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A Descriptive Study of the Diagnosis and Treatment of Depression by Nurse Practitioners

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A DESCRIPTIVE STUDY OF THE DIAGNOSIS AND TREATMENT OF DEPRESSION BY NURSE PRACTITIONERS

by

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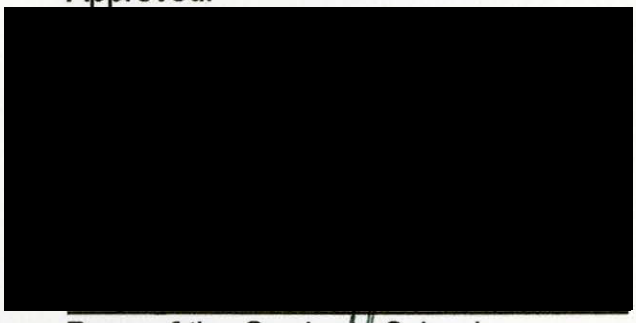

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ABSTRACT

The purpose of this study was to determine whether family and adult nurse practitioners were able to diagnose and treat the depressed patient in the primary care setting. The sample included 28 adult and family nurse practitioners who had been practicing as NPs for at least one year and who were currently employed in the primary care setting. The researcher used five case studies that were developed by the investigator to portray different levels of depression. The study demonstrated a fair ability to diagnose depression but not to recognize the different levels of depression. It also demonstrated a lack of knowledge in appropriately treating the depressed client in the primary care setting. The implications of this study to nursing education include regular updates on diagnosis and treatment of the depressed patient, a more comprehensive curriculum of the nurse practitioner's education, and the use of experts in the field to educate the practitioner students.

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CHAPTER 1

THE RESEARCH PROBLEM

Family nurse practitioners (FNPs) hold a unique role in healthcare. They have the knowledge and clinical skills to treat clients in an advanced practice setting. In the "hurry- up world" of healthcare delivery, priority must be placed on the major complaint presented to the provider. Therefore, many times illnesses such as depression are often underdiagnosed. Depression takes on many symptoms that can often be masked by primary diseases such as diabetes, hypertension, and hypothyroidism. In other instances, depression can be the primary illness but can mimic diseases such as dementia, pain, or symptoms that are nondescript. Healthcare providers are challenged not only to diagnose but also to treat patients with depression. Most patients are reluctant to share emotional concerns (Good, Good, & Cleary, 1987). Many clients are embarrassed to have a mental illness diagnoses because of the stigma associated with being mentally ill.

According to a study done by Lave, Frank, Schulberg, and Kamlet (1998), the first line of treatment for depression is pharmacotherapy. There are often problems with follow-up and compliance when patients are started on drug therapy immediately. This can be costly in terms of patient satisfaction and personal cost to the patient. The patient may be noncompliant because of unpleasant side effects or the cost may be too much once the samples run out. Sometimes they just cannot get past the stigma of their diagnosis. The FNP

must teach patients that caring for their mental health is just as important as caring for their physical well-being. It is critical to learn which patients bring emotional concerns to the primary care office and to assure that the FNP recognizes, evaluates, and responds to their emotional distress (Callahan, Jaen, Crabtree, Zyzanski, Goodwin, & Strange, 1998).

Depression is misdiagnosed or underdiagnosed about 50%-60% of the time. About 9% of all ambulatory primary care patients suffer from major depression, and the numbers are even higher when other depressions (dysthymia and minor depressive disorders) are taken into consideration (deCampos, 1998). The majority of patients who suffer from a psychiatric disorder will develop at least one other psychiatric disorder. It is imperative that clinicians recognize and treat these conditions. Many factors can lead to the lack of treatment. Some of the barriers to treatment regarding the patient have been mentioned. Other factors that may affect the practitioner not treating the psychiatric disorder are the concerns about a preexisting medical problem, the practitioners' personal discomfort with treating psychiatric disorders, or their lack of knowledge with psychiatric diagnosis and/or medications (deCampos, 1998).

Purpose of the Study

The purpose of this study is to determine whether FNPs can accurately identify depression and treat it using alternative methods as well as pharmacotherapy.

Theoretical Framework

Peplau's (1952) theory of interpersonal relations provides the organizing framework for this research. The theory addresses the patient-nurse relationship, the patients and their awareness of feelings, and nurses and their awareness of feelings. It presents nursing as a maturing educative force that uses the experiential learning method for both patient and nurse. The kind of person the nurse becomes makes a substantial difference in what patients will learn as they receive nursing care.

Peplau's Interpersonal Relations Model

Peplau defined nursing as "a service for people that enhances healing and health by methods that are humanistic and primarily noninvasive" (1987, p.32). It is a "significant therapeutic interpersonal process which functions cooperatively with other human processes that make health possible for individuals" (Peplau, 1952, p.16). Nursing is conceptualized as an integration of art and science. Practicing nurses are described as "working scientists" and the nursing process is described as an "investigative approach". Science is thus used to delineate universal characteristics about a phenomenon from an objective, theoretical, "tough-minded" stance. Art and aesthetic knowledge are used to understand the observed phenomenon from an individualized, ethical and contextually sensitive, "tender-hearted" stance. Using the interpersonal process, clinical judgement is used to integrate scientific and artistic aspects to define the patient's problem and then intervene. The goal of nursing is to "move patients toward enhanced health by increased awareness of problems in psychosocial patterns and helping

to develop more useful growth-continuing patterns" (Peplau, 1988; cited in Reed, 1996, p. 68).

Clear and supportive communication is a basic concept in Peplau's theory. She taught psychodynamic nursing. She believed that it was important for nurses to understand their own behavior in order to help others identify perceived difficulties. She believed that people, particularly nurses, are always changing and growing. It is this aspect of psychosocial nursing that helps to influence persons' thinking and causes them to take action. Therapeutic communication helps patients to learn what their dysfunctional thinking patterns are and assists them in developing more productive behaviors. The nurse's goal then is to assess a patient's communication skills and influence that person to communicate in a healthier manner.

The person, as defined by Peplau, is a developing self-system composed of biochemical, physiological, and interpersonal characteristics and needs. The person develops as a direct result of interactions with significant others. The person possesses the power to change. The nurse can be a facilitator of change. Mature people are able to meet their own needs and integrate a variety of experiences. These needs are met in accordance with Maslow's hierarchy of needs and help in developing behavior patterns. Experiences from interpersonal relationships are the basis for developing these behaviors. Humans thrive on interpersonal relations.

