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Graduate School

LEADERSHIP TECHNIQUES IN GROUPS
WITH CHRONIC SCHIZOPHRENICS

by

Judith L. Jensen and W. Leona McGrew

A Thesis
in Partial Fulfillment of the Requirements
for the Degree Master of Science
in the Field of Nursing

April 1973

188473

Each person whose signature appears below certifies that
this thesis in his opinion is adequate, in scope and quality,
as a thesis for the degree Master of Science.

Rachel M. Lee, Chairman
Rachel M. Lee, Assistant Professor
of Nursing

Ina Y. Longway
Ina Y. Longway, Associate Professor
of Nursing

Norma Norriss Ph.D.
Norma Norriss, Associate Clinical
Professor of Psychiatry

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Chapter 1

INTRODUCTION TO THE STUDY

THE PROBLEM

Psychiatric patients are expected to participate in group therapy. Many patients experience some degree of anxiety during and following group sessions and it has been postulated that some anxiety may be useful as an aid to the learning process in groups. The tenuous anxiety tolerance of psychotic patients, however, poses particular problems in management of group therapy (Johnson, 1963, p. 389). Mullen and Rosenbaum state,

The acutely anxious patient contributes little or nothing to the group experience since he does not move toward any mutualism. He simply looks for relief of anxiety (Mullen and Rosenbaum, 1962, p. 102).

In this study, we were concerned with the relationship of the leadership techniques used in group therapy to the amount of anxiety experienced by the chronic schizophrenic patient.

Generally, group therapy with chronic schizophrenic patients who have been hospitalized from 3 to 5 years or longer has not been very successful. The anxiety level of the group members has constituted a major problem. These patients move extremely slowly in a group and the therapist's attempts to promote group activity are usually too anxiety-provoking (Johnson, 1963, pp. 393-394).

An assessment of the level of anxiety that might be anticipated would permit the group leader to choose the style of leadership that would best meet his goals for the group. While anxiety is a key factor in groups, there are other factors to be considered, such as the defense

mechanisms which may be employed by chronic schizophrenics against the threat of anxiety-producing situations.

Need for the Study

S. R. Slavson pointed out that the group experience produces anxiety (Slavson, 1969, p. 31). Excessive anxiety due to group therapy may prevent the patient from perceiving his problems and deriving benefit from further therapy. If the therapist's technique of leadership produces prolonged excessive anxiety, the group members react with exaggerated behavior patterns and illness symptoms (Johnson, 1963, p. 34).

Psychotics who are displaying this degree of disturbance have very little anxiety tolerance. They will need a somewhat different therapeutic approach in the group and therefore should not be combined with neurotics in the same therapy group (Smith, 1970, p. 110).

Berger states,

It is imperative for a successful outcome of treatment that the group leader make modification in his leadership technique according to the specific setting, group composition, goals and time available (Berger, 1970, p. 41).

Solomon and Patch point out,

Anxiety is primarily a conscious subjective state, variously described as an emotion, affect, or feeling. It is expressed by certain kinds of behavior and is accompanied by characteristic physiological changes (Solomon and Patch, 1971, p. 51).

Various physiological indices have been used as measurements of anxiety reactions including an increase in blood pressure and pulse rate, galvanic skin response, urine catecholamines and forearm blood flow. Positive correlations have been found between physiological, introspective and behavioral manifestations of anxiety (Cattell, 1963, p. 97).

Purpose of the Study

Leadership techniques should be adapted to the needs of the patients within the group. The purpose of our study was to find out if chronic schizophrenic patients experience less anxiety in structured or nonstructured group therapy. This information will assist the nurse-therapist in formulating techniques for use in group therapy with these patients.

Hypothesis

A null hypothesis and two alternate hypotheses were used to guide this study. The hypotheses included:

1. H_0 - There will not be a significant difference between the amount of anxiety and/or arousal experienced by chronic schizophrenic patients in a structured group as compared with a nonstructured group.
2. H_1 - There will be significantly less anxiety and/or arousal experienced by chronic schizophrenic patients in a structured group as compared with a nonstructured group.
3. H_2 - There will be significantly less anxiety and/or arousal experienced by chronic schizophrenic patients in a nonstructured group as compared with a structured group.

We decided to accept the hypothesis that was indicated by the findings of the psychological data when supported by the results of the tests for physiological arousal. Either alternate hypothesis was to be accepted at the 5 percent (0.05) level of significance in an analysis of covariance.

