

ELECTROCONVULSIVE THERAPY: NURSES'
KNOWLEDGE AND ATTITUDES

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Knowledge and Attitudes

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DEDICATION

This thesis is dedicated to my mother and father, and with love and affection to my children, Shelby and Scott.

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ABSTRACT

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This study examined psychiatric nurses' knowledge of electroconvulsive therapy (ECT) and their attitudes toward ECT. Festinger's (1957) theory of cognitive dissonance provided the study framework. The hypothesis stated that there is a positive correlation between psychiatric nurses' knowledge of ECT and their attitudes toward ECT.

The instrument used in the study to measure knowledge of ECT was developed by Janicak et al. (1985). Attitude was measured using an overall rating scale of 1-10. The sample consisted of 111 nurses selected at random from a list of psychiatric nurses obtained from the State Board of Nurse Examiners in a large southwestern state. The study hypothesis was tested and statistical results supported the hypothesis ($\underline{r} = .50, \underline{p} < .001$).

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CHAPTER I

INTRODUCTION

Electroconvulsive therapy (ECT) was first introduced in 1938 by Cerletti and Bini (cited in Malitz & Sackeim, 1986). Over the course of the past 50 years ECT, without a doubt, has been one of the most controversial issues in the treatment of mental illness (Vissenga & Whitfield, 1983). Negative press over the years, and dramatic representation in movies such as "One Flew Over the Cuckoo's Nest," adapted from Ken Kesey's (1963) book of the same name, have given the general public, and perhaps even some mental health professionals, a negative attitude toward ECT. Cochran (1984) noted that The American Psychiatric Association's 1978 Task Force Report on electroconvulsive therapy found that 32% of psychiatrists either disapproved of or had never prescribed ECT.

Beginning in the 1930s, ECT has been used as a treatment modality for specific mental health disorders, particularly for psychotic depression (Cochran, 1984). However, with the introduction of psychotropic medications in the 1950s, the use of ECT declined. This decline continued through the 1960s and 1970s. However, as the use

of psychotropic drugs increased, more knowledge was gained concerning the limitations and long-term side effects of these drugs. Thus, ECT is once again being considered as a viable treatment option (Taylor, 1982). With this in mind, it is important for nurses to have a thorough knowledge of electroconvulsive therapy.

Problem of Study

The problem of this study was: Is there a correlation between psychiatric nurses' knowledge of ECT and their attitudes toward ECT?

Justification of Problem

When ECT was first introduced, it was considered the treatment of choice for patients suffering from schizophrenia. Clinical observation soon showed that it was more effective in the treatment of endogenous depression and affective disorders (Hamilton, 1986). In this ever-stressful world, the onset of depression and its debilitating implications is staggering. It has been suggested that as many as 15% of adults have some depressive symptoms at any given time (Rush, 1983). Rush noted that the most frightening aspect of depression is that more than 30,000 suicides are reported in the United States each year. He also stated that the real number may

be much higher, indicating that suicide attempts may number in the hundreds of thousands.

Taylor (1982) reported that ECT is the most effective treatment for endogenous depression and is probably safer than psychotropic medications. He also reported that ECT is the only treatment that dramatically reduces the suicide rate of depressives. He further suggested that ECT is the treatment of choice for severely ill depressives, depressives who are pregnant, those who are elderly, and those with metabolic complications that preclude the safe use of anti-depressants.

As the high cost of health care continues to rise, all aspects of treatment must be scrutinized. Although anti-depressants are effective in the treatment of depression, they take time before their therapeutic value is set. ECT works faster and, therefore, the patient's length of stay may be shorter (Fine & Jenike, 1985).

It becomes apparent that nurses should be aware of the significant clinical application of ECT. Nurses should have a clear knowledge and understanding of its usage. With an increased knowledge and better insight into ECT, nurses will be in a greater position to deliver quality care to their patients and the patients' families.

Theoretical Framework

The framework for this study was based on Festinger's (1957) theory of cognitive dissonance. Festinger stated that humans strive for consistency within their lives. It remains overwhelmingly true that related opinions or attitudes are consistent with one another. When inconsistencies are found to exist, they may be rather dramatic and stand out in sharp contrast against a background of consistency.

Assuming that consistency is desirable, why do people continue to smoke knowing that this practice is a threat to their health? Generally speaking, a person attempts to rationalize behavior in an effort to minimize the inconsistency between knowledge and behavior. Festinger noted that the person who smokes might rationalize his or her behavior in the following ways.

1. I enjoy smoking, and the possible consequences are worth it.

2. The chances of me suffering health problems are not as serious as some would make it out to be.

3. It is not possible for me to avoid every dangerous situation in life.

4. If I quit smoking I will gain weight, which is equally bad for my health.

There are times, however, when these rationalizations are not easily formulated. In such situations, these inconsistencies cause psychological discomfort.

Festinger developed a theoretical framework to help understand behavior. To enhance the development of abstract thought, he first substituted the word "dissonance" for the term inconsistency. In addition, he replaced the word "consistency" with the term consonance.

Festinger expressed the relationship between these concepts in the following propositions:

1. The existence of dissonance, being psychologically uncomfortable, will motivate the person to try to reduce the dissonance and achieve consonance.
2. When dissonance is present, in addition to trying to reduce it, the person will actively avoid situations and information which would likely increase the dissonance. (p. 3)

Cognitive dissonance proposes that dissonance, that is the existence of conflicting cognition, is a motivating factor in its own right. The term cognition is interpreted as having knowledge, opinion, or belief about the environment, about oneself, or about one's behavior. Cognitive dissonance can be viewed as an antecedent condition which leads to an activity oriented toward dissonance reduction, just as hunger leads to activity oriented toward hunger reduction (Festinger, 1957).

The significant point to remember is that there is pressure to produce consonant relations among cognitions and to avoid and reduce dissonance. Therefore, it seems that the more knowledge nurses have about the beneficial effects of ECT, the more positive will be their attitudes toward ECT.

Assumptions

The following assumptions were applicable to this study:

1. Depression is a major health problem in the United States.
2. Electroconvulsive therapy is utilized as an appropriate treatment option for specific mental illnesses.

Hypothesis

This study tested the following hypothesis: There is a positive correlation between psychiatric nurses' knowledge of ECT and their attitudes toward ECT.

Definition of Terms

The following terms are specifically defined:

1. Electroconvulsive therapy (ECT)--a form of somatic therapy in which an electrical current is used to produce convulsions (Miller & Keane, 1987).

2. Knowledge--understanding gained by actual experience, range of information, clear perception of truth, something learned and kept in mind (Merriam-Webster, 1974). In this study knowledge of ECT was measured by the scores on the knowledge section of Janicak, Mask, Trimakas, and Gibbons' (1985) ECT Knowledge and Attitude Questionnaire. The higher the score, the higher is the knowledge level.

2. Attitude--a mental position or feeling with regard to an object (Merriam-Webster, 1974). In this study, attitude toward ECT was measured by the scores on a scale developed by the researcher. The range of scores is 1-10, with 1 being the most unfavorable and 10 being the most favorable.

3. Psychiatric nurses--individuals, male or female, who were registered nurses in a large southwestern state at the time of the study and who classified themselves as psychiatric nurses when renewing their license.

Limitations

The following limitations may have influenced the findings of this study:

1. The study was conducted in one geographical area.
2. Data were gathered through self-report questionnaires.

3. The subjects may have been affected by one or more of the following:

- (a) educational or clinical preparation concerning ECT.
- (b) previous personal experiences with ECT.
- (c) attitudes of other health professionals toward ECT.

Summary

This chapter has discussed the clinical significance of ECT. Research has shown that ECT is a viable treatment option in the treatment of individuals with endogenous depression, depressives who are pregnant, depressives with metabolic disturbances which would preclude the safe use of anti-depressive medication, and depressives who are elderly.

It is, therefore, clinically important for nurses to have a thorough knowledge of ECT in order for them better to care for their patients receiving such treatment. Nurses need to have knowledge of ECT if they are to provide quality care for patients receiving ECT and support for their families. The problem of this study was to determine if there is a correlation between psychiatric nurses' knowledge of ECT and their attitudes toward ECT.

CHAPTER II

REVIEW OF THE LITERATURE

The literature review examines five areas pertinent to electroconvulsive therapy (ECT). The areas to be reviewed are: (a) historical perspective, (b) research on ECT, (c) general attitudes toward ECT, (d) nurses' attitudes toward ECT, and (e) nurses' roles in ECT. The overall purpose of this chapter is to provide the reader with recent information and data that are depicted in the literature as it pertains to the administration of ECT.

Historical Perspective

The present day use of ECT is almost exclusively limited to the treatment of affective disorders (Fraser, 1982). However, the use of convulsive therapy has been recorded for many years. It has been reported that Seribonius Largus in 46 A.D. used the discharge of torpedo fish to cure headaches and gout (Fraser, 1982). The Ethiopians, during the 16th century, were applying electrical catfish to mentally ill patients to "expel devils out of the human body" (Fraser, 1982, p. 1). Fraser also reported that Michael Schuppach gave a crude course of ECT to a Swiss farmer's wife, who was diagnosed as being

possessed by eight devils. By holding a wire attached to an electric machine the farmer's wife was given shocks on 7 consecutive days. It was reported by the doctor that the eighth devil was "Beelzebub himself," and he gave a shock so severe that the patient fainted and fell to the floor. The doctor reported that this resulted in a complete cure. Desbois de Rochefort, in 1779, recommended electricity for various nervous complaints and described its usefulness in a patient with grief reaction (cited in Fraser, 1982). Fraser went on to say that the first patient to have "shock treatment," as it is now understood, was a melancholic London porter who had been ill for approximately 1 year. The porter was under the care of John Birch, a surgeon at St. Thomas Hospital. John Birch, in 1792, wrote that, "six small shocks were passed through the brain in different directions on each of three consecutive days" (cited in Fraser, 1982, p. 1). Dr. Birch reported the patient regained his spirits, returned to work, and remained perfectly well for 7 years.