The use of Peplau's theory, especially her conceptualization of therapeutic communication, is essential to the role performed by nurse practitioners. It is

through therapeutic communication that depressed individuals will accept their problems and take health actions to overcome them.

Assumptions

1. Depression in the primary care setting is underdiagnosed.
2. Patients may not seek help for their depression because of certain fears and stigmas.
3. Nurse practitioners may have difficulty treating depression due to their own issues and concerns.
4. All family nurse practitioners and adult practitioners receive similar training during their program of study.

Research Questions

There were two research questions for this study:

1. Given case studies, are nurse practitioners able to accurately diagnose depression?
2. Given case studies, can nurse practitioners develop appropriate care plans for clients with depression?

Definitions of Terms

The following terms are defined as used in this study:

Depression (theoretical) - a unipolar mood disorder characterized by physical and psychological symptoms that cause significant distress and impairment in functioning and occur in the absence of elevated mood (mania or hypomania) as identified by:

a. Depressed mood or marked decreased pleasure in most activities lasting more than 2 weeks.

b. Depressed mood for most of day, for more days than not for at least 2 years.

c. Presence of fewer than five symptoms of major depressive disorder. (Uphold & Graham, 1998)

Depression (operational) – for the purpose of this study five or more of the following criteria must be identified by the nurse practitioner to diagnose major depression and at least two of the criteria must be identified to diagnose dysthymia:

a. Feelings of sadness nearly every day or crying spells observed by others.

b. Loss of pleasure in all or most activities of daily living.

c. Significant weight loss not caused by dieting or weight gain (5%of body weight in a month) or decrease or increase of appetite.

d. Insomnia or hypersomnia nearly every day.

e. Observed psychomotor retardation or agitation.

f. Fatigue or loss of energy nearly every day.

g. Feelings of worthlessness or guilt.

h. Decreased concentration or ability to make decisions.

i. Recurrent thoughts of death or suicide.

j. Significant distress or impairment in social, occupational or other important areas of functioning.

k. Symptoms not caused by physiological effects of substances or a general medical condition.

Drug treatment- a prescription of a medicine or action that is approved by the Food and Drug Administration for the resolution of a particular illness or condition.

Alternative Treatment- Care of a particular condition or illness without the use of pharmacotherapeutic substances. This can include food supplements, behavior modification and/or psychotherapy.

Nurse practitioner (theoretical) - a RN who has received advanced education, has advanced health assessment, diagnostic, and clinical management skills that include pharmacology management. The focus is expert primary health care practice in managing the health needs of individuals and their families. The primary focus is on wellness and prevention (Hambric, Spross, & Hanson, 1996).

Nurse practitioner (operational) – an advanced practice nurse who has received certification in at least one specialty area of family, adult, women's health or gerontology and who is currently practicing in a primary care setting. This is usually a Master's Degree nurse, but some nurse practitioners received a certificate and were grandfathered into the position.

Case study – A set of abbreviated scenarios designed to evaluate the ability of the NP to identify different levels of depression, accurately diagnose each level of depression and decide the most appropriate plan of care for the client (See Appendix A).

Significance to Nursing

Depression, if untreated, can result in dire consequences, the extreme of which is suicide. Yet, many individuals in our society still have stigmas attached to mental illness and often do not directly report such symptoms. Since the first line of diagnosis is often the primary care provider, this person needs to be cognizant of covert signs and symptoms of mental illness.

The curricula of traditional adult medical- surgical primary care practitioners of both medicine and nursing have often been lacking in adequate content regarding treatment of psychiatric problems. These issues were considered to be the domain of a psychologist, psychiatrist, or an advanced practice psychiatric clinical nurse specialist. The results of this study will provide information for nursing school faculty who prepare family and adult nurse practitioners that demonstrates whether these programs adequately prepare NPs to treat and diagnose psychiatric illness. Results will also provide the needed documentation for the practitioner to determine whether a comprehensive inservice program is needed in this area.

CHAPTER 2

REVIEW OF THE LITERATURE

Nurse practitioners receive education to care for the whole person in the clinical setting. There is limited literature to substantiate the level of competency that nurse practitioners demonstrate in treatment of clients with depression within their scope of practice. A thorough review of the literature was conducted using Cinahl, Medscape, Carl Uncover, and the World Wide Web resources.

The researcher searched for articles that discussed diagnoses and treatment of depression from the psychiatric perspective, as well as, that of primary care. The literature included studies of alternative therapies and traditional therapies. The researcher also reviewed studies of comparisons between nurse practitioners and primary care physicians. The literature review spanned the years of 1995 through the present.

This literature review will define depression and treatment modalities. It will also discuss the impact depression has on the general public. It will show how physicians in general practice manage clients who manifest symptoms of depression. Lastly, this review will present studies that demonstrate how clients are cared for by nurse practitioners in general practice.

Depression

Depression is defined in Saunder's Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health (1987) as "a morbid sadness, dejection, or

melancholy." Early signs of depression can include pessimistic statements, refusal to eat, diminished concern about personal appearance, and reluctance or inability to make a decision. A person may become isolative and avoidant of others, especially of those who could help them. They may express a lack of energy, feelings of worthlessness, and thoughts of self-injury or destruction. Depression can take on varying degrees of severity, from a mild dysthymia to a severe suicidal depression.

The Diagnostic and Statistical Manual of Mental Disorders (1994), the fourth edition (DSM-IV), is the standard used by the American Psychiatric Association to diagnose mental illnesses. In the section under mood disorders, it describes major depression as having the symptoms described in over a two-week period with a significant change in a person's previous functioning. These symptoms can cause a significant impairment in social, occupational, or other areas of functioning and persist for at least two months.

The U.S. Department of Health and Human Services published an extensive report in 1989 on depression in primary care that outlines treatment for health care providers. These guidelines were developed because of the large population of depressed people seen in the primary care setting. This agency recognized that improvements were needed in the recognition and treatment of depression among primary care givers. Depression has a high mortality and morbidity rate and, left untreated, can lead to dire consequences. Even with these consequences, depression can be treated successfully.

