas.

- Davis, Teri D., Tisha Deen, Keneshia Bryant-Bedell, Vera Tate and John Fortney. 2011. "Does Minority Racial-Ethnic Status Moderate Outcomes of Collaborative Care for Depression?" *Psychiatric Services* 62(11):1282-1288.
- DeLeon P. H., B. Giesting and M.B. Kenkel. 2003. Community health centers: Exciting opportunities for the 21st century. *Prof Psychology: Res Prac* 34:579–585.
- Deutsch, Albert. 1937. *The Mentally Ill in America*. New York: Doubleday, Doran & Co.
- Diaz, E., S. W. Woods and R. A. Rosenheck. 2005. "Effects of Ethnicity On Psychotropic Medications Adherence." *Community Mental Health Journal*, 41(5):521-537.
- Eack, Shaun M. and Christina E. Newill. 2012. "Racial Disparities in Mental health Outcomes after Psychiatric Hospital Discharge among Individuals with Severe Mental Illness." *Social Work Research* 36(1):41-52.
- Elkin, Irene. 1990. "NIMH Treatment of Depression Collaborative Research Program." *Archives of General Psychiatry* 47:682-688.
- Epstein, Leon J. 1962. "An Approach to the Effect of Ataraxic Drugs on Hospital Release Rates." *American Journal of Psychiatry* 119:246-261.
- Essig, C. 1964. "Addiction to Nonbarbiturate Sedative and Tranquillizing Drugs." *Clinical Pharmacology & Therapeutics* 5:334-343.
- Fava, Giovanni A. 2003. "Can Long-Term Treatment with Antidepressant Drugs Worsen the Course of Depression?" *Journal of Clinical Psychiatry* 64:123-133.
- Goffman, Irving. 1963. *Stigma*. Prentice-Hall.
- Goldberg, J. 2008. "Overdiagnosis of Bipolar Disorder Among Substance Use Disorder Inpatients With Mood Instability." *Journal of Clinical Psychiatry* 69:1751-1757.
- Goldberg, Joseph F. 2001. "Risk for Bipolar Illness in Patients Initially Hospitalized for Unipolar Depression." *American Journal of Psychiatry* 158:1265-1270.
- Golombok, S. 1988. "Cognitive Impairment in Long-Term Benzodiazepine Users." *Psychological Medicine* 18:365-374.
- Grazier, Kyle L., Carol T. Mowbray and Mark C. Holter. 2005. "Rationing Psychosocial Treatments In The United States." *International Journal of Law and Psychiatry* 28:545-560.
- Greenblatt, David J. 1971. "Meprobamate: A Study of Irrational Drug Use." *American Journal of Psychiatry* 127: 33-39.

- Grob, Gerald. 1994. *The Mad Among Us*. Harvard University Press.
- Gur, Robert. 1998. "Subcortical MRI volumes in Neuroleptic-Naïve and Treated Patients With Schizophrenia." *American Journal of Psychiatry* 155:1711-1717.
- Harris, Emily, Mark Sorbero, Jane N. Kogan, James Schuster and Bradley D. Stein. 2012. "Concurrent Mental Health Therapy Among Medicaid-Enrolled Youths Starting Antipsychotic Medications." *Psychiatric Services* 63(4):351-356.
- Harrow, Martin. 2007. "Factors Involved In outcome and Recovery in Schizophrenia Patients Not on Antipsychotic Medications." *Journal of Nervous and Mental Disease* 195:406-414.
- Healy, David. 2008. *Mania: A Short History of Bipolar Disorder*. Baltimore: Johns Hopkins University Press.
- Healy, David. 2002. *The Creation of Psychopharmacology*. Cambridge, MA: Harvard University Press.
- Hinsie, Leland. 1929. "The Treatment of Schizophrenia: A Survey of the Literature." *Psychiatric Quarterly* 3:5-34.
- Hollister, Leo. 1975. "Drugs for Emotional Disorders." *Journal of the American Medical Association* 234:942-947.
- Horvitz-Lennon, Marcela, Thomas G. McGuire, Margarita Alegria and Richard G. Frank. 2009. "Racial and Ethnic Disparities in the Treatment of a Medicaid Population with Schizophrenia." *Health Services Research* 44(6):2106-2122.
- Jablensky, A. 1992. "Schizophrenia: Manifestations, Incidence and Course in Different Cultures." *Psychological Medicine* 20:1-95.
- Kevles, Daniel. 1985. *In the Name of Eugenics*. University of California Press.
- Kirsch, Irving. (2010). *The Emperor's New Drugs: Exploding the Antidepressant Myth*. New York: Basic Books.
- Kraepelin, Emil. 1962. *One Hundred years of Psychiatry*. New York: The Macmillan Co.
- Kranke, D., J. Guada, B. Kranke and J. Floersch. 2012. "What Do African American Youth With A Mental Illness Think About Help-Seeking and Psychiatric Medication?: Origins of Stigmatizing Attitudes." *Social Work in Mental Health*, 10(1):53-71.