Assumptions

For the purpose of this study the following assumptions have been made:

1. Chronic schizophrenic patients usually experience some degree of anxiety in group therapy.
2. The effect of drugs will not be significantly different between the two groups since all chronic schizophrenic patients hospitalized on the N units at Patton State Hospital receive a similar variety of medications.
3. A two-week period of testing during the orientation phase of group therapy will be sufficient since anxiety is thought, by some authorities, to be more acute during the orientation phase of group therapy.

Limitations

The tools used for measurement in the study were limited to: (1) the measurement of blood pressure and pulse, and (2) administration of a standardized paper and pencil test for anxiety. We selected blood pressure and pulse as measurements of physiological arousal since these were the best measurements available to us. The limited patient population currently at Patton State Hospital made it unfeasible to include cultural and socioeconomic factors in criteria for selection of patients for the study.

We did not include a control group in this study. Since authoritative opinion indicates that group therapy produces anxiety, the purpose of this study was limited to the comparison of two methods of group leadership to determine which produces less anxiety.

Method of Study

Our study contained both experimental and explanatory components of methodology. We set up experimental conditions for both groups. We then used the explanatory method in looking at two leadership styles in conducting group therapy to see if one is to be preferred in treating chronic schizophrenic patients. Abdellah defines the explanatory method as being concerned with assessment of alternative courses of action and prediction of causal relationships (Abdellah, 1971, pp. 563-596).

The amount of anxiety experienced by the patients in each group was measured by two indices. The physiological response to anxiety was measured by blood pressure and pulse readings before and after each group therapy session. All measurements of blood pressure were made by the same research assistant using the same standard sphygmomanometer and stethoscope.

The second measurement used was the Spielberger Self-Evaluation Test for Anxiety (see Appendix, pp. 60-61). This psychological test was selected because it differentiates between the transient state of anxiety as opposed to the personality trait of anxiety (Spielberger, 1966). Reliability and validity of the test have been developed with chronic schizophrenic patients.

Evidence of the validity of the State-Trait Anxiety Inventory is found in Table 1. Correlations were made with IPAT Anxiety Scale, the Taylor Manifest Anxiety Scale, and the Zuckerman Affect Adjective Checklist. Spielberger and associates found correlations between STAI, IPAT, and TMAS to be moderately high for both college students and patients tested (Spielberger et al., 1970, pp. 10-14).

Table 1
Correlations Between the STAI A-Trait Scale and
Other Measures of Trait Anxiety

Anxiety Scale	College Females (N=126)			College Males (N=80)			NP Patients (N=66)	
	STAI	IPAT	TMAS	STAI	IPAT	TMAS	STAI	IPAT
IPAT	.75			.76			.77*	
TMAS	.80	.85		.79	.73		.83	.84
AACL	.52	.57	.53	.58	.51	.41		

*N=112 for the correlation between the STAI and the IPAT.

Evidence bearing on the validity of the A-State Scale is available from several studies including correlations with the Minnesota Multiphasic Personality Inventory for two samples of hospitalized neuropsychiatric patients (Spielberger et al., 1970, pp. 10-14).

DEFINITION OF TERMS

Anxiety: "An unpleasant anticipation of some kind of misfortune, danger, or doom. This apprehension is accompanied by tenseness, restlessness, and the feeling that something must be done" (Solomon and Patch, 1971, pp. 51-52).

Physiological arousal: We define this term as those physiological manifestations which occur in conjunction with the subjective emotion of anxiety. These manifestations include cardiovascular changes such as those we intend to measure, systolic blood pressure, diastolic blood pressure, and pulse.

Chronic schizophrenic: Includes those patients with an admitting diagnosis falling into the diagnostic category for chronic schizophrenia as designated in The Diagnostic and Statistical Manual for Mental Illness (American Psychiatric Association, 1968). For the purposes of our study, the operational definition of chronic schizophrenia was further defined to mean patients who had a history of one or more prior admissions with a diagnosis of schizophrenia.

Structured group: Used herein to mean that the therapist maintains a directive role. The technique is outlined under the section entitled, "Experimental Procedure" and shown in Appendix, pp. 62-63.

Nonstructured group: Used herein to mean that the therapist

maintains a nondirective role. The technique is outlined under the section entitled, "Experimental Procedure" and shown in detail in Appendix, pp. 64-66.