Treatment modalities range from diet and exercise to pharmacotherapy and cognitive psychotherapy and behavioral psychotherapy. Extreme cases may require electroconvulsive therapy, which can be performed either in the hospital setting or on an outpatient basis. There are many mental health facilities available throughout the country designed to assist and treat the mentally ill. Depression, however, is the mental illness most often seen in the primary care setting.

Dietary insufficiencies have been implicated in the causes of depression as far back as 1962 (Alpert & Fava, 1997). Studies conducted by Alpert and Fava (44) showed an inverse relationship between folate levels and the incidence of depression in adults. They suggested folate use as adjunct therapy for depression. The correlation between dietary intake and severe depression demonstrates the importance of good nutrition in the treatment of depression. The studies showed marked improvement in some people just with the addition of folic acid added to their diet.

Another dietary supplement that is gaining more acceptance is St. John's Wort. In a meta-analysis conducted by Butler, 23 German studies during the past 10 years involving St. John's Wort were evaluated in the treatment of mild to moderate depression. St. John's Wort is a herbal therapy that has been used in Germany and England over many years and is gaining more acceptance in the United States. There are fewer side effects but caution should be used when recommending its use since it may react with some other medications. The cost of the herb is considerably cheaper than the newer antidepressants but may take

up to six weeks to reach therapeutic levels. The only known adverse effect is the potential to phototoxicity in people who are hypersensitive to the sun (Butler, 1998).

Physical activity has been shown to be a useful tool in preventing and easing depression symptoms. According to a study quoted by Artal (1998) exercise has psychological and physiologic benefits. His findings revealed that subjects who exercised over an 11-week period and had a significant reduction of their score of a standard depression inventory (Byrne & Byrne, 1993). Exercise has been shown to be beneficial not only as a complimentary therapy but also as a primary form of prevention of depression.

Pharmacotherapy is the most popular choice of treatment, not only of psychiatrists, but also primary care givers. Numerous antidepressant medications are available to treat depression. Several classes of medications affect different neurotransmitter sites in the brain. All of these drugs are effective in the treatment of depression. Safety, tolerability, cost, and convenience of dosing determine selection of one medication over the other. Comorbid disease and potential drug interactions also influence selection (Majeroni & Hess, 1998).

One of the newer classes of antidepressants is the selective serotonin reuptake inhibitor (SSRI). These medications are currently the drugs of choice. They have fewer side effects, are not lethal in an overdose, are easily administered and are more likely to result in treatment compliance. Side effects can include but are not limited to nausea, headache, insomnia, drowsiness, anorexia, and jitteriness (Majeroni & Hess, 1998).

Another category of medications is the tricyclic antidepressants (TCAs). These are the most studied class of antidepressants and have been around the longest. They have many more side effects and can be toxic in overdose. Side effects include anticholinergic effects, weight gain, sedation, and orthostatic hypotension (Majeroni & Hess, 1998).

The monomine oxidase inhibitors (MAOIs) are the third line of treatment for depression. A special diet is necessary during the course of treatment with these medications. They must be used cautiously with all over the counter medications because of the drug interactions that can cause the client to have a hypertensive crisis. Although these drugs are effective, they are seldom used. (Majeroni & Hess, 1998).

There are several other miscellaneous antidepressants that are effective (Majeroni & Hess, 1998). Several of them can be used in combination with each other to counteract side effects, induce sleep or boost the effectiveness of the antidepressant. All medications have side effects. Each drug regime is individualized to the client's need, and may need adjustment at anytime during the course of treatment.

Studies done by Simon, Heiligenstein, Grothaus, Katon, and Revicki (1998) indicated that all antidepressants have about the same effectiveness in treating depression. Factors that influence which drug regime will be used are side effects, compliance, and cost. SSRIs promote greater compliance due to fewer side effects and easier dosing, TCAs cost less but have many side effects and can be fatal if taken as an overdose.

Psychotherapy is another treatment proven to be effective for depression. This method of treatment relies on establishing good communication between a therapist and client as a means of understanding and modifying the client's behavior. There are numerous types of therapy. Two more commonly used are behavior therapy that focuses on the client's behavior and cognitive therapy that focuses on the client's perception of the world. Often these are used in conjunction with pharmacotherapy to treat depression. Studies have shown this dual treatment to be more effective in preventing relapse.

Depression in the General Population

Depression is a well- defined illness that can be easily treated in the primary care setting. Yet, it is one of the most under diagnosed illnesses with only 30% of approximately 19 million sufferers seeking treatment (St. Dennis, 1999). According to de Campos (1998), about 50% to 60% of depression cases are misdiagnosed or missed altogether. This has dire implications for the general population, since moderate to severe depression results in a 15% mortality rate from suicide (Gill, 1999). Suicide is now the second highest cause of death in American women ages 15-44 and the fourth highest cause of death of American males in that age group, according to new studies done by Peruzzi and Bongar (1999). Older clients have a higher success rate of suicide. Studies indicate that their primary caregivers have seen most of these clients within months of their deaths (Callahan, Hendrie, Nienaber, & Tierney, 1996).

Kroenke (1997) explored the problems of diagnosing depression in the primary care setting. Foremost is that most visits last less than 15 minutes;

whereas, the mental health visit may last a minimum of 30 minutes. Depression is a subtle disease. The physician has to negotiate such competing priorities as acute symptoms, follow-up of previous problems, refill of prescriptions, review of laboratory results, and health maintenance. Follow up of depression takes a long time. It takes numerous visits once the diagnosis has been made and treated to assess medication effectiveness and symptoms. Medications have to be constantly monitored. The follow up may require the physician to order numerous refills and review laboratory results.

Symptoms of depression may be masked by somatic complaints such as fatigue, insomnia, pain, or gastrointestinal problems. Physicians rarely ask about emotional health when these problems are presented. Coexisting medical problems may camouflage depression by exhibiting the same somatic complaints of depression. In the elderly population, 25% have comorbid medical problems (Butler, 1997). Elderly clients have five times the national rate of depression yet only a small percentage of those are actually treated. Of those treated, only 50% are treated effectively.

A study conducted in France showed that general practitioners tend to undertreat clients using antidepressants and use more anxiolytics than do psychiatrists. This study also indicated that these general practitioners do not keep clients on antidepressant therapy as long as psychiatrist; therefore, clients have more problems with relapse (Lapeyre-Mestre, Desboeuf, Aptel, & Chale, 1995).