Fink (1979) credited Laszlo Meduna, a Hungarian psychiatrist, with developing modern convulsive therapy in 1934. Popular thinking of the time was that the schizophrenic process had a curative effect in epilepsy. This led to the unsuccessful attempts to transfuse the

blood of schizophrenic patients to treat patients with epilepsy.

Fink went on to say that Meduna hoped to achieve the reverse. He hoped to use the epileptic process to treat schizophrenia. Meduna's thinking was reinforced in part by reports that among more than 6,000 patients with schizophrenia, approximately only 20 had a history of epileptic seizures. Meduna desired to find a convulsive drug that would be safe to use in humans which would produce epileptic attacks. In 1936, Meduna wrote, "the effect of the epileptic convulsions is that they change the chemical constituents in the organism in a way suitable for the cure of schizophrenia" (cited in Fink, 1979, p. 9). Meduna's efforts in 1934 included the induction of seizures with camphor. The use of camphor caused difficulties which led to the use of pentylenetrazol (Metrazol, Cardiozol) by 1936 (Fink, 1979).

The experimentation with different methods to produce seizures led to the introduction of electrical currents to induce seizures. Because Metrazol often induced painful and frightening experiences, Ugo Cerletti used electrical methods to induce experimental seizures in animals (Fink, 1979). As a result, Cerletti replaced Metrazol with electrical inductions.

Fraser (1982) reported that the first machine used to treat patients was designed by Lucino Bini. In 1938 Bini and Cerletti induced a grand mal seizure on the second application of current to a vagrant who had schizophrenia. It was reported that the vagrant recovered after a series of these treatments over a 2-month period, and was discharged free of his symptoms.

It was not long ago that ECT was being administered without anesthetic, sedation, or any form of relaxant. Fraser (1982) reported that frequently male nurses were assigned to ECT clinics to utilize their esteemed bulk. These nurses were especially trained in the correct holds to protect the patients from harm after a seizure was induced. Packman (1984) reported that as many as three or four staff members were required to hold the patient and apply firm pressure on all joints, because of the strength of the convulsions.

Because of the discomfort of ECT, modification in the procedure was needed. Over the past 20 years the use of ultra-brief barbiturate anesthesia has come into gradual use. During this time the refinement of anesthesia and the introduction of short-acting muscle relaxants have almost negated the use of ECT without anesthesia or sedation (Fraser, 1982).

Research Concerning ECT

Siris, Glassman, and Stetner (1982) organized a review of ECT into three parts: (a) ECT vs. drugs in depression, (b) ECT combined with drugs in depression, and (c) ECT and/or drugs in schizophrenia. Despite impressive evidence documenting the efficacy of ECT, the advent of other depressants and neuroleptics resulted in a sharp decline by the mid-1950s, in the use of ECT (Fink, 1978; Turek & Hanlon, 1977; Weiner, 1979).

ECT vs. Drugs in Depression

Siris et al. (1982) noted that studies comparing ECT and drug treatments started to appear in the early 1960s. Greenblatt, Grosser, and Wechsler (1962, 1964) performed studies which involved 215 patients. The study compared: (a) an 8-week treatment of either imipramine 200-250 mg/day, phenelzine 60-75 mg/day, or isocarboxazid 40-50 mg/day, (b) nine ECT treatments given over 3 weeks, and (c) an 8-week placebo trial. The result was that 76% of the ECT-treated patients were markedly improved after 8 weeks compared with 53% treated with imipramine, 50% of those treated with phenelzine, 44% of those treated with the placebo trial, and 28% of those treated with isocarboxazid. A later study by Greenblatt, Grosser, and Wechsler (1977) included the use of amitriptyline. It was observed that

ECT led to the most marked improvements in the most severely ill patients. Hutchinson and Smedberg (1963) also found ECT treatment significantly more beneficial than other treatments in 200 depressed female inpatients.

In a retrospective study, Bratfos and Haug (1965) reviewed the records of 315 manic depressives who had been hospitalized during their depressed phases of illness, during two prolonged periods. One period was before antidepressants were available in 1952-57 and the second period was after antidepressants were available in 1958-1963. The response rates to ECT was similar during both periods. The patients receiving ECT had a 61% recovery rate after 5-11 treatments, as compared with only 31% for those responding to drugs. Bratfos and Haug also noted, however, that their studies revealed a 34% relapse rate for those patients treated with drugs and a 38% relapse for those treated with ECT.

Angst, Varga, and Shepherd (1967) reviewed 632 cases of endogenous depression after 4 weeks of treatment. They found that 31% of patients receiving ECT were free of depressive symptoms, which was significantly more than the group treated with imipramine. In another retrospective study Alexander, Berkeley, and Cohen (1972), studied 735 patients. They found that ECT resulted in a 58% recovery

rate, which was significantly superior to tricyclic antidepressants (29%), or monoamine oxidase inhibitors (28%). Ravn (1966), however, found results different from those of the other studies. In a retrospective study, Ravn did not find a meaningful difference among 150 endogenously depressed women treated with tricyclic antidepressants, monoamine oxidase inhibitors, or ECT. Siris et al. (1982) reviewed 19 comparison studies and with some caution concluded that "ECT is at least of equal efficacy as tricyclic antidepressants and, in fact, ECT may be more efficacious than tricyclic antidepressants" (pp. 97-98).

ECT Combined with Drugs

Siris et al. (1982) reported that there is a smaller number of studies which examine the question of whether there are any advantages to be gained by combining ECT with drugs. Fink (1978) suggested that there are few studies in this area because once the decision has been made to use ECT for treating depressed patients, the response rate is so high that it would be difficult to demonstrate some other form of treatment to be superior. Siris et al. (1982) reported that most of the studies found no statistical advantage of the combination of medication and ECT. However, there is one finding for which all studies agreed. The continuation of treatment with antidepressant

medication after initial response to ECT lowers the relapse rate.

ECT and/or Drugs in Schizophrenia

Siris et al. (1982) reported that the overall efficacy of ECT in schizophrenia has been comprehensively reviewed. ECT is most beneficial for those schizophrenics who have had recent and sudden onset of psychosis or for those suffering from affective symptoms, such as mood disorders, thoughts of suicide, or feelings of hopelessness or guilt. These conclusions were noted in findings by Erwin and Thompson (1978), Fink (1978), and Weiner (1979). The question is raised, however, by Erwin and Thompson (1978) as to whether ECT may only be benefiting those patients with the affective components of their illness.

General Attitudes toward ECT

Salzman (1977) found that many physicians regard ECT as a standard psychiatric clinical treatment, while on the other hand patients' rights advocates call for its abolition. Kerr, McGrath, O'Kearney, and Price (1982) examined misconceptions and attitudes relating to ECT. They had 178 participants in their study. The sample consisted of three approximately equal sized groups:

(a) a group of psychiatric patients who had received ECT,

(b) a group of visitors to ECT-treated psychiatric patients, and (c) a group of visitors to non ECT-treated psychiatric patients. Kerr et al. concluded that misconceptions about ECT were common and noted that most of the respondents' information or knowledge of ECT came from film and/or television. Kerr et al. concluded that it would be advantageous for those patients receiving ECT if they were given some educational preparation describing the treatment and dealing with common misconceptions.

Freeman and Kendell (1986) found in their study some subtle differences among men and women who received ECT. The study found that women (20%) thought that ECT was more frightening than men (8%). Freeman and Kendell also stated that the amount of previous experience with ECT among patients did not appear to alter their attitudes, nor did their attitudes either mellow or harden with time. From their study Freeman and Kendell also concluded that patients wish to be told more about their treatment.

Fink (1978) reported that ECT has undergone many modifications and that it is significantly different from that which was introduced more than 50 years ago. However, he noted that misconceptions about the process, its efficacy and safety, and its mode of action persist.

Kalayam and Steinhart (1981) also noted in their review of

the literature that there were few studies concerning the attitudes of professionals, patients, or the public on the use of ECT. Kalayam and Steinhart also discovered that psychiatrists and psychologists were at opposite ends of the spectrum in their opinions about ECT, with psychiatrists being the most in agreement with ECT as a treatment modality. Psychologists, in fact, were found to be significantly more fearful of ECT than the general public. Kalayam and Steinhart went on to report that psychiatric nurses in their study affirmed the use of ECT and agreed that ECT was no different from minor surgical procedures. The authors went on to conclude that since ECT is a valuable treatment modality, educational approaches might be helpful in further reducing fear and misconceptions about its use.

Nurses' Attitudes toward ECT

Procedurally, ECT administration has improved dramatically; however, its clinical efficacy remains in question even within the nursing profession. Much of the nursing literature from Great Britain discusses a nurse's right of refusal to participate in ECT. Vousden (1985) discussed the dismissal of a psychiatric nurse who refused to participate in ECT on a physically frail and weak elderly patient. The nurse contended that the

administration of ECT would certainly place the patient's safety at risk. The nurse's case was not upheld, and he subsequently was dismissed from his duties. Brennan et al. (1983) reported that nurses do not have to participate in the actual administration of ECT. Brennan et al. believed that the nurses' duties were to care for the patients receiving ECT before and after the treatment.