SUMMARY

Excessive anxiety due to group therapy may prevent the patient from deriving benefit from this form of therapy. Our purpose in this study was to find out if a selected group of chronic schizophrenic patients hospitalized on the N units of Patton State Hospital experienced less anxiety in a structured or a nonstructured therapy group. We used the explanatory method to compare the amount of anxiety resulting from the two techniques of leadership utilized. Our measurement tools were blood pressure and pulse readings and the Spielberger Anxiety Test.

Chapter 2

LITERATURE REVIEW

There is a wealth of information to be found in the literature on psychology and psychosocial aspects of life. Within the last several decades authors have turned their attention and writing talents toward such subjects as mental disorders, the etiology of mental illness, influencing factors in mental illness, and methods of treatment. They have spent a great amount of energy trying to answer such basic questions as, "Does mental illness really exist?" Though there are volumes of material written on the subjects of psychology and mental illness, there are still areas virtually untouched and many questions left unanswered. We concerned ourselves with literature on the subjects of anxiety, group therapy, chronic schizophrenia, leadership styles in group therapy and combinations of these subjects. We have tried to present, in this literature review, the most relevant and important studies and authoritative opinions related to our subject.

THE CONCEPT OF ANXIETY

Historically there has been little agreement among theorists about the meaning of the term "anxiety". Sir Aubrey Lewis reviewed opinions of international authorities on the subject of anxiety. In his conclusions, based on this review, Sir Aubrey compiled a list of the characteristics of anxiety. These characteristics provide a framework for the study and evaluation of a person's reaction to anxiety.

The identified characteristics include:

1. It is an emotional experience with the subjectively experienced quality of fear or a closely related emotion.
2. The emotion is unpleasant.
3. It is directed toward the future.
4. There is either no recognizable threat, or the threat is, by reasonable standards, quite out of proportion to the emotion it seemingly evokes.
5. There are subjective bodily discomforts during the period of anxiety.
6. There are manifest bodily disturbances (Lewis, 1970-71, pp. 62-79).

Viederman (1970-71, pp. 101-110) objected that Sir Aubrey considered anxiety as psychopathological. Viederman points to the service of anxiety in the individual's adaptation. It is the degree of anxiety that determines whether the experience is productive or destructive. He stresses the framework of adaptation or maladaptation as the basis for determining normality or psychopathology.

Spielberger, in contrast to both Lewis and Viederman, differentiates between the concept of trait anxiety and state anxiety. State anxiety is described as "a transitory state or condition of the organism that varies in intensity and fluctuates over time" (Spielberger, 1966, p. 12). Spielberger defines trait anxiety as follows, "Trait anxiety refers to relatively stable individual differences in anxiety proneness, that is, to differences between people in the tendency to respond to situations perceived as threatening" (Spielberger, 1970, p. 3). Most studies on anxiety have been concerned with the transitory anxiety state.

These are just brief examples of the many diverse ways of looking at the concept of anxiety. For the purposes of this paper, we will

be using Spielberger's definitions of state and trait anxiety.

REACTIONS TO ANXIETY

Reactions to Anxiety in Non-schizophrenic Individuals

Psychological reactions. Early in the twentieth century Freud began to try to define anxiety from a psychological point of view. He recognized this phenomenon in his patients as they described to him their "nervousness". People could distinguish anxiety from other unpleasant emotions such as grief or anger (Spielberger, 1966, p. 9).

Today, we are still concerned with the effect of anxiety upon man because none of us is exempt from experiencing this unpleasant sensation. Solomon and Patch state, "Psychological manifestations of anxiety are reflected in impaired concentration, memory, abstract reasoning, calculating ability, and psychomotor efficiency" (Solomon and Patch, 1971, p. 52). Taylor and Spence have described directly observable and measurable reactions to anxiety which include:

. . . verbal responses as reports of chronic worry and tension; and such nonverbal patterns as excessive autonomically controlled effector disturbances in appetite and elimination, sleeplessness, panic attacks, etc. (Taylor and Spence, 1954, p. 497).

In using the Welsh A Scale to study the effects of anxiety and situational stress on communication efficiency, Gynther found that subjects who were low in anxiety were found to have significantly higher communication efficiency scores than those subjects who ranked high in anxiety (Gynther, 1957, p. 276). It has been shown that anxiety states interfere with perception and many aspects of cognitive functioning. Silverman found in his study of "Anxiety and the Mode of Response" that

threatening situations decreased incidental learning as measured by recall and recognition scores. "Thus we would predict and do find a large segment of the anxious patients are rigid conformists" (Silverman, 1954, pp. 540-541).