Treatment of Depression by Primary Care Physicians

Butler (1997, p. 110) described "depression as ... the 'common cold of psychiatry.'" He said that it is highly treatable but commonly the diagnosis is missed. His recommended treatment included psychotherapy, antidepressants, or a combination of the two. He also identified tests, such as the Geriatric Depression Scale, to help detect depression. His article did not give the success rate of using these tests nor of the therapies. He also did not include who he thought should be doing the psychotherapy.

Primary care physicians miss depression in as many as two out of three cases (Schwenk, 1995). Depression is often undertreated by giving antidepressants at a subtherapeutic dosage or for too short a period. Schwenk also claimed that supportive counseling and education are often inadequate or the importance is overlooked. Many times physicians and patients underestimate the importance of treating depression or the physician is not adequately trained in the appropriate use of antidepressants. Schwenk maintained that depression is easier to treat than some chronic diseases and many times can be managed in the office setting. Schwenk addressed the responsibility of the physician to identify suicide risks and when to make proper referrals to the psychiatrist. He used an algorithm to help those physicians who are not completely comfortable in the treatment of depression learn to use antidepressant therapy, as well as, when to change treatment, and when to refer.

His article suggested that for those who feel comfortable, psychotherapy can be used along with antidepressants. He recommended that for those

physicians who do not have the experience needed that a consultant be brought in to do brief cognitive therapy. In lieu of these options he recommends referral to a mental health specialist.

One study indicated that depression could be predicted using the health history form and standardized inventories of depression (Post & Miller, 1998). The study results indicated that using these forms and having the primary care physician review them prior to examining the client would improve mental health diagnosis. Physicians can ask two simple questions that can assist them in the diagnosis and treatment of depression. Those are "Are you feeling depressed?" and "Are you feeling suicidal?" Studies indicated that many primary care physicians are not comfortable with these questions (Schulberg, Magruder, & deGruy, 1996). Gwin and White (1999) identified effective communication as critical for successful patient care. To successfully treat depression in the primary care setting caregivers must learn to ask the right questions and then be willing to follow-up with the best treatments.

Treatment of Depression by Nurse Practitioners

There are about 65,000 nurse practitioners employed in the United States. They are licensed in all 50 states and have prescriptive rights with various restrictions in all 50 states. Education of nurse practitioners emphasizes disease prevention, risk reduction, and empowering clients to care for themselves. A study suggested that nurse practitioners treat clients just as well as physicians do. Although this study had only a limited population, indications from previous studies "suggest that nurse practitioners compared to other practitioners will do

just as well" (Mundinger, 2000, p. 59). There have been more than 100 studies conducted over the past 30 years measuring nurse practitioners' competence, yet there remains a paucity of literature available on how well they treat mental illness and specifically depression (Mundinger, 2000).

Flenniken (1997) showed that 95% of nurse practitioners encounter clients with mental illness in their practice. The most common illnesses were depression and anxiety. The majority of the NPs felt uncomfortable prescribing psychotropic medications and felt they needed more training in psychopharmacology.

Considering the lack of literature available to address these issues this study can be invaluable to the education of nurse practitioners. Not only will it identify how depressed clients are being managed in the primary care setting but it will determine the need of further education in the course of study for nurse practitioners.

CHAPTER 3

METHOD

The purpose of this study was to determine whether FNPs could accurately identify depression and will treat it using alternative methods, as well as, pharmacotherapy. This chapter discusses the methodology used.

Research Design

A descriptive design was selected for this study. Major variables that were examined consisted of the nurse practitioner's knowledge of signs and symptoms of depression and their ability to diagnose and treat those signs and symptoms.

Setting

The setting was four nurse practitioner special interest group meetings of the Mississippi Nurses' Association. Mississippi's nurse practitioner special interest groups are subgroups of the Mississippi Nurses Association which meet monthly or bimonthly to enhance their knowledge base and discuss issues directly influencing their practice. These meetings are usually sponsored by pharmaceutical companies and are held at local restaurants in one of the five districts. An additional setting in the study was the Nurse Practitioner Update workshop held annually for practitioners throughout the state. It was held at the Lake Terrace Convention Center in Hattiesburg, Mississippi.

Sample

The sample consisted of 28 adult and family nurse practitioners that treat clients in a primary care setting who volunteered to be subjects. These nurse practitioners received their national certification and have been in practice for at least one year. They were ineligible if they were working anywhere except in primary care.

Instrumentation

The instrument for this study consisted of a demographic data form and five case studies to analyze (Appendixes A & B). Each section will be discussed. The Demographic data form was developed by the investigator to determine the age, work experience, length of time in practice, and continuance of education of the nurse practitioners that participated in the study.

The five case studies described a client with no depression but had an obvious medical problem, a client with obvious complaints of depression, a client with comorbid physical problems, a client that had somatic complaints with an underlying depression, and situational depression. The lab values and current health status were included. The subjects were asked to read each of the case studies and assign diagnosis/ diagnoses and prescribe treatment.

The case studies were developed by the investigator to represent various degrees of depression. An expert panel of three psychiatric clinical nurse specialists, a family nurse practitioner (employed by a mental health facility as a

psychiatric nurse practitioner), and two psychiatrists reviewed the case studies for clarity and content validity.

The first case study described a woman suffering from hypothyroidism and the treatment was strictly medical. The patient did manifest some depressed symptoms that would probably clear with pharmacotherapy intervention. The second case study portrayed a woman who had numerous physical problems but also suffered from moderate depression. Management of her care would have to include treatment for the depression, counseling, as well as, medical treatment. Case study #3 describes a severely depressed woman. She had a past history of depression and a family history as well. She was a person who needed a referral immediately to the emergency room or a mental health facility. The next case study dealt with a woman who came to the clinic often for numerous somatic complaints. It was incumbent on the participants to recognize the moderate depression in this scenario and treat her with therapy and alternatives to traditional treatment. The last case study portrayed a woman who was suffering from a mild depression and could have been treated with socialization and exercise.