In this country, the administration of ECT is a controversial issue among nurses as well. Cochran (1984) noted that arguments against ECT were emotional and based on misunderstanding. She stated, "as well informed nurses we can help dispel misinformation and bring the facts about ECT to the attention of the public, physicians, and patients" (p. 1005).

Janicak et al. (1985) included nurses in their study of mental health professionals' knowledge and attitude of ECT and discovered that nurses with less than 3 years experience had a mean score of 33.38 on their knowledge questionnaire. Those nurses with more than 3 years of experience had a mean score of 36.69. The total possible score was 48 on their questionnaire. In assessing the nurses' attitudes, Janicak et al. went on to report that the nurses were asked to respond with "yes" or "no" to the question, "if moderately depressed would you agree to ECT?"

No data were reported in this article on those who chose ECT if moderately depressed. Evidently the number was quite small. When the respondents were asked if they would consent to ECT "if very depressed," 17% of the nurses who had less than 3 years of clinical experience responded with "yes." Among the nurses with more than 3 years of clinical experience, 14.3% responded with "yes." When the nurses were asked if they would consent to ECT if they were "extremely depressed," 66.3% of the nurses with less than 3 years experience responded with "yes" and 69% of those nurses with more than 3 years experience responded with "yes." Janicak et al. attempted further to clarify attitude by asking a second series of questions. Respondents were asked to indicate if they would choose ECT over medication or psychotherapy as a treatment option. They were given the scenario of being "moderately depressed," "very depressed," or "extremely depressed." Again no data were presented in the article on the number of subjects who chose ECT if "moderately depressed." Janicak et al. reported that among nurses with less than 3 years of experience 27.3% selected ECT as their first choice of treatment if "very depressed." Among the nurses with more than 3 years of experience, 25.1% of this group selected ECT as their first choice of treatment if "very

depressed." In response to choice of treatment options if the respondents were "extremely depressed," 4.5% of the nurses among those with less than 3 years of experience chose ECT as their first choice of treatment. Among the nurses with more than 3 years of experience, 8.6% chose ECT first if "extremely depressed." Janicak et al. also reported that the trend was to choose ECT if the respondent had more clinical experience. They noted that attitudes toward ECT were positively related to levels of knowledge about ECT. Those respondents who reported they would allow themselves to undergo ECT if "very depressed" had a significantly higher mean knowledge score than those who would not allow themselves to undergo ECT ($t = 5.25$, $p < .001$). Additionally, Janicak et al. noted there was a statistically significant trend toward an increase in knowledge scores with increasing clinical experience.

Nurses' Roles in ECT

Talbot (1986) noted that there was a great deal of anxiety among patients receiving ECT. Talbot contended that nurses can play an important part in reducing this anxiety. By utilizing the nursing process, the nurse can identify the patient's anxiety and through the nurse's interventions this anxiety can be reduced. By implementing pretreatment programs to dispel myths and increase patient

knowledge as well as that of family members, the nurse can meet the patient's identified needs. Fine and Jenike (1985) asserted that the role of the nurse was crucial to a successful outcome for the patient receiving ECT, and for his family. Stuart and Sundeen (1987) noted that nursing intervention for the patient receiving ECT begins as soon as the patient and family are aware of the treatment decision. These authors indicated that the nurse must assess for the opportunity to communicate with the patient and family. They contended that learning would be hampered if the anxiety level was overwhelming. Stuart and Sundeen go on to say that much of the nursing procedure related to ECT is similar to that which takes place when a patient is going to undergo surgery.

A nurse may find himself or herself in any number of roles concerning the administration of ECT. The American Psychiatric Association (APA) Task Force on ECT (1990) has published in their report roles specific to the nurse.

The ECT treatment team consists of at least a treating psychiatrist, an anesthetist, and a recovery nurse. In addition, the use of an ECT treatment nurse or assistant is strongly encouraged. The APA Task Force (1990) suggests that a nurse could be in any of the following positions with the following responsibilities:

1. Anesthetist (CRNA), who should be responsible for the maintenance of an airway and oxygenation, delivery of anesthesia, relaxant, and adjunctive agents. The anesthetist should have current certification in Advanced Cardiac Life Support (ACLS) and should be capable of managing foreseeable medical emergencies.

2. Treatment Nurse: this individual should be responsible for selected tasks delegated by the treating psychiatrist and/or anesthetist. Such tasks may include education of patients and their families. Assisting with the informed consent proceedings, application of stimulus and monitoring electrodes, placement of bite-block, monitoring of vital signs, and documentation of treatment.

3. Recovery Nurse: this individual would be responsible for monitoring vital signs and mental status during the acute post-ictal/post-anesthetic period, maintaining IV, administering oxygen per mask, suctioning, assessing for further medical intervention if needed.

4. Staff Nurse: this individual is responsible for preventing the patient from ingesting anything except necessary medication 6 hours prior to treatment, completing a standardized checklist, obtaining vital signs, and documentation.

Additionally, the task force recommended that nursing schools are encouraged to provide formal didactic instruction on ECT, and are encouraged to incorporate observation of ECT into their psychiatric nursing training experience, either directly or via videotaped material.

As has been previously stated, the administration of ECT treatment without medication no longer exists. The American Psychological Association unequivocally states that ECT should be given under general anesthesia with the use of a muscle relaxant (Stuart & Sundeen, 1987).

According to Stuart and Sundeen (1987) and the APA Task Force (1990), prior to ECT the following sequence of medications is commonly utilized:

(a) Anticholinergics: such as atropine and glycopyrrolate. These are given by most practitioners to minimize the risk of vagally-mediated bradycardia or asystole. It is frequently given subcutaneously or intramuscularly 30 minutes prior to treatment, but it is most effective if given intravenously with the other pre-treatment medication.

(b) Anesthetic: ECT should be carried out utilizing ultra-brief, light general anesthesia. Typically, a short acting barbiturate such as methohexital (Brevital) is used at a dose of 0.75-1.0 mg/kg given in a single IV bolus.

(c) Relaxant: A skeletal muscle relaxant is used to minimize convulsive motor activity and to improve airway management. Succinylcholine chloride (Anectine) at a dose generally 0.5-1.0 mg/kg is administered as a single intravenous bolus or by drip (APA Task Force, 1990; Stuart & Sundeen, 1987).

The following is a depiction of the administration of an electroconvulsive treatment, presented by Stuart and Sundeen (1987). Typically, the patient lies supine on a bed or cot with 100% oxygen being administered for 1 to 2 minutes. An infusion is started and the medication administered. When paralysis occurs the treatment is given. Electrodes are placed on the temple or on the nondominant side, if unilateral ECT is being considered. Unilateral ECT involving the right hemisphere is associated with significantly less verbal memory impairment than bilateral ECT (APA Task Force, 1990). Stuart and Sundeen (1987) go on to say that a mouth gag or bite block is inserted between the teeth and the jaw is supported. There is no need to restrain the limbs. At this point the treatment is administered and the fingers and toes are observed for rhythmic twitching, which is the only visible evidence that a grand mal convulsion has occurred. According to Stuart and Sundeen, some authorities have

indicated the use of a tourniquet or blood pressure cuff to isolate one extremity before the administration of the muscle relaxant. This extremity can be observed for unmodified seizure activity when ECT is given. When the seizure activity has stopped, oxygen is given via bag-breathing technique until spontaneous respirations resume.

Immediately following the treatment, close nursing observation in the recovery area is required. While unconscious the patient will require attentive nursing care, such as maintenance of the patient's airway, suctioning if required, positioning on the side to prevent aspiration of any secretions, and the monitoring of the patient's vital signs until the patient is fully awake. The patient will generally respond after 10 to 15 minutes. The nurse should be sure to reorient the patient to person, place, and time. The nurse should be sensitive to the patient's potential fearful states of confusion following the electroconvulsive procedure.

Summary

The purpose of this chapter was to provide the reader with an overview of the literature as it pertains to (a) historical perspective, (b) research in ECT, (c) general attitudes toward ECT, (d) nurses' attitudes toward ECT, and (e) the nurses' roles regarding ECT. The issue of ECT and

its efficacy remains controversial among professionals and lay people. The literature reviewed indicates that somatic therapies, particularly ECT, have been around for a number of years. Research indicates that ECT is a viable treatment modality for specific psychiatric disorders and the nurse's role is extremely important for a successful outcome. The research also suggests that attitudes toward ECT are positively related to levels of knowledge regarding ECT.

CHAPTER III

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

The problem under examination in the study was to determine the relationship between psychiatric nurses' knowledge of ECT and their attitudes towards this treatment modality. The study was classified as descriptive, correlational research. Descriptive studies are those that have as their main objective the accurate portrayal of the characteristics of persons, situations, or groups and the frequency with which certain phenomena occur (Polit & Hungler, 1987). Correlational studies examine the strength of relationships between variables (Nieswiadomy, 1987).

The independent variable, knowledge, was measured by Janicak et al.'s (1985) ECT Knowledge Scale and ECT Knowledge Evaluation Scale. The dependent variable, attitude, was measured by the researcher's attitude scale.