Cattell and Scheier first differentiated between "state" and "trait" anxiety (Cattell and Scheier, 1961, p. 152). State anxiety, as mentioned previously, is used to describe a transitory reaction of the individual to a perceived threat; whereas trait anxiety describes a consistent personality characteristic. Spielberger points out that persons with high trait anxiety would be expected to show anxiety state reactions more frequently than those people with low trait anxiety as they perceive more situations to be threatening (Spielberger, 1970, p. 3). Cattell and Bartlett conducted a factor analytic study with 63 students for the purpose of providing an operational distinction among anxiety, stress and fear states. These researchers found that (1) anxiety is independent of stress or fear states, and (2) that states are trait change factors (Cattell and Bartlett, 1971, p. 118).

Anxiety has traditionally been measured by a variety of subjective tests. Schafer, in his book The Clinical Application of Psychological Tests, discusses major psychological tests and presents results characteristic of anxious individuals. His findings are outlined as follows:

1. Bellevue Scale. The most conspicuous features, in anxiety states and/or depression, are lowered Digit Span score which denotes impaired attention, a lowered arithmetic score showing impaired concentration, and a lowered performance level showing tension with resulting

inefficiency. (The Wexler Scale is used more frequently in recent studies.)

2. Rorschach Test. The record of an anxious person shows a reduced number of responses and a large number of vague responses.

3. Word Association Test. In anxiety multiword definitions and blocking often occur.

4. Thematic Apperception Test. There may be occasional blocking, frequent themes of apprehension and increases in anxiety in the course of telling the story (Schafer, 1948, pp. 42-46).

Physiological reactions. Evidence of transitory anxiety may be drawn from introspective reports, overt behavior, task performance, clinical intuition and physiological signs. Subjective reports are the most widely accepted basis for identifying transitory anxiety. Krause, however, recommends the use of a combination of introspective reports and physiological behavioral signs to prevent ambiguous reports of anxiety (Krause, 1961, pp. 178-189).

Some studies have shown positive correlations between self reported states of autonomic activity in response to stress and corresponding objective measurements of these autonomic reactions (Fenz, 1967, pp. 663-675). While physiological arousal can not be interpreted to specify an anxiety state, studies have shown that physiological changes do occur with the psychological experience of anxiety. In a study by Kelly, Brown and Shaffer, clinical, psychophysiological and psychometric measurements were made on 20 normal controls and 30 anxious patients during rest and experimental states. Resting forearm bloodflow and heart rate were found to correlate significantly with clinical and

subjective ratings of anxiety (Kelly et al., 1970, p. 429).

In a study of "Response Specificity Among Muscular and Autonomic Variables," Shipman also found that heart rate was statistically significant at the 5 percent (0.05) level in correlation with subjective statements of anxiety. Gibby and associates conducted research on the effect of a stressful condition on heart rate and concluded that the rate of change of heart rate is a stable parameter (Gibby, 1969, p. 463). Johnson and Spielberger studied the "Effects of Relaxation Training and the Passage of Time on Measures of State and Trait Anxiety." They found that blood pressure and pulse increased due to experimentally induced stress (Johnson and Spielberger, 1968, p. 20).

In a summary of collaborative studies with other researchers, Cattell identified physiological variables which were significantly associated with the anxiety factor. From a list of fifteen physiological variables given in decreasing order of significance, the two highest were systolic blood pressure and an increase in heart rate (Spielberger, ed., 1966, p. 33). Spielberger found that "physiological variables such as respiratory rate and systolic blood pressure markedly loaded the state anxiety factor but had only slight loadings on trait anxiety" (Spielberger, 1968, p. 237).

Some studies have shown that physiological arousal occurs in anticipation of a threatening situation. From a nursing study into "Effects of Varied Nursing Approaches During Hospital Admission," Elms concluded that anxiety is aroused in anticipation of an ordeal which is perceived as a threat to integrity or life (Elms, 1964, pp. 266-270). In a study by Epstein and Clark, a major finding was that, "Physiological

arousal during the anticipatory period was directly related to anticipated intensity of noxious stimulation" (Epstein and Clark, 1970, pp. 105-112). In summarizing three of his studies involving cardiac activity during experimentally induced stress, Deane concludes that,

. . . the acceleration component is probably the response associated with anxiety and that the deceleration observed in these experiments may be associated with a preparation to "attend" to any type of stimulus event (Deane, 1969, p. 30).