A score sheet (see Appendix C) was used to quantify data when it was received. A percentage was used for each of the two questions asked. The diagnosis was scored as 50% correct if depression was diagnosed and 100% if the level of depression was diagnosed. The second question was based on a percentage of answers used in each case study and then quantified for each of the case studies. The investigator completed all the scoring without assistance.

Procedure

Each chairperson of the nurse practitioner special interest groups was contacted by phone to request permission to distribute the questionnaires at the next meeting of the group. After permission was obtained the investigator attended the various special interest group meetings. At the beginning of the meeting the chairperson allowed the investigator to describe the study and distribute packets to individuals who volunteered to be a subject. The packet contained a cover letter, the demographic data form, and the case studies. Completion of the instrument indicated consent to participate. The volunteer subjects completed the instrument and placed them in a designated collection site at the meeting site or returned them by mail in the self -addressed stamped envelope provided.

Protection of Human Subjects

This study was reviewed by the Human Subjects Protection Review Committee HSPRC) at the University of Southern Mississippi. A letter of introduction was presented to each potential subject explaining the purpose and method for the study, as well as, including the following information about the study: (a) completion of the questionnaire and case studies will take approximately 30 minutes over the course of the meeting; (b) no biopsychosocial risks are associated with the study; (c) no direct benefits to subjects will be gained beyond the advancement of nursing knowledge; (d) subjects can chose not to participate; (e) participation is strictly voluntary; (f) no penalty or loss would result from nonparticipation or participation from the study; (g) confidentiality,

privacy, and anonymity was assured; The procedure for maintaining anonymity included: (a) no identifying information on the survey; (b) surveys were returned in an envelope with no personal information requested on the outside; and (c) all data was shredded at the end of the study and computer disks erased.

Limitations

The following were limitations of this study:

1. The use of a convenience sample and small sample size limited generalizability of the findings.
2. The researcher- developed instruments had unreliability testing and therefore may have limited the validity of the findings.

CHAPTER 4

ANALYSIS OF DATA

The purpose of this study was to determine whether FNPs could accurately identify depression and treat it using alternative methods, as well as, pharmacotherapy. The Chapter discusses the results of this study. It addresses the two research questions regarding FNP's ability to diagnose and treat depression in the primary care setting.

Description of Sample

The study consisted of 28 adult and family health practitioners. Their ages ranged from 26 to 61 years old. They were all currently employed in a primary care setting and had a minimum of one year of work experience. There were three males in the study and the remainder of the subjects was female. All subjects had a minimal education of baccalaureate in nursing. The majority of the subjects had earned a Master's Degree in Nursing (82%) as their highest level of education. Three of the subjects (11%) had earned doctoral degrees. The majority of participants were graduates from universities throughout the south. There were participants, however, that had graduated from universities in the northeast and the Midwest. Table 1 summarizes the demographic profile of the sample. Table 2 summarizes the age and years of practice.

Findings

Subjects were asked to read five short case studies and then answer two questions for each study; 1) What is your diagnosis? 2) What is your plan of care? Each case study was designed to assess the ability of nurse practitioners to diagnose and treat varying degrees of depression with the exception of Case Study #1. This study was strictly a medical problem.

Table 1 Description of the Sample (N= 28)

Basic Nursing Education	Frequency	Percent
Associations Degree	8	31%
Baccalaureate (Nursing)	17	65%
Baccalaureate (Non-nursing)	1	4%
Highest Degree Earned		
Baccalaureate (Nursing)	1	4%
Masters (Nursing)	23	82%
Masters (Non-nursing)	1	4%
Doctorate	3	10%
Total	28	100%
NP Preparation		
Certificate	2	7%
Masters Degree	26	93%
Current Practice		
FNP	21	75%
Adult Practitioner	7	25%
Current Employment		
Clinic	19	68
Doctor's Office	8	29%
Nursing Home	1	3%

All 28 subjects (100%) were able to identify and treat the medical problem in the first case study. Most subjects were able to identify depression in the

remainder of the case studies, but none of them differentiated the degree of depression encountered. Although most subjects were able to diagnose depression, the results of the plan of care demonstrated that many did not determine adequate treatment. Table 3 summarizes the scores for subjects' performance on the diagnosis task of the five scenarios, and Table 4 summarizes their performance in treating the client described in each of the five scenarios.

Table 2 Age and Years of Practice (N=28)

Age	
Range	26-61 Years
Mean	43.6 Years
Standard Deviation	9.5
Years Since Graduation from Baccalaureate Program	
Range	5.0-37 Years
Mean	18.5 Years
Standard Deviation	7.9
Years Practicing as a NP	
Range	1.0-19
Mean	5.4
Standard Deviation	4.4

Case Study #1 described a patient with hypothyroidism. This condition is often misdiagnosed as depression. The subjects of this study appropriately treated the medical diagnosis in 100% of the cases. This supports a strong medical background that is taught in the practitioner curricula.

The treatment of moderate depression in Case Study #2 was masked within numerous medical problems. This could account for the small amount of subjects who recognized and treated this client appropriately.

Table 3 Summary of Scores for Diagnosis (N=28)

Case Study 1(Medical Diagnosis/No Depression)		
Correct Diagnosis	28	100%
Case Study 2 (Moderate Depression)		
Correct Diagnosis	26	93%
Differential Degree of Depression	0	0%
Case Study 3 (Severe Depression)		
Correct Diagnosis	26	93%
Differential Degree of Depression	0	0%
Case Study 4 (Moderate Depression)		
Correct Diagnosis	16	57%
Differential Degree of Depression	0	0%
Case Study 5 (Mild Depression)		
Correct Diagnosis	26	93%
Differential Degree of Depression	0	0%

Case Study #3 considered a case of severe depression that should have been referred to a mental health facility or emergency room immediately. Even though the depression was recognized by most of the subjects, many wanted to treat the patient with an antidepressant and have her return in a week. Occasionally the subject would make a suicide contract with the patient but failed to make the appropriate referral. Studies show that most clients are seen within a few months of committing suicide and the rates for elderly suicide are rising (Callahan et al., 1996).

The second case study of moderate depression, in Case Study #4, discussed a patient with numerous somatic complaints. According to the

literature reviewed in Chapter 2, depression often gets overlooked with patients who somaticize their illness.