Setting

The setting for the study was a large southwestern state. Completion of the mailed questionnaires was done in a setting chosen by each participating psychiatric nurse.

Population and Sample

The accessible population for this study included all psychiatric nurses in a large southwestern state. A list was purchased from the Board of Nurse Examiners for the state.

Systematic random sampling, which involves a form of random selection in choosing the sample (Polit & Hungler, 1987), was used in the study. The sample included 300 psychiatric nurses chosen from the sampling frame. It was anticipated a return of at least 20% or 60 of the questionnaires would be returned. A second mailing was planned in the event that less than 20% of the questionnaires were returned.

Protection of Human Subjects

This study was classified as a Category I study (Appendix A) because data were gathered through the use of anonymous questionnaires. Therefore, the study was exempt from review by the Human Subjects Review Committee of Texas Woman's University. Permission was obtained from the graduate school (Appendix B) prior to data collection.

Each potential nurse participant received a packet, which included a cover letter (Appendix C). The packet also included a demographic questionnaire (Appendix D) generated by the researcher and a questionnaire

collection regarding knowledge of and attitude toward ECT (Appendix E).

Subjects were informed of how they were selected and advised as to what was required of them. They were informed of the approximate time needed to complete the questionnaires and were advised of any potential risks. Each nurse was assured of anonymity. They were asked to refrain from placing their names on the questionnaires. Each questionnaire contained the following statement: RETURN OF THIS QUESTIONNAIRE WILL BE CONSIDERED TO BE YOUR CONSENT TO BE A RESEARCH SUBJECT IN THIS STUDY. If participants in the study desired a copy of the results, they were informed that the study results could be obtained from the researcher or, upon completion of the study, in the libraries of Texas Woman's University. If the participants had any questions, they were advised that they could contact the researcher at anytime.

Instruments

The instruments utilized in this study were a demographic questionnaire (Appendix D) generated by the researcher to measure subject characteristics and attitudes toward ECT, and an instrument created by Janicak et al. (1985) to measure knowledge of ECT (Appendix E).

Permission, both verbal and written, to use the Janicak et al. instrument was obtained (Appendix F). There are no available reliability or validity data regarding this questionnaire; however, it has been used by Janicak et al. and results have been published in their 1985 study of ECT. The tool has also been requested to be used in at least two other studies (Janicak, personal communication, March 1990).

The knowledge section of the ECT Knowledge and Attitude Questionnaire consisted of 12 statements on ECT. The respondents were instructed to indicate 1 of 5 reaction levels to each statement: strongly agree, agree, undecided, disagree, or strongly disagree. Eight statements are factually correct, therefore requiring a strongly agree answer, and four are incorrect, requiring a strongly disagree answer (Janicak et al., 1985).

Each of the totally incorrect responses was given a score of 0; each of the totally correct responses was given a score of 4, with the scores of 1, 2, and 3 falling on a continuum between the two extremes. A total knowledge score was the sum of the 12 scores. A maximum score of 48 and a minimum score of 0 was possible on the knowledge questions (Janicak et al., 1985).

Attitudes toward ECT were measured by the response to four questions requiring a yes or no choice of receiving ECT for varying degrees of depression. Additionally, attitudes were measured by placing the respondents in a hypothetical situation; they were asked to indicate their preference of treatment choice among psychotherapy, ECT, or medications.

After reviewing the attitude portions of Janicak et al.'s questionnaire it was thought that the format might be confusing to the participants. To help alleviate any possible confusion, and in the effort to ensure being able to test the hypothesis, the researcher included the following question on the demographic questionnaire, "On a scale of 1 to 10, circle your overall attitude toward ECT."

Data Collection

Following receipt of permission from the graduate school at Texas Woman's University, each participant was selected through a random sampling of the population. The packets were mailed to the nurses' homes. The packets included a cover letter and the questionnaires required to obtain the desired data. The cover letter included a deadline for completion. A preaddressed, stamped envelope was also included in the packet.

Treatment of Data

Descriptive statistics were used to describe the sample. The hypothesis was tested utilizing the Pearson product moment correlation coefficient. The level of significance was set at .05.

CHAPTER IV

ANALYSIS OF DATA

This descriptive, correlational study was designed to determine if there was a relationship between nurses' knowledge of ECT and their attitudes toward ECT. The independent variable was the level of knowledge, as measured by Janicak et al.'s (1985) ECT Knowledge and Attitude Questionnaire. The dependent variable was attitude toward ECT, as measured on a scale of 1-10. In addition, data on selected demographic variables were collected and were used to describe the sample. An analysis of the data collected from the subjects, who were from a large southwestern state, is presented in this chapter.

Description of the Sample

Questionnaires were mailed to 300 nurses in a large southwestern state. A total of 137 subjects (45%) completed all or a portion of the self-report questionnaire. Another five subjects returned the questionnaires and indicated they did not wish to participate in the study. Subjects in the study were obtained by a systematic random sampling method. The

sampling frame consisted of the names and addresses of psychiatric nurses, which was purchased from the State Board of Nurse Examiners. From this list, 300 names were selected through a systematic random sampling process. A second mailing was not required because the response rate was higher than the minimum set for the study (60 subjects or 20%).

All 137 subjects are included in the descriptive analysis of the demographic variables. One subject did not answer the attitude question. Thus, data on attitudes toward ECT are presented on 136 subjects. Additionally, 26 subjects completed only a portion of the knowledge questions. Therefore, knowledge of ECT is presented for 111 subjects. Data from these 111 subjects were used to test the study hypothesis.

Of the 137 participants, 43 (31.4%) had greater than 10 years of psychiatric experience. Another 28 (20.4%) of the subjects had from 7-10 years experience. Table 1 depicts the years of psychiatric clinical experience reported by the participants. In addition, Table 1 depicts the highest level of education among participants. The largest number of subjects was baccalaureate-prepared nurses (48 or 35%). Table 1 also depicts the number of participants who were employed in psychiatric nursing. At

the time of the study, 117 (85.4%) of the respondents indicated that they were presently employed in psychiatric nursing.

Table 1

Demographic Data on Participants

	Frequency	Percent
<u>Years</u>		
< 1 yr.	4	2.9
1-3 yrs.	21	15.3
4-6 yrs.	41	29.9
7-10 yrs.	28	20.4
> 10 yrs.	43	31.4
Total	137	100.0
<u>Highest Level of Education</u>		
Diploma	31	22.6
Associate degree	43	31.4
Baccalaureate	48	35.0
Master's	13	9.5
Others	2	1.5
Total	137	100.0
<u>Employment Status in Psychiatric Nursing</u>		
Presently employed	117	85.4
Not presently employed	20	14.6
Total	137	100.0

In response to the question, "Have you ever witnessed ECT," 111 (89.1%) responded "yes." Among the participants, 44 (32.1%) reported having witnessed ECT prior to the usage of anesthesia and muscle relaxants. Additionally, 66

(48.2%) reported that ECT was performed at their place of employment.

Nurses who indicated they were presently employed in psychiatric nursing ($n = 95$) had a mean knowledge score of 30.2. Among those nurses not employed in psychiatric nursing ($n = 16$) their mean knowledge score was 28.0.

In response to the question, "How would you characterize your knowledge of ECT," 55 (43%) reported that their knowledge of ECT was minimally adequate, inadequate, or severely deficient. Table 2 depicts the participants' perceptions of their knowledge regarding ECT.

Table 2

Participants' Report of their Knowledge of ECT

Knowledge	Frequency	Percent
Quite adequate	24	18.8
Adequate	49	38.3
Minimally adequate	45	35.2
Inadequate	9	7.0
Severely deficient	<u>1</u>	<u>.8</u>
Total	128	100.0

Respondents were asked how they obtained their knowledge regarding ECT. Sixty-seven (51.9%) reported that they learned about ECT through lectures, 106 (82.2%) reported learning about ECT through observation, 82 (63.6%) reported learning about ECT through reading, while 48 (37.2%) reported learning about ECT through "other" methods. The other methods included: "discussed it with doctors" and "discussed it with other nurses."

Findings

To assess the participants' knowledge of ECT and to obtain an individual's score, Janicak et al.'s (1985) ECT Knowledge and Attitude Questionnaire was used. Table 3 depicts the questions asked and the participants' responses. Each question was to be answered using the same format of: SA = strongly agree, A = agree, U = undecided, D = disagree, and SD = strongly disagree. Eight of the questions required an SA (strongly agree) response for the most correct response, while four of the questions required an SD (strongly disagree) response as the most appropriate choice. Each correct response was worth 4 points. Other responses received a 3, 2, 1, or 0, in descending order of correctness. A score of 48 was possible if all answers were correct. For reasons unknown to the researcher, 26 (18.9%) of the respondents did not complete the second page

Table 3

Participants' Answers to ECT Knowledge Questions

Question		SA	A	U	D	SD	Total
1. The therapeutic effect of ECT is related to the induction of a seizure in the brain.	Value	4	3	2	1	0	
	Frequency	23	61	22	4	1	111
	Percent	20.7	55.0	19.8	3.6	.9	100
		SA	A	U	D	SD	Total
2. Anti-depressant medications rather than ECT are more effective in the treatment of psychotic depressive disorders.	Value	0	1	2	3	4	
	Frequency	11	45	34	19	2	111
	Percent	9.9	40.5	30.6	17.1	1.8	100
		SA	A	U	D	SD	Total
3. A small percentage of patients undergoing ECT can experience some permanent memory loss.	Value	4	3	2	1	0	
	Frequency	19	72	13	7	0	111
	Percent	17.1	64.9	11.7	6.3	0	100
		SA	A	U	D	SD	Total
4. Confusion and disorientation are often a temporary effect of ECT.	Value	4	3	2	1	0	
	Frequency	55	54	1	1	0	111
	Percent	49.5	48.6	.9	.9	0	100
		SA	A	U	D	SD	Total

(table continues)

Note. SA = strongly agree; A = agree; U = undecided; D = disagree; SD = strongly disagree.