Deane goes on to summarize a review of the findings of research on the aversive stimulus and cardiac response. He states ". . . some investigators have reported finding an acceleration, some a deceleration, and some a biphasic acceleration-deceleration in the interval between warning signal and shock" (Deane, 1969, p. 17). Thus it would seem that although there is definite cardiac involvement during induced anxiety, there has been little agreement as to when the greatest response occurs. There is also little agreement on the duration of the response.

Reaction to Anxiety in Patients
with Schizophrenic and Other
Chronic Emotional States

Psychological reaction. The chronically anxious individual responds with anxiety and worry to stresses which most people are able to take in their stride (Lader, 1970, p. 55). Various theorists have described anxiety as being the major drive in schizophrenics. In order to lower this intolerable anxiety, the schizophrenic employs pathological ego defenses. There is considerable controversy in the literature, however, regarding the patterns of response to anxiety states in schizophrenic patients.

Many researchers distinguish between process schizophrenics and reactive schizophrenics. Process schizophrenics are those who have an insidious onset and a chronic course of their disease. Reactive schizophrenics usually have a more sudden precipitating cause with an acute or shorter illness (Solomon and Patch, 1971, p. 189). Reactive (acute) schizophrenics show less impairment of psychomotor performance and are sympathetically more reactive (i.e., central nervous system reaction) than are process (chronic) schizophrenics. Chronic schizophrenics' thought processes are more retarded and their mood is flattened, showing less fluctuation (Claridge, 1967, p. 172). In discussing the reaction to anxiety-arousing stimuli of acute and chronic schizophrenics, Burnham also cites differences. He suggests that acute schizophrenics incorporate ordinarily neutral stimuli into anxiety-arousing structures of meaning from factors such as tangential stimuli and threatening impulses that have been repressed. The chronic phase contains the domination of thought by anxiety-reducing avoidance patterns (Cancro, ed., 1970, pp. 204-205). Contrasting theory on the influence of anxiety in chronic schizophrenics has been offered by Cockshott, who studied the efficacy of induced anxiety in treatment of 36 female patients in a state mental hospital (Cockshott, 1971). When compared with a contact control group (tested and were seen in discussion group but received no affect arousal) and a no-contact control group (tested but were not seen in group), the results for the experimental group who received affect arousal were interpreted to suggest that induced anxiety can be an effective treatment modality. Psychological test batteries included the MMPI, Psychological Screening

Inventory, Shipley Hartford IQ, Zimmer Sentence Completion Test and the Affect Adjective Check List.

Although the literature abounds with opinion regarding the reactions of schizophrenics, there is a dearth of research showing the response of schizophrenics to psychological tests for anxiety. In a comparison of psychological and physiological measurements in anxious patients and normal controls, Kelly and associates assessed the psychological states and emotional traits. The psychological states were assessed by the Maudsley Personality Inventory, Taylor Manifest Anxiety Scale and Zung Depression Scale. Their emotional states were evaluated by the Clyde Mood Scale and Semantic Differential Scale. Twenty-one variables showed a significant difference between the two groups in response to experimental stress. The patient group showed significantly more anxiety and depression than the control group.

The patients showed significantly more anxiety and depression than the controls on both observer and self-ratings of anxiety and depression. The patients were also more "Neurotic" and "Introverted" (MPI) and had higher scores on Taylor Manifest Anxiety and Zung Depression Scales. . . . On the Clyde Mood Scale, the patients were significantly less "Friendly" and "Aggressive" and more "Unhappy" and "Dizzy" than the controls. Only the "Clearthinking" and "Sleepy" factors (CMS) failed to differentiate the two groups significantly. The Semantic Differential gave less differentiation between the groups. The patients "Evaluated" themselves significantly less highly than the controls and were less "Potent" and less "Receptive." The factors yielding insignificant differences were "Activity," "Tautness," "Novelty," and "Polarization" (Kelly et al., 1970, pp. 434-435).

Physiological reaction. The physiological response to anxiety is of major interest to many researchers, particularly the response of schizophrenics to anxiety. Walek and Lee conducted a research project involving psychotic patients and group therapy. Their findings supported

the part of their hypothesis stating that the stress of group therapy would be indicated by an increase in systolic and diastolic blood pressure, but did not support the aspect of their hypothesis that stated there would be an increase in pulse (Walek and Lee, 1970). Duffy states that the weight of evidence supports the view that psychiatric patients differ from normal subjects on various physiological measures that appear to reflect arousal. Duffy also notes that the results of studies with schizophrenic patients using physiological measures have sometimes been conflicting (Claridge, ed., 1967, p. 7).