- Kupfer, D. 2005. "The Increasing Medical Burden of Bipolar Disorder." *Journal of the American Medical Association* 293:2528-2530.
- Lehrman, Nathaniel. 1961. "Follow-Up of Brief and Prolonged Psychiatric Hospitalization." *Comprehensive Psychiatry* 2:227-240.
- Lemert, Charles. 2010. *Social Theory: The Multicultural and Classic Readings Fourth Edition*. Westview Press.
- Lesser, Ira M., Andrew F. Leuchter, MadHukar H. Trivedi, Lori L. Davis, Stephen R. Wisniewski and G.K. Balasubramani. Maurizio Fava A. John Rush. 2007. "Insured and Non-insured Depressed Outpatients: How Do They Compare?" *Annals of Clinical Psychiatry* 19(2):73-82.
- Maletzky, Barry M. 1976. "Addiction to Diazepam." *International Journal of Addictions* 11:95-115.
- Martin, Andres. 2004. "Age Effects on Antidepressant-Induced Manic Conversion." *Archives of Pediatrics & Adolescent Medicine* 158:773-780.
- Marth, Dean. 2009. "Mental Health Parity Act of 2007: An Analysis of the Proposed Changes." *Social Work in Mental Health* 7(6):556-571.
- Medical Research Council. 1965. "Clinical Trial of the Treatment of Depressive Illness." *British Medical Journal* 1:881-886.
- Mendels, J. 1974. "Brain Biogenic Amine Depletion and Mood." *Archives of General Psychiatry* 30:447-451.
- Mitz, Morton. 1965. *The Therapeutic Nightmare*. Boston: Houghton Mifflin.
- Myslobodsky, Michael. 1993. "Central Determinants of Attention and Mood Disorder in Tardive Dyskinesia." *Brain and Cognition* 23:56-70.
- NIMH. 2008. "The Numbers Count." *Epidemiological Reviews* 30:1-14.
- Nejtek, V. A., K. Kaiser, H. Vo, C. Hilburn, J. Lea and J. Vishwanatha. 2011. "Are There Racial/Ethnic Differences In Indigent Inner-City Clients with Dual Diagnoses?" *Journal of Dual Diagnosis*, 7(1):26-38.
- Nwokeji, Esmond D., Thomas M. Bohman, Lynn Wallisch, Dena Stoner, Kristin Christensen, Richard R. Spence, Brian C. Reed and Britta Ostermeyer. 2012. "Evaluating Patient Adherence to Antidepressant Therapy Among Uninsured Working Adults Diagnosed with Major Depression: Results of the Texas Demonstration to Maintain Independence and Employment Study." *Adm Policy Ment Health* 39:374-382.

- Patten, S. 1995. "Self-Reported Depressive Symptoms Following Treatment with Cortico-Steroids and Sedative-Hypnotics." *International Journal of Psychiatry in Medicine* 26:15-24.
- Patten, S. 2004. "The Impact of Antidepressant Treatment on Population Health." *Population Health Metrics* 2:9.
- Pinel, Philippe. 1962. *A Treatise on Insanity*. New York: Hafner Publishing.
- Pelissolo, Antoine. 2007. "Anxiety and Depressive Disorders in 4,425 Long Term Benzodiazepine Users in General Practice." *Encephale* 33:32-38.
- Petursson, H. 1981. "Withdrawal from Long-Term Benzodiazepine Treatment." *British Medical Journal* 283:635-643.
- Rappaport, Maurice. 1978. "Are There Schizophrenics for Whom Drugs May Be Unnecessary or Contraindicated?" *International Pharmacopsychiatry* 13:100-111.
- Ronalds, C. 1997. "Outcome of Anxiety and Depressive Disorders in Primary Care." *British Journal of Psychiatry* 171:427-433.
- Roy-Byrne, Peter, Cathy Sherbourne, Jeanne Miranda, Murray Stein, Michelle Craske, Daniela Golinelli and Greer Sullivan. 2006. "Poverty and Response to Treatment Among Panic Disorder Patients in Primary Care." *Am J Psychiatry*. 163:8.
- Rost, Kathryn, Yi-Ping Hsieh, Stanley Xu, Nir Menachemi and Alexander S. Young. 2011. "Potential Disparities in the Management of Schizophrenia in the United States." *Psychiatric Services* 6(62):613-618.
- Ruiz, Pedro. 2004. "Addressing Culture, Race, & Ethnicity in Psychiatric Practice." *Psychiatric Annals* 37(7):526-532.
- Sakel, Manfred. 1937. "The Origin and Nature of the Hypoglycemic Therapy of Psychoses." *Bulletin of the New York Academy of Medicine* 13:97-109.
- Scull, Andrew. 1989. *Social Order/Mental Disorder*. Berkeley: University of California Press.
- Schooler, N. 1967. "One Year After Discharge." *American Journal of Psychiatry* 123:986-995.