Question

5. ECT in an effective treatment for patients who are depressed and who are a serious suicide risk.

	SA	A	U	D	SD	Total
Value	4	3	2	1	0	
Frequency	26	51	21	10	3	111
Percent	23.4	45.9	18.9	9.0	2.7	100

6. It is not necessary to obtain informed consent before initiating treatment in ECT.

	SA	A	U	D	SD	Total
Value	0	1	2	3	4	
Frequency	2	1	0	28	80	111
Percent	1.8	.9	0	25.2	72.1	100

7. ECT is the induction of a seizure by electrical stimulation for therapeutic purposes in severely depressed patients.

	SA	A	U	D	SD	Total
Value	4	3	2	1	0	
Frequency	41	63	6	1	0	111
Percent	36.9	56.8	5.4	.9	.0	100

8. The patient receiving ECT is completely awake and aware of the entire treatment procedure.

	SA	A	U	D	SD	Total
Value	0	1	2	3	4	
Frequency	1	5	9	45	51	111
Percent	.9	4.5	8.1	40.5	45.9	100

(table continues)

Note. SA = strongly agree; A = agree; U = undecided; D = disagree; SD = strongly disagree.

Question

9. Recent legal decisions have had an impact on the use of a ECT in the country.

	SA	A	U	D	SD	Total
Value	4	3	2	1	0	
Frequency	12	52	40	7	0	111
Percent	10.8	46.8	36.0	6.3	0	100

10. An individual receiving ECT is asleep and totally relaxed during a treatment.

	SA	A	U	D	SD	Total
Value	4	3	2	1	0	
Frequency	32	49	9	19	2	111
Percent	28.8	44.1	8.1	17.1	1.8	100

11. ECT is used in the treatment of disorders other than depression (e.g., schizophrenia)

	SA	A	U	D	SD	Total
Value	4	3	2	1	0	
Frequency	6	40	20	31	14	111
Percent	5.4	36.0	18.0	27.9	12.6	100

12. Changing the placement of stimulus electrodes on the skull has no effect on the side effect of memory disruption.

	SA	A	U	D	SD	Total
Value	0	1	2	3	4	
Frequency	4	12	47	37	11	111
Percent	3.6	10.8	42.3	33.3	9.9	100

Note. SA = strongly agree; A = agree; U = undecided; D = disagree; SD = strongly disagree.

of the knowledge questionnaire. This was page three of the five-page questionnaire. Page two contained the instruction, "continued on back of page." However, it appears that subjects overlooked page three. A total of 111 (81%) respondents completed the entire knowledge section of the questionnaire.

When responding to the first item, "The therapeutic effect of ECT is related to the induction of a seizure in the brain," 84 (75.7%) either chose strongly agree or agree. In response to the question concerning antidepressants being more effective in the treatment of psychotic depressive disorders, 56 (50.4%) of the respondents selected strongly agree or agree. Ninety-one (82%) of the respondents checked strongly agree or agree that a small percentage of patients undergoing ECT experience some permanent memory loss.

In response to the fourth question, 109 (98.1%) of the respondents either selected strongly agree or agree that confusion and disorientation are often temporary side effects of ECT. As far as the respondents' knowledge of ECT as an effective treatment for patients who are depressed and are a serious suicide risk, 77 (69.3%) chose strongly agree or agree. In response to the item concerning it not being necessary to obtain informed

consent before initiating treatment, only 3 (2.7%) selected strongly agree or agree. One hundred and four (93.7%) of the subjects selected strongly agree or agree that ECT is the induction of a seizure by electrical stimulation for therapeutic purposes in severely depressed patients.

When asked if the patient receiving ECT was completely awake and aware of the entire treatment procedure, 96 (86.5%) chose either disagree or strongly disagree. Sixty-four (57.6%) of the respondents were aware that recent legal decisions have had an impact on the use of ECT in this country. When asked if an individual was asleep and totally relaxed during the treatment, 81 (72.9%) chose strongly agree or agree. When asked if ECT was used in the treatment of disorders other than depression, such as schizophrenia, only 6 (5.4%) selected strongly agree and another 40 (36.0%) checked agree. When responding to the statement that changing the placement of stimulus electrodes on the skull had no effect on the side effect of memory disruption, only 48 (43.2%) responded disagree or strongly disagree.

As was previously mentioned, the knowledge question was given a value score and the total score was used to measure the level of knowledge regarding ECT. Table 4 depicts the score, frequency, and percentage of the

participants' ($\underline{n} = 111$) knowledge scores. The mean score was 29.9 out of a possible total score of 48. The lowest score was 22 and the highest score was 42. In order to compare the study sample's knowledge with that of the nurses in Janicak et al.'s (1985) study, knowledge scores were examined for nurses with less than 3 years experience and those with more than 3 years experience. Those nurses with less than 3 years of experience ($\underline{n} = 21$) had a mean knowledge score of 26.8. The nurses who responded that they had more than 3 years experience ($\underline{n} = 90$) had a mean knowledge score of 30.5.

Table 4

Participants' Knowledge of ECT

Score	Frequency	Percent
22	1	.9
23	1	.9
24	8	7.2
25	5	4.5
26	9	8.1
27	11	9.9
28	6	5.4
29	12	10.8
30	10	9.0
31	15	13.5
32	8	7.2
33	7	6.3
34	5	4.5
36	2	1.8
37	5	4.5

(table continues)

Score	Frequency	Percent
38	2	1.8
40	2	1.8
41	1	.9
42	<u>1</u>	<u>.9</u>
Total	111	100.0

Table 5 demonstrates attitudes of respondents toward ECT. Of the 136 participants who answered this question, 80 (58.8%) scored 6 or higher on the attitude scale. Fifteen subjects indicated highly favorable attitudes by circling the number 10. The mean attitude score was 6.0.

Table 5

Participants' Attitudes Toward ECT

Score*	Frequency	Percent
1	6	4.4
2	4	2.9
3	19	14.0
4	11	8.1
5	16	11.8
6	15	11.0
7	20	14.7
8	16	11.8
9	14	10.3
10	<u>15</u>	<u>11.0</u>
Total	136	100.0

Note. Scores range from 1 = unfavorable to 10 = favorable.

In an attempt to further measure attitude among the participants, responses to Janicak et al.'s (1985) questions regarding attitude (Appendix E, pg. 4) were examined. For reasons unknown to the present researcher, 37 (27%) did not answer all or part of those questions. As was feared prior to data collection, subjects appeared to have difficulty in responding to Janicak et al.'s attitude questions. This was the reason that the decision was made to test the study hypothesis using scores obtained from the 1-10 attitude scale designed by the researcher.

When asked if they themselves would undergo ECT if "moderately depressed," only 2 of 120 subjects (1.7%) agreed they would. When asked if they would undergo ECT if they were "very depressed," 18 of 120 subjects (15%) agreed they would. However, when asked if they would undergo ECT if "extremely depressed," 91 of 128 subjects (71.1%) agreed they would. Additionally, 31 of 100 respondents (31%) indicated that they would undergo ECT under no circumstances.

Janicak et al.'s (1985) tool also attempts to measure attitude by asking the respondents if they themselves would consider ECT as a treatment option over medication or psychotherapy, after being hospitalized for a 3-4 week period for treatment of depression. Respondents of the

present study were asked to indicate their first, second, or third choice if moderately depressed, very depressed, or extremely depressed. If moderately depressed, none of the 90 subjects chose ECT as their first choice and only 1 (1.1%) of the 90 subjects chose ECT as the second choice. Eighty-nine (98.9%) of the respondents chose ECT as their third choice. If very depressed, 3 of 90 subjects (3.3%) chose ECT as their first choice, 9 (10%) subjects chose it as their second choice, and 78 (86.7%) subjects chose it as their third choice. If extremely depressed, 23 of 108 subjects (21.3%) chose ECT as their first choice, 14 (13%) of 108 subjects chose ECT as their second choice, and 7 (6.5%) of 108 subjects chose ECT as their third choice.

The study hypothesis was tested using the responses of the 111 subjects who completed the knowledge components of the questionnaire and the attitude scale. The hypothesis for this study stated: There is a positive correlation between psychiatric nurses' knowledge of ECT and their attitude toward ECT.

A Pearson product-moment correlation coefficient was used to examine the relationship between knowledge of ECT and attitude toward ECT among psychiatric nurses. Statistical analysis revealed $r = .50$, $p < .001$. Thus, the study hypothesis was supported.

Additional Findings

The researcher further chose to examine the relationship between the demographic variables and subjects' knowledge of ECT and their attitude toward ECT. When examining the correlation between years of experience and knowledge of ECT, the findings were significant ($r = .30$, $p = .001$). It was also noted that there was a significantly higher knowledge level among the respondents who reported that ECT was performed at work ($t = 2.58$, $p = .001$) than those who reported it was not performed at their work place. Nurse subjects presently employed in psychiatric nursing had higher knowledge levels than those not presently employed in psychiatric nursing ($t = 2.01$, $p = .047$). Additionally, there was a significant correlation between the rating of their knowledge and their knowledge scores ($r = .4364$, $p < .001$). When assessing how knowledge was obtained regarding ECT, there was a statistically significant difference ($t = 3.41$, $p = .001$) between the knowledge scores of those who said they obtained information by reading about ECT, in comparison to those who responded "no" to this item.