Schmalling and Lepidus examined the evidence that schizophrenics show a higher baseline of arousal than normals and the effect of variations of arousal on task efficiency. They felt this might explain some of the inconsistencies in previous research. These authors also suggest the ". . . danger of assuming invariant relationships between physiological and psychological variables. For instance we cannot take it for granted that GSR or increased heart rate are somehow equivalent to anxiety" (Schmalling and Lepidus, 1972, p. 319). Schmalling and Lepidus go on to conclude that schizophrenics have an elevated baseline of physiological measurements and show reduced reaction to a stressful event, which is consistent with the law of initial values. This law posits that a person with a high baseline will be more limited in response by the ceiling of arousal than a person with a low baseline (Schmalling and Lepidus, 1972, p. 315). The lowered reactivity of the chronic schizophrenic was supported in a study by Howe, who compared hospitalized chronic schizophrenics, patients with anxiety states, and normals. He found that schizophrenic subjects showed significantly

lower response magnitude to an electric stimulus, when measured by Galvanic Skin Response (Howe, 1958, pp. 183-189).

In the previously cited study by Kelly and associates, there were findings that pointed out that experimentally induced stress caused a relatively greater response in the controls than in "anxious" patients, as measured by forearm blood flow and heart rate. One explanation given was that anxious patients who were already in a state of persistent physiological arousal have higher resting values. Therefore, the added stress has less effect on them than normals (Kelly, 1970, p. 429).

Zuckerman and associates cited the influence of the law of initial limits and individual specificity of response in connection with the findings of their study on the relationships among anxiety, depression, hostility, and autonomic variables. In their study cardiovascular measurements showed little relationship to affects measured (Zuckerman et al., 1968, pp. 481-487). Specificity of response and a higher level of arousal in chronic schizophrenics were findings in a study by Zahn and associates. Their sample consisted of 52 male chronic schizophrenic patients and 20 normal males (Zahn et al., 1968, pp. 117-134). In his study on effects of a stress condition on process and reactive schizophrenics, Barry found different patterns of reaction to stress. Under his conditions the process or chronic schizophrenic performed in a more concrete fashion but showed less increase on anxiety measures than did the reactive or acute schizophrenic. He interpreted these results as consistent with the defense theories of chronic schizophrenic thought disorder (Barry, 1967).

As we have seen, there are diverse reports of the reactions of

schizophrenics to anxiety, as well as varied suggestions for treatment. Unfortunately, there is a lack of correlation in the findings of most research conducted with chronic schizophrenics. Kraus, in his study of "The Use of Symbolic Techniques in Group Psychotherapy with Chronic Schizophrenics," points out that on the grass roots level there is no effective therapy for our chronically schizophrenic hospital population (Kraus, 1970, pp. 156-157).

ANXIETY IN GROUP THERAPY WITH SCHIZOPHRENIC PATIENTS

The Schizophrenic's Reaction to Group Therapy

A certain amount of anxiety is expected in group therapy sessions, and in theory, some anxiety is deemed to be beneficial to learning in therapy. Group therapy must be modified, however, when the membership consists of chronic schizophrenic patients due to their low tolerance for anxiety in group situations. This high anxiety level serves to interfere with group interaction and can be detrimental to the individual.

Patients in group therapy should have some tolerance for anxiety. The emotional interaction between the group members and the therapist creates anxiety and, in group therapy, the anxiety is utilized therapeutically by the group therapist. The anxiety level of the group can be considered a gauge of group function (Johnson, 1963, p. 87).

It is necessary for the therapist to assess the level of anxiety of the group member as it can be damaging to personality functioning if the anxiety is not being used constructively (Johnson, 1963, p. 11).

Tension and anxiety beyond a point are potentially dis-integrating to the unified thinking, feeling, and behaving

functions of the schizophrenic, his defective physiological and psychological machinery indisposing him to dealing with these emotions (Wolberg, 1967, p. 1003).

Scheidlinger cites that these anxieties are inevitable due to the pressure and contact of patients which characterizes group therapy. He also warns that in a group with a membership high in personal pathology, such as schizophrenia, there is lower tolerance for situational frustrations (Scheidlinger, 1968, p. 8).

Kibel points out that when working with schizophrenic patients therapy methods must be modified to be more supportive (Kibel, 1968, p. 339). Johnson states that there is no difference in group dynamics in groups of patients with severe ego dysfunction but the degree of anxiety is more "massive, threatening, and frightening." The psychotic patient's feelings of rage, guilt and fear of retaliation accounts for much of his anxiety in group therapy (Johnson, 1963, p. 389).