- Schwartz, R. C. and K. P. Feisthamel. 2009. "Disproportionate Diagnosis of Mental Disorders Among African American Versus European American Clients: Implications for Counseling Theory, Research, and Practice." *Journal of Counseling & Development*, 87(3):295-301.
- Shapiro, Arthur. 1983. "Diazepam: How Much Better Than the Placebo?" *Journal of Psychiatric Research* 17:51-73.
- Silverman, C. 1968. *The Epidemiology of Depression*. Baltimore: Johns Hopkins Press.
- Smith, Aaron. 1969. "Studies on the Effectiveness of Antidepressant Drugs." *Psychopharmacology Bulletin* 5:1-53.
- Solomon, K. 1978. "Pitfalls and Prospects in Clinical Research on Antianxiety Drugs." *Journal of Clinical Psychiatry* 39:823-831.
- Sorkin, D., H. E. Pham and Quyen Ngo-Metzger. 2009. "Racial and Ethnic Differences in the Mental Health Needs and Access to Care of Older Adults in California." *Journal of the American Geriatrics Society*, 57(12):2311-2317.
- Sullivan, Henry Stack. 1940. "Explanatory Conceptions." *Psychiatry* 3:73.
- Stevens, Jack. Jeffrey S. Harman and Kelly J. Kelleher. 2005. "Race/Ethnicity and Insurance Status as Factors Associated with ADHD Treatment Patterns." *Journal of Child and Adolescent Psychopharmacology* 15(1):88-96.
- Swazey, Judith. 1974. *Chlorpromazine in Psychiatry*. Cambridge, MA: MIT Press.
- Szalavitz, Maia. 2012. "DSM-5 Debate: Committee Backs Off Some Changes, Re-Opens Comments." *Time*, May 3. Retrieved May 8, 2014.
<http://healthland.time.com/2012/05/03/dsm-5-debate-committee-backs-off-some-changes-re-opens-comments/>
- Szasz, Thomas. 1961. *The Myth of Mental Illness: Foundations of a Theory of Personal Conduct*. New York, NY: Harper Perennial.
- Thoits, Peggy A. 2005. "Differential Labeling of Mental Illness by Social Status: A New Look at an Old Problem." *Journal of Health and Social Behavior* 46(March):102-109.
- Thomson, R. 1982. "Side Effects and Placebo Amplification." *British Journal of Psychiatry* 140:64-68.
- Uehara, Edwina. S. 1994. "Race, Gender, and Housing Inequality: An Exploration of the Correlates of Low-Quality Housing Among Clients Diagnosed with Severe and Persistent Mental Illness." *Journal of Health & Social Behavior*, 35(4):309-309.

- U.S. Department of health and Human Services. 1999. *Mental Health: A Report of the Surgeon General*.
- Valenstein, Elliot. 1998. *Blaming the Brain*. New York: The Free Press.
- Young, James. 1967. *The Medical Messiahs*. Princeton, NJ: Princeton University Press.
- Virnig, Beth, Zhen Huang, Nicole Lurie, Dorothea Musgrave, Marshall McBean and Bryan Dowd. 2004. "Does Medicare Managed Care Provide Equal Treatment for Mental Illness Across Races?" *Arch Gen Psychiatry* 61:201-205.
- Wagner, Amy M., Alexander Bystritsky and Joan E. Russo. 2005. "Beliefs About Psychotropic Medication and Psychotherapy Among Primary Care Patients with Anxiety Disorders." *Depression and Anxiety* 21:99-105.
- Whitaker, Robert. 2010. *Anatomy of An Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America*. New York: Broadway Paperbacks.