Additional findings regarding the demographic variables and attitude were as follows: (a) there was no significant relationship between years of clinical

experience, (b) educational level, and (c) previous experience of having ever witnessed ECT and the subjects' attitude score. Additionally, although 43 participants had witnessed ECT prior to anesthesia and muscle relaxants, there was no significant difference in their attitude scores in comparison to those who had not witnessed ECT during that period prior to the use of anesthesia or muscle relaxants. It was noted, however, that attitude toward ECT was significantly more positive among nurses who reported that ECT was performed at their place of employment ($t = 3.72$, $p < .001$) than among those nurses who reported it was not performed where they worked.

Findings using Janicak et al.'s attitude questions revealed some interesting points. Only two respondents indicated that they would choose ECT for themselves if moderately depressed. However, their mean attitude score was quite high (8.5). Subjects who said they would choose ECT as a treatment if very depressed or extremely depressed were significantly higher than those who responded "no" to these two items ($t = 4.28$, $p < .001$; $t = 8.66$, $p < .001$).

Attitudes were also examined using Janicak et al.'s scenario of, "If I were hospitalized for a 3-4 weeks period of treatment for depression, depending on the severity of my depression, my preference for treatment would be. . . ."

Subjects were asked to pick their first, second, and third choice between psychotherapy, ECT, and medication (a) if moderately depressed, (b) if very depressed, and (c) if extremely depressed. It was observed that no one chose ECT first if moderately depressed. One subject indicated ECT as the second choice of treatment if moderately depressed and this person had a mean attitude score of 7.0. Eighty-nine subjects chose ECT as their third choice if moderately depressed and among this group, their mean attitude score was 6.4. It was noted that among the group who chose ECT first if "very depressed" ($n = 3$), their mean attitude score was 10; those choosing ECT second ($n = 9$) had a mean attitude score of 7.7; those choosing ECT third ($n = 78$) had a mean attitude score of 6.1 ($F = 5.88$, $p = .004$). It was determined that those who selected ECT as their first choice or second choice had significantly higher scores than those who chose ECT as their third choice. Those choosing ECT as their first choice if extremely depressed ($n = 23$) had an attitude mean score of 7.8, those choosing ECT as their second choice ($n = 13$) had a mean attitude score of 6.6, and those choosing ECT as their third choice ($n = 71$) had a mean attitude score of 6.1 ($F = 4.64$, $p = .01$). Statistical significance was found between the

group who chose ECT first and the group who chose ECT third.

Among those who reported their knowledge of ECT as "quite adequate" ($n = 23$), their attitude mean score was 8.3. Those subjects who rated their knowledge as "adequate" ($n = 49$) had a mean score of 5.9. Among those who rated their knowledge as "minimally adequate" ($n = 45$), their attitude mean score was 5.6. Subjects who checked their knowledge level as "inadequate" on the questionnaire ($n = 9$) had a mean attitude score of 5.5. Finally, the subject who indicated his or her knowledge was "severely deficient" ($n = 1$) revealed a mean attitude score of 1. Statistical significance was found ($F = 7.06, p < .001$) between the mean scores for the groups. Those subjects who reported their knowledge as "quite adequate" had significantly higher knowledge scores than those subjects who reported any other level of knowledge regarding ECT.

Summary of Findings

The findings of the present study are summarized as follows:

1. The majority of subjects (71 or 51.8%) had over 7 years of experience. The largest group was baccalaureate prepared. Over 85% were presently employed in psychiatric nursing. Almost 90% of the subjects had witnessed ECT and

nearly one-third of them had witnessed ECT prior to the usage of anesthesia and muscle relaxants. Additionally, 48% reported that ECT was performed at their place of employment. Nearly half of the subjects (43%) indicated their knowledge of ECT was less than adequate. Respondents indicated they had learned about ECT, primarily through observing the procedure.

2. The subjects' average knowledge score of ECT was 29.9 out of a possible score of 48.

3. The subjects' average attitude score was 6 out of a possible 10.

4. There was a positive correlation between nurses' knowledge of ECT and their attitude toward ECT ($r = .50$, $p < .001$).

5. The more psychiatric clinical experiences the subjects had, the higher was their knowledge of ECT ($r = .30$, $p = .001$).

6. Knowledge of ECT was higher among nurses who reported that ECT was being performed at their work place in comparison to those who indicated that ECT was not performed where they worked ($t = 2.58$, $p = .001$).

7. Nurse subjects presently employed in psychiatric nursing had higher knowledge levels than those not

presently employed in psychiatric nursing ($t = 2.01$, $p = .047$)

8. There was a positive correlation between the respondents' rating of their knowledge of ECT and their knowledge of ECT ($r = .4364$, $p < .001$).

9. There was a higher level of knowledge among respondents who reported they obtained their knowledge through reading in comparison to those who indicated they did not obtain their knowledge of ECT through reading ($t = 3.41$, $p = .001$).

10. Eighty-three (75.7%) of the respondents either agreed or strongly agreed that the therapeutic effect of ECT is related to the induction of a seizure in the brain.

11. Fifty-six (50.4%) of the respondents agreed or strongly agreed that antidepressants were more effective in the treatment of psychotic depressive disorders than ECT.

12. Ninety-one (82%) either agreed or strongly agreed that a small percentage of patients undergoing ECT experienced some permanent memory loss.

13. One hundred nine (98.1%) subjects responded strongly agree or agree that confusion and disorientation are a temporary side-effect of ECT.

14. Seventy-five (69.3%) of the respondents either strongly agreed or agreed that ECT is an effective

treatment for patients who are depressed and are a serious suicide risk.

15. Only 3 (2.7%) of the subjects indicated it was not necessary to obtain "informed consent" before initiating ECT.

16. One hundred four (93.7%) of the respondents agreed or strongly agreed that ECT is the induction of a seizure by electrical stimulation for therapeutic purposes in severely depressed patients.

17. Ninety-six (86.5%) of the respondents either disagreed or strongly disagreed that the patient receiving ECT was completely awake and aware of the entire procedure.

18. Sixty-four (57.6%) of the respondents were aware that recent legal decisions have had an impact on the use of ECT in this country.

19. Eighty-one (72.9%) either chose strongly agree or agree when asked if an individual receiving ECT was asleep and totally relaxed during the treatment.

20. Forty-six (41.4%) of the respondents chose strongly agree or agree when asked if ECT was used in the treatment of disorders other than depression, such as schizophrenia.

21. Forty-eight (43.2%) of the respondents either chose disagree or strongly disagree when asked if changing

the placement of stimulus electrodes had no effect on the side effects of memory disruption.

22. There was a more positive attitude toward ECT among those respondents who said ECT was performed at their work place than among those who reported it was not performed where they worked.

23. There was a more positive attitude among those respondents who would chose ECT if very depressed than among those who would not choose ECT in such a situation.

24. There was a more positive attitude among those respondents who would chose ECT if extremely depressed than among those who would not choose ECT.

25. There was a more positive attitude among those who chose ECT first, as a treatment option, over psychotherapy or medication than among those respondents who did not.

26. There was a positive correlation between respondents' perceptions of their knowledge of ECT and their attitude toward ECT.

CHAPTER V

SUMMARY OF THE STUDY

Depression and its debilitating effects continue to be a mounting health care concern, to the point where the effects of depression can be life-threatening. All avenues of treating this debilitating disease must be examined. Siris et al. (1982) concluded that "ECT is at least of equal efficacy as tricyclic antidepressants and, in fact, ECT may be more efficacious than tricyclic antidepressants" (pp. 97-98). It has been reported that previous data concerning the attitudes of mental health professionals toward ECT is scarce (Janicak et al., 1985).

The purpose of this correlational study was to examine the level of nurses' knowledge of ECT and their attitudes toward ECT. Discussion of the study's findings, conclusions, implications, and recommendations for further study are contained in the chapter.

Summary

This correlational study was conducted and designed to investigate the relationship between nurses' knowledge of ECT and their attitudes toward ECT. The framework for the study was based on Festinger's (1957) theory of cognitive

dissonance. Cognitive dissonance proposes that dissonance, that is, the existence of conflicting cognition, is a motivating factor in its own right. Cognitive dissonance can be viewed as an antecedent condition which leads to an activity oriented toward dissonance reduction. The significant point to remember is that there is pressure to produce consonant relations among cognitions and avoid or reduce dissonance. Therefore, it seems that the more knowledge nurses have about ECT, the more positive will be their attitude toward ECT.

The study investigation took place in a large southwestern state. A systematic random sampling method was used to select a sample of 300 participants. A total of 137 (45%) nurses returned questionnaires. Of those 137 respondents, 111 provided sufficient data to test the hypothesis. The hypothesis tested was: There is a positive correlation between psychiatric nurses' knowledge of ECT and their attitudes toward ECT.

The independent variable, knowledge, was measured using Janicak et al.'s (1985) ECT Knowledge and Attitude Questionnaire. Possible scores ranged from 0-48. The mean knowledge score was 29.9. The dependent variable, attitude, was measured on a scale of 1-10. The mean attitude score was 6.0. The study revealed a significant

positive correlation between the variables, knowledge of ECT and attitudes toward ECT ($r = .50$, $p < .001$).