The anxiety of psychotic patients in group therapy takes a different form than seen in group therapy with neurotic patients. Psychotic patients show a more bizarre and acting out pattern of behavior in groups. Johnson concludes that because of the psychotic's massive anxiety, his limited tolerance to frustration, and his irrational behavior, the therapist should modify his leadership technique when working with psychotics in group therapy (Johnson, 1963, p. 395). Johnson also recommends that group therapy with chronic psychotics, such as schizophrenics, be segregated by sex. He feels that mixed groups of these types of patients causes the anxiety level to be too high for satisfactory group therapy (Johnson, 1963, p. 392).

In the previously cited study by Walek and Lee, involving

psychotic patients receiving group therapy, the researchers found that systolic and diastolic blood pressures were increased following group therapy. They concluded that group therapy was stressful and that stress could be measured by an increase in blood pressure.

Implications for Leadership in Groups

The wide variance in types of group therapy is shown by the many terms that are used in describing the different forms of group therapy. A meaningful assessment of the literature, with any clear understanding of the meaning of the various terms used, is difficult because there is a lack of consistent definitions (Sethna and Harrington, 1971, p. 641, and Pattison et al., 1967, p. 287). In their study, "A Didactic Approach to Structure in Short Term Group Therapy," Shrader and associates explain the concept of structure to ". . . refer to a variety of techniques that make for greater specificity of problems treated, clearer direction in the therapeutic process, and more exact treatment goals" (Shrader et al., 1968, p. 493).

In her manual for training psychiatric nurses in group therapy, Smith discusses three "categories" of group therapy. The first group is called "neurotic" and includes neurotic patients and psychotics in good remission. The second type described is the "overtly psychotic" group which includes patients exhibiting a high degree of disturbance with little anxiety tolerance. The third group is labeled "geriatric" and is made up of patients who are at the lowest level of integration, including chronic schizophrenics of many years duration. Smith recommends a somewhat modified therapeutic approach for the second group due

to their very low anxiety tolerance and a remotivation technique for the third group (Smith, 1970, p. 110).

Implications for leadership might be found in Meyers' research on structuring communication and its effect on patients' reaction to stress. She states, "Less tension is created when the patient is given specific information upon which he can structure the event of impending stress" (Meyers, 1964, pp. 126-131). In her work with long term regressed patients, O'Conner used a didactic approach to allay apprehension in group therapy. A structured approach was used to overcome severe resistance which took the forms of silence, flight from meetings and complete withdrawal (O'Conner, 1969, p. 227).

Pattison and associates conducted research with all male, predominately chronic schizophrenic patients in group therapy to determine whether or not group therapy made a significant contribution to the patient's treatment. Among their findings was evidence that,

. . . group meetings which encourage free interaction by supplying minimal leadership result in increased anxiety and acting out, with an inhibition of the formation of greater reality orientation and self acceptance (Pattison et al., 1967, p. 294).

In a study on the influence of the therapist on the emotional climate in group therapy, Harrow found that,

. . . there was a moderate degree of tenseness in all sessions. . . . In addition, it is possible that being in groups is an anxiety arousing experience for many people, and particularly for mental patients. This consideration would apply here, since many mental patients have interpersonal difficulties and thus find group experience extremely trying, especially when complete structure is not provided for them in such situations (Harrow, 1967, pp. 49-64).

One study, specifically designed to determine the effect of leadership techniques on anxiety in small groups with college students, might have implications for selecting a leadership style for patient

groups. Wheatley considered four styles of leadership in four experimental groups as follows: (1) in the first group, the leader participated in the group discussion, (2) in the second group, the leader acted as a supervisor, (3) in the third group, the leader remained silent throughout the interaction and (4) in the fourth group, there was no leader present during group discussion. After a twenty-minute problem solving discussion, anxiety of the group members was measured by the Multiple Affective Adjective Check List. Wheatley's findings showed the leaderless group to be highest in anxiety but the results were not statistically significant (Wheatley, 1967). It might be concluded from Wheatley's study that a higher degree of anxiety occurred in the group that did not have a leader to provide some structure for the group process.

Frost has found active leadership to be useful for groups of patients with chronic schizophrenia. ". . . the leader helps them to assist themselves little by little so that they may eventually dare to engage in verbal exchange and reach out to each other (Frost, 1970, p. 272).