Table 4 Description of Treatment of the Case Studies (N=28)

Case Study 1 (No Depression)	
Medical Diagnosis	
Range	100
Mean	100
Case Study 2 (Moderate depression)	
Medical Comorbidity	
Range	0-50
Mean	35.7
Standard Deviation	38.1
Case Study 3 (Severe depression)	
Range	0
Mean	14.6
Standard Deviation	35.5
Case Study 4 (Moderate depression)	
Somatization	
Range	0-35
Mean	16.8
Standard Deviation	22.9
Case Study 5 (Mild depression)	
Range	0
Mean	8.9
Standard Deviation	19.5
Total possible score for diagnosis and treatment (505)	
Range	108-304
Mean	188.6
Standard Deviation	53.6

Case Study #5 discussed a patient who was suffering from mild depressive symptoms. Her treatment should have included increasing her socialization and exercise. Only one person suggested this as her plan of care.

Pearson Correlations were conducted to ascertain if there was a relationship between the total diagnosis and treatment score and several other selected variables. There was only one significant correlation. The correlation between the total diagnosis and treatment score and mental health continuing education showed a sign relationship at the .01 level.

The two research questions asked in this study regarding diagnosis and treatment of depression were answered. The first question, whether nurse practitioners can diagnose depression accurately, demonstrated that most NPs can identify depression but not the degree or level of one's depression. Secondly, the question of whether NPs can develop appropriate plans of care based on their diagnosis is not clearly evident. Based on the percentages, depression was treated appropriately only 53.6% overall.

Summary

The findings of this study revealed that the sample was able to diagnose depression, but not differentiate levels of depression, and their plan of care for the five case studies was inadequate. The only variable that indicated significance regarding the subject's ability to diagnose and treat depression was participation in a current continuing education program for mental health.

CHAPTER 5

FINDINGS, CONCLUSIONS, AND SUMMARY

This study was conducted to ascertain if nurse practitioners in the primary care setting could identify and treat depression appropriately using alternative therapies, as well as, pharmacotherapy. A convenience sample of 28 family and adult nurse practitioners in Mississippi volunteered to participate in this study. A total of 90 surveys were distributed with a 29% return rate. Although this study cannot be generalized to the whole population of nurse practitioners it had some valuable findings. These findings will be discussed in this Chapter.

Depression is one of the most common illnesses that brings people to their primary care provider. It often manifests itself in physical symptoms. It is incumbent upon the provider to be able to identify depression and treat it properly. In order to treat depression appropriately, one must be able to identify the degree of the patient's depression. Nurse practitioners have teaching skills that could be invaluable in the treatment of depression without having to use pharmacotherapy as the first line treatment.

Depression can be manifested by mild, moderate, and severe/major symptoms. The healthcare provider must be able to distinguish these different levels of depression so they can properly treat each different type. A person with mild depression may not need medication but a suicidal person may need immediate referral. It is necessary for healthcare providers to identify suicide

potential since the number of suicides increase every year and especially among the older population.

Summary of Findings

The first case study examined the ability of subjects to identify and diagnose a medical condition, hypothyroidism. All of the 28 subjects were able to identify and treat this condition without difficulty. These results demonstrate that the nurse practitioners are comfortable and experienced at diagnosing medical problems. Recent studies show that nurse practitioners treat patients just as well as physicians (Mundinger, 1999).

Case Study # 2 required the subjects to identify a patient with moderate depression, as well as, numerous medical problems. Although 26 subjects (92.6%) identified depression, none of the 28 subjects diagnosed moderate depression. Out of a possible 100 points the mean score for treatment was 35.7. A study conducted by Callahan et al. (1998) indicated the difficulty in recognizing and diagnosing depression in the primary care setting. Another study conducted by de Campos (1998) found that between 50 and 60% of clients with coexisting medical conditions and depression are either misdiagnosed, or missed and left untreated by clinicians.

The third case study was perhaps the most critical. It identified a patient who had major depression with a past history of hospitalization and suicidal thoughts. The treatment for this patient should have been an immediate referral. Most NP subjects failed to see the severity of this scenario and chose to give the patient medication and have her return in a week. There were two NP subjects

that did write that they would develop a suicide contract with the patient before sending her home. This should have actually been a "no suicide contract". There is a misunderstanding about this type of contract among most nurses. Without an understanding of making contracts with suicidal patients, the nurse can put the patient at even more risk for suicide. The mean treatment score in this case study was 14.6 out of a 100 points possible.

Case study #4 again identified a patient with moderate depression who also had numerous somatic illnesses. Only 57.1 % of the subjects accurately diagnosed that the patient had depression. This is substantiated by the literature that indicates depression is often missed by patients who have numerous somatic complaints.

Case Study #5 presented a patient with mild depression. Most subjects identified the depression but most of the 26 subjects did not treat it correctly. The treatment plan mean score of 8.9 out of 100 points possible. Treatment for this patient should have included socialization but only one subject made this recommendation. All subjects wanted to prescribe this patient medication.

The research demonstrated a lack of skill in correctly diagnosing and treating depression. An interesting correlation was made of those nurse practitioners that had a recent update in a mental health subject as opposed to those who had not. This may indicate a need for practitioners to seek a review of this subject on a regular basis. Although the researcher did not have any literature that discussed this in a previous study it may be an interesting forum to pursue.

Discussion of Findings

The findings of this study imply a need for more education in the treatment and recognition of the degrees of depression. The results of the case studies indicate an educational need on the part of nurse practitioners to develop better skills at diagnosing and treating depression in the primary care setting. The practitioners who had attended continuing education in the mental health field in the last two years were better able to answer the questions presented in the case studies. This finding might pose a question regarding adequacy of mental health content in the basic curriculum of nurse practitioners' course work. One has to wonder if there is enough information in this area provided for the practitioner.

In some curricula, guest speakers are brought in to lecture on specialty issues such as diabetes, diseases of the thyroid, and diseases of the eye. Yet when it comes to psychiatric issues the instructors teach this themselves. Many have never had any formal education or even worked in this specialty area.

Some practitioners continue to be uncomfortable with psychiatric issues in primary care, while others without much education in this area, attempt to treat patients who should be referred to specialists. Their overconfidence can have traumatic effects such as death from suicide or mismanagement of medications. The ability to assess degrees or levels of depression help to determine the form of treatment that is right for individuals. The nurse practitioner who has good communication skills and is comfortable in this role can make the difference for those who suffer from depression but are waiting for someone to ask the right questions.