Therefore, the hypothesis was supported.

Only 75.7% of the respondents recognized that the therapeutic aspect of ECT was related to the induction of a seizure in the brain. Approximately one-half (50.4%) of the subjects either agreed or strongly agreed that anti-depressives were more effective in the treatment of psychotic depression than ECT. A large portion of the respondents (82.0%) was aware that a small percentage of patients undergoing ECT experience some permanent memory loss. Additionally, almost all (98.1%) of the respondents recognized that confusion and disorientation are often a temporary side-effect of ECT. Over two-thirds (69.3%) of the respondents recognized the value of ECT in treating depressed patients who are a serious suicidal risk. Nearly all (97.3%) of the respondents recognized the importance of obtaining informed consent prior to treatment of ECT. Almost all of the participants (93.7%) recognized that ECT is the induction of a seizure by electrical stimulation for therapeutic purposes in severely depressed patients. A great majority of the respondents (86.5%) were aware that the patient was not awake during the procedure. A little over one-half of the respondents (57.6%) were aware of

recent legal decisions that have impacted ECT. A great majority of the respondents (72.9%) was aware that the patient was asleep and totally relaxed during the treatment. Less than half of the respondents (41.4%) were aware of the value of ECT in treating other disorders such as schizophrenia. Additionally, less than half of the respondents (43.2%) recognized that placement of stimulus electrodes had an effect on the side effect of memory disruption.

Findings of this study also demonstrated a significant correlation ($r = .30$ $p = .001$) between years of clinical experience and knowledge of ECT. Additionally, there was significance concerning knowledge about ECT among those who were presently employed in psychiatric nursing and those who were not ($t = 2.01$, $p = .047$). It was also noted that there was a significant positive correlation between the subjects' perception of their knowledge of ECT and their knowledge scores.

In a further attempt to assess attitude, the respondents were asked if they would undergo ECT themselves if they were "moderately depressed." Two of the 120 subjects (1.7%) chose "yes." When asked if they would undergo ECT if they were "very depressed," 18 of 120 respondents (15%) chose "yes." When asked if they would

undergo ECT if they were "extremely depressed," 91 of 128 subjects (71.1%) agreed they would. Additionally, when asked if they would undergo ECT under "no circumstances," 31 of 100 subjects (31%) agreed that they would undergo ECT under no circumstances.

An attempt was made to measure attitude by asking respondents if they, themselves, would consider ECT as a treatment of choice before medication or psychotherapy, after being hospitalized for a 3-4 week period for treatment of depression. The respondents were asked to make their first, second, or third choices if (a) "moderately depressed," (b) "very depressed," and (c) "extremely depressed." If moderately depressed, none of 90 respondents chose ECT as their first choice, 1 (1.1%) of 90 subjects chose ECT as their second choice. Eighty-nine (98.9%) of the respondents chose ECT as their third choice. If the respondents were characterized as "very depressed," 3 (3.3%) of 90 subjects chose ECT as their first choice of treatment options. Nine (10%) of 90 subjects chose ECT as their second choice. If characterized as being "extremely depressed" 23 (21.3%) of 108 subjects chose ECT as their first treatment option. Fourteen (13%) of 108 subjects chose ECT as their second choice and 71 (6.5%) of

108 subjects chose ECT as their third choice of treatment option.

Discussion of the Findings

This research study examined the correlation between nurses' knowledge level of ECT and nurses' attitudes toward ECT. The independent variable was the level of knowledge as measured by Janicak et al.'s (1985) ECT Knowledge Scale. The dependent variable, attitude toward ECT, was measured by a scale of 1-10. Analysis of the data indicated a positive correlation between knowledge of ECT and attitude toward ECT among the respondents. Thus, the study hypothesis was supported ($r = .50$, $p < .001$). Support for this hypothesis also lends support to Festinger's (1957) theory of cognitive dissonance.

As stated by Janicak et al. (1985), there is a positive correlation between knowledge of ECT and attitude toward ECT. The findings of the present study support this claim. The findings revealed that with more clinical experience comes higher knowledge regarding ECT. It was also noted that with ECT being performed at the work place, it generated more knowledge of ECT. Findings revealed that nurses presently employed in psychiatric nursing had a higher knowledge level of ECT. It was also noted that there was a positive correlation between the respondents'

rating of their knowledge and their knowledge of ECT. It was apparent in the findings that nurses enhanced their knowledge of ECT through reading. This would suggest that more material and data concerning ECT should be made available to nurses.

Findings suggested that nurses have an adequate understanding of the therapeutic effect of seizure induction in the brain via ECT. There is, however, some misconception regarding ECT and its usefulness in treating psychotic depressive disorders. Taylor (1982) suggested that ECT was the treatment of choice for severely ill depressed patients.

The present study findings suggest that nurses are aware of the potential side effects of permanent memory loss. This knowledge would be advantageous to know when teaching the patient and family about the procedure. Kerr et al. (1982) suggested that it would be advantageous for those patients receiving ECT to be given some educational preparation. Findings also suggested that nurses were very aware of the temporary side effect of confusion and disorientation. Talbot (1986) contended that nurses can play an important part in reducing anxiety.

Findings suggested that only 69.3% of the respondents recognized the value of ECT in treating depressed

individuals who are a serious suicide risk. Taylor (1982) reported that ECT was the only treatment that dramatically reduces the suicide rate of depressed individuals.

The present study findings indicated that nurses have a good understanding of the value of informed consent prior to ECT. Recent legal decisions concerning ECT have had an impact on ECT. Findings also suggest that nurses have a good understanding of procedural induction of electricity to induce a seizure. Cochran (1984) stated that well informed nurses can dispel misinformation and present facts concerning ECT. Findings suggested that almost all subjects were aware that the patient was not awake during ECT, but rather asleep and relaxed. This knowledge will also help dispel myths and misconceptions regarding ECT.

Findings suggested that nurses were not fully aware of the efficacy of ECT in treating other disorders such as schizophrenia. Siris et al. (1982) reported that ECT was most beneficial for those schizophrenics who had recent and sudden onset of psychosis or for those suffering from affective symptoms. It was noted in the findings that less than one-half the nurses were aware that changing the placement of the stimulus electrodes had an effect on memory disruption. The APA Task Force (1990) reported that

unilateral ECT, involving the right hemisphere, is associated with less verbal memory impairment.

Additionally, Janicak et al. (1985) found the mean knowledge score for nurses with less than 3 years of experience was 33.3 and in the present study the mean knowledge score was 26.8 among nurses with less than 3 years of experience. Janicak et al. noted that the mean knowledge score for nurses with more than 3 years experience was 36.6. In the present study the mean score was 30.5 among nurses with more than 3 years of clinical experience. Thus, the knowledge levels of nurses in the present study were a good bit lower than those of the nurses in Janicak et al.'s study.

Kerr et al. (1982) concluded from their study that most of their respondents' knowledge of ECT was obtained through film and/or television. The findings of the present study revealed that most nurses gained their knowledge of ECT through observation (106 of 128 subjects or 82.2%). There was a higher level of knowledge among respondents who reported they obtained their knowledge through reading in comparison to those who indicated they did not obtain their knowledge of ECT through reading ($t = 3.41, p = .001$).

In addition, the findings also suggested that there is a positive correlation between perception of knowledge of ECT and attitude toward ECT. This would also lend credence to the hypothesis that with more knowledge of ECT comes a more positive attitude toward ECT. There has been previously little data available which examines mental health care professionals' attitudes toward ECT. However, Janicak et al.'s (1985) study assessed the knowledge and attitudes of physicians, psychologists, nurses, and social workers. Janicak et al.'s study suggested that "attitudes toward ECT were positively related to levels of knowledge about ECT" (p. 264). The findings of the present study would suggest support for this claim.

Findings from the present study revealed that nurses with a favorable attitude toward ECT would agree to ECT if "very depressed" and if "extremely depressed." In the Janicak et al. (1985) study, they found that among nurses 14.3% would agree to ECT if "very depressed." Findings from the present study revealed that among nurses 15% agreed they would consent to ECT if "very depressed." Additionally, Janicak et al. reported 69% of the nurses would agree to ECT if "extremely depressed." Findings from the present study again revealed similar results. Among the nurse respondents, 71.1% agreed they would consent to

ECT if "extremely depressed." Findings of the study also revealed that those who selected ECT as their first choice over medication or psychotherapy had a more positive ECT attitude score.

Conclusions and Implications

The major conclusion of this study is based on the theory of cognitive dissonance. It was concluded that the positive correlation between psychiatric nurses' knowledge of the benefits of ECT and their attitude toward ECT was the result of an attempt to seek consonance between knowledge and attitudes. Additionally, the conclusion was made that psychiatric nurses' attitudes toward ECT were moderately positive, based on the mean score of 6 out of a possible score of 10. It was also concluded that knowledge of ECT is less than optimal, based on the findings of a mean knowledge score of 29.9 out of a possible score of 48.

Additional conclusions and implications are based on the demographic data:

1. Nurses may not be aware of the effectiveness of ECT in treating psychotic features of depression. This conclusion suggests that nurses may need to learn more of the therapeutic benefits of ECT.

2. Among nurses in the study there was an understanding of the temporary side effects, confusion, and

disorientation as it pertains to ECT. This would suggest that nurses are aware of some of the special needs of their patients following ECT.