Communication, as implied by Peplau's theory, can have profound influence in the treatment of depression. If nurses are taught these communication skills throughout their nursing education, they can be implemental in advancing their roles in the recognition and treatment of the depressed patient. It is important for nurses in all areas to recognize the signs and symptoms of this illness. They must learn to be comfortable in their role to ask the right questions. It is incumbent upon these nurses to recognize when they are not comfort in this role and question what it is that causes their discomfort.

The implication for nursing practice is that nurses must get comfortable with asking the tough questions. They must be taught in each nursing program throughout the continuum to communicate properly. They need continuous refresher courses to fine-tune these skills. It is only through continually learning and education that nurses can insure that they keep their patients safe and meet their needs.

Conclusions

From the findings, the researcher concluded that for this sample, nurse practitioners are able to identify depression, but they are unable to differentiate levels of the same. Secondly, nurse practitioners that attended continuing education programs on the subject of mental health are better able to treat depression appropriately.

Recommendations for Further Research

The following are the recommendations of the researcher.

1. Replication of this study needs to be done using a larger more diverse group of nurse practitioners.
2. An experimental study should be considered to ascertain if a unit on mental health illnesses taught by a psychiatric expert in psychiatric nursing practice results in increased ability of nurse practitioners to diagnose and treat mental illness.
3. A similar study conducted on psychiatric nurse practitioners to compare the two groups.
4. Further investigation should be considered to examine nurse practitioner curricula for mental health issues.
5. Consideration should be made for mandating nurse practitioners to get continuing education on mental health issues.

APPENDIX A

CASE STUDIES

Case Study 1

Carol is a 41- year –old married black female that is a part time teacher. She presents at clinic complaining of feeling fatigued all of the time and having difficulty falling asleep at night for the past six months. Her medical history is essentially negative. She has not changed her diet or exercise recently but has had a significant weight gain, frequently feels depressed, and feels cold all the time. She has not had a complete exam in five years and has been well. Her last menstrual period was two weeks ago and was lighter than usual.

On physical examination she has a palpable thyroid. Her hair is thinning and is coarse. Her skin is dry and rough. She has some facial and hand edema. Her laboratory results are not significant except for a slightly elevated TSH.

1. What is your diagnosis(es)?
2. What is your plan of care?

Case study # 1 concerns a lady who has a medical problem. She should be treated for hypothyroidism and should not need treatment for any mental illness. Her treatment would be strictly medical at this point.

Case Study #2

Clara is a 55-year-old, single, white obese female who lives in a ground floor apartment with her "friend," Harry. She has no other family support and is not involved in any church or other social activities. Both Clara and Harry are on disability and do not remember when they last worked. Clara has been confined to a wheelchair for the last two years. A healthcare provider has not seen her "in a while". She weighs 450 pounds. She has no known allergies. She denies any previous medical problems and no prior surgeries. She denies alcohol or tobacco use. She comes to the clinic today because of "bites" on both legs. Both legs are discolored, tingling, and have small ulcers below the knees. She came in today "because of the pain." She complains of constant pain in her legs. She refuses to look at her legs but expresses concern that Harry is getting tired of taking care of her. She depends on Harry to take care of all of her activities of daily living. She reports that she and Harry haven't been getting along and have been arguing more lately. She fears having to go to a nursing home. She has lost interest in her hobbies and spends most of her time crying and looking out the window. Her diet consists of "anything I want to eat." There is a definite odor of perspiration but she is covered with powder. Clara refuses to be hospitalized and says all she wants is something to help her legs.

1. What is your diagnosis(es)?
2. What is your plan of care?

Case study # 2 describes a case of a client who has medical problems and a moderate depression. Symptoms of depression included: poor support system, isolation, poor self-esteem, crying most of the time, loss of pleasure, weight gain, and lack of self-care.

Plan of care: SSRI every day for 30 days, then return to clinic for reevaluation of depression. This client will require extra time in a one to one dialogue to deal with issues such as coping skills, relationship problems and self-esteem issues. Consideration should be made to refer this client to the local mental health office to address her long-term mental health issues.

Case Study # 3

Mrs. B. is an attractive, small-framed 36-year-old married white female who appears younger than her stated age. She has a 2-year –old daughter. She has a college degree but has not worked since her daughter was born. She denies previous medical hospitalizations, surgeries, or major illnesses. Mrs. B. has had two previous admissions to a mental health facility for depression. She reports episodes of asthma as a child that ceased during her teenage years. She denies excessive alcohol or drug use, but admitted smoking marijuana while in college. She does not use tobacco. She has had one miscarriage prior to giving birth to her daughter. Her menses is regular and she currently uses spermicidal gel for birth control. Both of her parents are dead. Her mother died at age 54 of an intentional drug overdose. Her father died of a heart attack at age 56.

She comes to the clinic today after having "a sudden sense of dread" come over her while at dinner last night with her husband. Today she presents as calm and relaxed. She sits with her hands in her lap. Her speech is well modulated and of normal quantity and speed. Her concentration is fair and she is cooperative. She displays a wide range of emotion. Her main concern was her fear of not coping with the demands of her daughter and feeling overwhelmed. She reports that for the last two weeks she has had progressive sleeplessness, decreased appetite, and marital conflicts. She admits to having

thoughts of wanting her "life to be over" but denies current thoughts of suicide or a plan.

1. What is your diagnosis(es)?

2. What is your plan of care?

Case study #3 identifies a client with major depression. Symptoms that should be identified by the practitioner would include family history of suicide, previous treatment for depression, lability of mood, feelings of being overwhelmed, sleeplessness, decreased appetite, marital discord, and wanting her life to be over. Diagnoses would be major depression. Plan of care would be to refer this patient to mental health agency the day of presentation.

Case Study # 4

Ms. H. is a 29-year old somewhat obese divorced white female who appears her stated age. She is casually dressed and wears a moderate amount of makeup. She has fair eye contact and smiles appropriately. Her speech is pleasant, coherent and has even quality and tone. She lives alone and does not have family except her mother, whom she does not get a long with very well. She does not have any hobbies and does very little except work because she "always seems to be sick".