3. Nurses are aware of the legal implications of ECT. This would imply that nurses in the study should be able to protect subjects' rights regarding ECT treatments.

4. Nurses recognized the physiological aspects of ECT. This would imply that nurses understand the purpose of the induction of electricity in the procedure. This would also suggest that the nurses are prepared in this aspect of the procedure and can relay this information to the patient and his or her family when ECT teaching is indicated.

5. Nurses are not aware of the therapeutic value of ECT in disorders other than depression. This would imply a need for increased education as to the therapeutic benefits of ECT, particularly in regard to the affective components of schizophrenia.

6. Nurses are not aware of how unilateral electrode placement can effect memory disruption. This would imply a need for instruction or self-learning in this area.

7. Based on the finding that as years of clinical experience increased, knowledge towards ECT increased. The

implication can be made that more exposure to ECT would be beneficial in increasing knowledge of this treatment.

8. Nurses with a more positive attitude toward ECT would be more likely to consent to ECT themselves if "extremely depressed." This would imply that nurses recognize ECT as a viable treatment option if their attitude toward ECT is favorable and this may enhance their teaching efforts.

9. Knowledge regarding ECT is most likely to be obtained through reading. This would imply that it would be most advantageous to have more material regarding ECT available to the reader.

10. Most psychiatric nurses are very interested in the present topic of research, as evidenced by the fairly high (137 or 45%) number of responses to the self-report questionnaires. This may suggest the nurses are becoming more cognizant of the importance of nursing research.

In nursing practice the nurse may find herself/himself in any number of roles associated with the delivery of ECT. If the nurse is not knowledgeable regarding ECT, the potential negative attitude toward ECT could impact patient care. As Cochran (1984) noted, "as well informed nurses we can dispel misinformation and bring the facts about ECT to

the attention of the public, physician, and patients" (p. 1005).

Recommendations for Further Study

Based on the findings of this study and its conclusions, the following recommendations for further research are listed below. Further research in this area would add to the body of nursing knowledge:

1. The study should be replicated in other geographical locations.
2. The study should be replicated utilizing a tool to measure attitude toward ECT that is more refined.
3. A study should be designed to investigate the amount and type of information concerning ECT that is presented to nursing students.

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APPENDIX A

Research Review Committee Exemption Form

TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING

PROSPECTUS FOR THESIS/DISSERTATION/PROFESSIONAL PAPER

This prospectus proposed by: David S. Hodson

and entitled:

Electroconvulsive Therapy: Nurses' Knowledge and Attitudes.

Has been read and approved by the member of (his/~~her~~)
Research Committee.

This research is (check one):

xx Is exempt from Human Subjects Review Committee review because it is classified as Category I research and data will be collected through the use of anonymous questionnaires

_____ Requires Human Subjects Review Committee review
because

Research Committee:

Chairperson,

Member,

Member.

Date: April 25, 1990

Dallas Campus xx Denton Campus Houston Campus

APPENDIX B

Graduate School Permission to Conduct Study

TEXAS WOMAN'S UNIVERSITY

DENTON DALLAS HOUSTON

THE GRADUATE SCHOOL

P.O. Box 22479, Denton, Texas 76204 817/898-3400, 800-338-5255



June 25, 1990

Mr. David Hodson
DRS Box 149
Weatherford, TX 76086

Dear Mr. Hodson:

I have received and approved the Prospectus for your research project. Best wishes to you in the research and writing of your project.

Sincerely yours,

A handwritten signature in cursive script that reads "Leslie M. Thompson".

Leslie M. Thompson
Dean for Graduate Studies
and Research

dl

cc Dr. Rose Nieswiadomy
Dr. Helen Bush

APPENDIX C
Cover Letter

Dear Colleague:

My name is David Hodson. I am a graduate nursing student at Texas Woman's University. As part of my program requirements, I am conducting a research study to determine nurses' knowledge of electroconvulsive therapy (ECT) and their attitudes toward ECT.

You have been chosen at random from a list of psychiatric nurses obtained from the State Board of Nurse Examiners. You are under no risk or obligation to participate. Your name will not appear in regard to the study findings, and your anonymity is assured. Only group statistics will be reported.

Your involvement in this study will consist of completion of two questionnaires. A preaddressed, stamped envelope is included for you to return the questionnaires.

It will take approximately 10 minutes of your time. Please return them as soon as possible after receiving this letter. If you choose not to participate, please return the questionnaires for statistical purposes.

If you would like the results of the study, please contact me; otherwise the results will be available in the libraries of Texas Woman's University after December 1990.

If you have any questions, please call me at 214/689-7742. I truly thank you for participating in this study.

Sincerely yours,

David Hodson, R.N., B.S.N.
Graduate Student
Texas Woman's University

APPENDIX D

Demographic Data Questionnaire

RETURN OF THIS QUESTIONNAIRE WILL BE CONSIDERED AS YOUR
CONSENT TO BE A RESEARCH SUBJECT

Demographic Data Questionnaire

1. Years of psychiatric clinical experience.
☐ < 1 year
☐ 1-3 years
☐ 4-6 years
☐ 7-10 years
☐ > 10 years

2. Highest level of education.
☐ Diploma
☐ Associate degree
☐ Baccalaureate
☐ Master's
☐ Doctorate
☐ Other (please specify) _____

3. Have you ever witnessed ECT?
☐ yes
☐ no

4. Did you ever witness ECT prior to the use of anesthesia and muscle relaxants?
☐ yes
☐ no

5. Is ECT performed at your place of employment?
☐ yes
☐ no

6. Are you presently employed in psychiatric nursing?
☐ yes
☐ no

7. On a scale of 1-10, circle your overall attitude toward ECT.

1	2	3	4	5	6	7	8	9	10
unfavorable									favorable

APPENDIX E

Electroconvulsive Therapy Knowledge and Attitude Questionnaire

RETURN OF THIS QUESTIONNAIRE WILL BE CONSIDERED TO BE YOUR
CONSENT TO BE A RESEARCH SUBJECT.

Electroconvulsive Therapy (ECT)
Knowledge and Attitude Survey

I. Please circle the appropriate response:

SA = Strongly agree
A = Agree
U = Undecided
D = Disagree
SD = Strongly disagree

1. The therapeutic effect of ECT is related to the
induction of a seizure in the brain.

SA A U D SD

2. Anti-depressant medications rather than ECT are more
effective in the treatment of psychotic depressive
disorders.

SA A U D SD

3. A small percentage of patients undergoing ECT can
experience some permanent memory loss.

SA A U D SD

4. Confusion and disorientation are often a temporary
side-effect of ECT.

SA A U D SD

5. ECT is an effective treatment for patients who are
depressed and who are a serious suicide risk.

SA A U D SD

6. It is not necessary to obtain informed consent before initiating treatment in ECT.

SA A U D SD

7. ECT is the induction of a seizure by electrical stimulation for therapeutic purposes in severely depressed patients.

SA A U D SD

8. The patient receiving ECT is completely awake and aware of the entire treatment procedure.

SA A U D SD

9. Recent legal decisions have had an impact on the use of ECT in this country.

SA A U D SD

10. An individual receiving ECT is asleep and totally relaxed during a treatment.

SA A U D SD

11. ECT is used in the treatment of disorders other than depression (e.g., schizophrenia).

SA A U D SD

12. Changing the placement of stimulus electrodes on the skull has no effect on the side effect of memory disruption.

SA A U D SD

II. For the following two questions, please use these descriptions:

Moderately depressed:

1. Inability to enjoy life activities
2. Mild disturbance in sleep
3. Mild loss of appetite
4. Mild decrease in ability to function in life activities

Very depressed:

1. Suicidal thoughts
2. Difficulty with sleep
3. Difficulty with eating
4. Difficulty with functioning in life activities

Extremely depressed:

1. Actively suicidal
2. Unable to sleep
3. Unable to eat
4. Total inability to function in life activities

1. I would allow myself to undergo ECT:

- | | | |
|-----------------------------------|--------|-------|
| A. If I was moderately depressed, | yes___ | no___ |
| B. If I was very depressed, | yes___ | no___ |
| C. If I was extremely depressed, | yes___ | no___ |
| D. Under no circumstances, | yes___ | no___ |

2. If I were hospitalized for a 3-4 week period of treatment for depression, depending on the severity of my depression, my preference for treatment would be (indicate 1st, 2nd, or 3rd the order of choice in the appropriate box for each treatment).

Severity of Depression (see above)	Treatment Methods		
	Psychotherapy	ECT	Drugs
Moderate			
Very			
Extreme			

III. 1. How would you characterize your knowledge of ECT?

- A. Quite adequate _____
- B. Adequate _____
- C. Minimally adequate _____
- D. Inadequate _____
- E. Severely deficient _____

2. How did you obtain knowledge about ECT?

- A. Lecture _____
- B. Observation _____
- C. Reading _____
- D. Other _____ (please specify) _____

APPENDIX F

Permission to Use Questionnaire

3/22/90

Dear Mr. Hodson:

I have enclosed a copy of the rating scale and article depicting the sample graphs you mentioned. (see Figure 3 for the breakdown) I have had 2 or 3 other requests to use this instrument (San Francisco + New Orleans come to mind as their locations) but I don't remember the details. No reliability + validity data is available. Yes, you have my permission to use the scale. Good Luck! Please send me a copy of your findings

Sincerely,

Philip D. Harman, M.D.