She has past medical history of gastroesophageal reflux disease, hypertension, temporomandibular joint dysfunction, environmental allergies, numerous bladder infections, and an ingrown toenail. Her surgical history includes a repair of a deviated septum and removal of an ingrown toenail. She is currently on Propanolol LA 60mg BID, Prevacid 30mg daily, Claritin D 1 tablet BID, and Robitussin 2 teaspoons every 6 hours as needed. She does not smoke or use drugs or alcohol. She has a family history of hypertension, breast cancer, and diabetes. Her allergies include Augmentin, intravenous pyelogram dyes and codeine.

She has numerous visits to the clinic but it has always been with the male family nurse practitioner in the past. Her complaints are normally vague. She often suffers from respiratory problems or digestive problems. She has occasional headaches. She comes to the clinic today because she has had a sore throat and hoarseness for the past 2 weeks. She has run out of Claritin D

and would like a refill as well as a shot of Celestone. Her last injection was less than 3 months ago.

Her physical examination is unremarkable except for mild redness in her throat. She becomes teary-eyed when the discussion leads to her weight and her numerous visits to the clinic. She is very knowledgeable about her allergies and dietary habits but avoids discussing these and tries to focus on getting the Celestone injection. "The other doctors always give them to me."

1. What is your diagnosis(es)?
2. What is your plan of care?

Case study #4 identifies a client who uses numerous somatic complaints to cover her low self-esteem and depression. She is isolated with few supports, has no outside hobbies, and her medical conditions can be stress induced. Diagnosis for this client would be moderate depression. Treatment for her would include an SSRI, starting with a low dose and gradually working up to a therapeutic dose. She would need frequent visits over the next three to four weeks to monitor her for side effects. Education would include encouraging some form of exercise at least three times a week that will work as an adjunct to the medication. She will need to deal with self-esteem issues and will need to be referred to an individual therapist for cognitive therapy sessions. It will be important to discuss the possible side effects of the medication, and that it may not reach optimum efficacy for three to four weeks.

Case Study # 5

Mrs. B is a 78-year-old black widow who appears younger than her stated age. She is neatly dressed in casual clothes and walks with a cane. She has good eye contact and her speech is slow but coherent. Her husband died nine months ago, and they never had any children. She has always been active in church, but since her husband died she just has not had the energy to go very often. "I've just seemed to lost interest in things."

Past medical and surgical history are unremarkable. "I have always been healthy except for a little arthritis." She reports that all she wants to do anymore is sleep. She often takes naps in the middle of the day. She hasn't had much of an appetite lately but she "eats enough to get by." She shows a 10-pound weight loss from her last visit. She has no allergies and is currently on no medicines except an ASA "every now and then for my arthritis." She does not use alcohol or tobacco. She is at the clinic today because she thought she should come in for a check up since she is feeling so tired.

1. What is your diagnosis(es)?
2. What is your plan of care?

Case study #5 identifies a woman who may be suffering from a mild depression brought on by the loss of her spouse. Treatment for her would include encouraging her to get reconnect with her church activities. A referral could be made for her to go to a senior citizens center during the day at least three times a week to encourage socialization. She has become isolated from her support system and needs to become more involved with daily activities. She should be encouraged to exercise since this would help his mood and help her sleep better. She should return to the clinic in a month to check on the progress she has made.

APPENDIX B

DEMOGRAPHICS FORM

(1) Age:

(2) Gender:
Male _____
Female _____

(3) Basic educational preparation?
Diploma _____
Associate Degree _____
Baccalaureate Degree _____
Bachelor's Degree (non-nursing) _____
Other (please explain) _____-

(4) Years since graduated from basic nursing program?

(5) Highest degree held
Baccalaureate in nursing_____
Master's in nursing _____
Area _____
Master's (non-nursing)_____
Area_____
Doctorate (nursing) _____
Area _____
Doctorate (non-nursing) _____
Area _____

(6) What is your current area of practice?
FNP ____
ANP ____
WNP _____

(7) Nurse Practitioner preparation
Certificate _____
Master's degree _____

(8) How many years of practice as a NP? _____

(9) Current area of employment?

Hospital _____
Clinic _____
Dr.'s Office _____
Nursing home _____
Consultation _____

(10) Prior work experience as an RN: (check all that apply)

OB/Gyn _____
Med/Surg ____
E.R. ____
Psych _____
ICU _____
OR/RR _____
Peds ____

(10) Check continuing education programs attended during the past two years:

Pharmacotherapy ____
HEENT_____
Cardiovascular ____
Musculoskeletal _____
Endocrine ____
Mental health _____
Gastrointestinal ____
Neurological ____
Respiratory _____
Other_____ (please explain)

(11) What university did you attend to obtain your NP education?

APPENDIX C

Case Study Number _____

SCORE SHEET

My diagnosis would be:

A. No depression
B. Mild depression
C. Moderate depression
D. Severe depression

My treatment would include

A. No psychotropic treatment
B. An antidepressant medication
C. Immediate admission
D. Referral to mental health agency and/or emergency room
E. Alternative therapy (check all appropriate)
    1) Support groups
    2) Exercise
    3) Dietary supplements
    4) Socialization
    5) Diet
F. Counseling/psychotherapy
G. Treatment of medical diagnosis

APPENDIX D

HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE
NOTICE OF COMMITTEE ACTION

The project listed has been reviewed by the University of Southern Mississippi Human Subjects Protection Review Committee, in accordance with Federal Drug Administration regulations (21 CFR 26.111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

The risks to subjects are minimized.
The risks to subjects are reasonable in relation to the anticipated benefits.

- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: **20030201**
PROJECT TITLE: **A Descriptive Study of the Diagnosis and Treatment of Depression by Nurse Practitioners**
PROPOSED PROJECT DATES: **2/24/00 to 5/12/00**
PROJECT TYPE: **Dissertation or Thesis**
PRINCIPAL INVESTIGATOR(S): **Polly T. Vick**
COLLEGE / DIVISION: **College of Nursing**
DEPARTMENT: **Nursing**
FUNDING AGENCY / SPONSOR: **n/a**
HSPRC COMMITTEE ACTION: **Exempt - Approved**
PERIOD OF APPROVAL: 3-3-00 to 3-2-01

Mitchell E. Berman, Ph.D.
HSPRC Co-Chair
The University of Southern Mississippi

3/3/2000
Date

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