SUMMARY

In this review of pertinent literature we have attempted to present a sampling of the most prominent research studies and statements of opinion related to our subject of anxiety and leadership styles in group therapy with chronic schizophrenic patients. The areas of interest in working with schizophrenic patients include: a discussion of the concept of anxiety, reactions to anxiety, both psychological and physio-

logical, and the effect of anxiety in group therapy. Although the opinions are varied and the studies conflict, we used this background knowledge to assist us in conducting our research and analyzing the results.

While some authors use the concept of anxiety to describe a psychopathological condition, others have pointed to the value of anxiety in an individual's adaptation, emphasizing that psychopathology occurs only when the degree of anxiety becomes destructive. Other authorities divide the concept of anxiety into two categories: state, or transitory anxiety, and trait, or anxiety proneness.

Although it has been recognized that mild anxiety is beneficial in the individual's readiness to act, most authorities agree that increasing anxiety states interfere with perception and many aspects of cognitive functioning. In measuring the level of anxiety, most studies reviewed showed correlations between psychological and physiological indices.

The preponderance of opinion indicates that schizophrenic patients have tenuous anxiety tolerance and are unable to deal effectively with anxiety provoking situations. One researcher, however, concluded that induced anxiety can be an effective treatment modality for these patients.

Numerous authorities have been quoted in this literature review, who advise that group therapy must be modified due to the low anxiety tolerance of schizophrenics. There is a dearth of information available, however, on suggestions for what these modifications should include.

Chapter 3

RESEARCH METHODS

This study was undertaken to determine the relationship between group structure and the amount of anxiety experienced by chronic schizophrenic patients in group therapy. The types of groups compared were: a structured group in which the leaders maintained a directive role in the group process and a nonstructured group in which the leaders maintained a nondirective role in the group process.

The level of anxiety experienced by members of both groups was measured by physiological and psychological methods in order to provide a clear evaluation (Spielberger et al., 1968, p. 237 and Lader, 1970, pp. 58-59). The physiological measurements were blood pressure and pulse readings. The psychological measurement tool was the Spielberger Anxiety Test.

METHOD OF APPROACH

Scope of the Study

Population. In our opinion, the study has meaningful implications for the infinite population of all chronic schizophrenic patients whose ages are between 21 and 59 years. The specific population included patients on the men's and women's wards of the N units of Patton State Hospital, Patton, California. Patton State Hospital is a state operated institution for the care of psychiatric patients. The N units house patients who require ongoing inpatient hospitalization.

Permission to conduct the study was obtained from the Loma Linda University Board of Human Experimentation and the Board of Research, the Medical and Nursing Directors, and the designated Program Director of Patton State Hospital. The research procedure was presented and accepted after modifications recommended by the Board of Research at Patton State Hospital.

Sample. We used random sampling to select patients from the N units who met the criteria of the study. The criteria for selection were as follows:

1. Age range of 21 to 59 years.
2. Admitting diagnosis of chronic schizophrenia, as outlined in the Diagnostic and Statistical Manual for Mental Illness, and a history of one or more prior hospitalizations.
3. No known cardiovascular, neurological, or venereal disease that would distort physiological testing.
4. Ability to communicate (read, write, and speak) sufficiently for psychological testing.
5. Voluntary participation in the study.

A sample of 20 patients was chosen by random selection from a population of 73, with five male and five female patients in each of the two groups.

The minimum age was selected to eliminate adolescents, who react with higher anxiety than adults in group situations (Johnson, 1963, p. 33). Patients over 59 years of age were excluded due to the increased incidence of arteriosclerotic changes in this age group. Patients that were known to have cardiovascular, neurological, or

venerable disease that would affect the blood pressure and pulse were excluded from the sample. One patient who refused to cooperate with the psychological testing was excluded and another patient was randomly selected to replace him in the group.

In setting minimum requirements for patient participation prior to data collection, we decided that a maximum of three missed sessions for each patient and a total loss of three patients in each group would be allowed. These limitations were indicated due to the lack of responsibility of chronic schizophrenic patients. Only one patient was lost from the study, due to transfer for surgery. Two other patients missed one session each.

All patients involved in this study were receiving similar combination drug therapy. Antipsychotic agents included Thorazine, Mellaril, Stelazine, Haldol, and Navane. The antidepressant agent, Elavil and the antispasmodic, Artane were used for some patients. Included in the list of drugs were Benadryl and Chloral Hydrate which were used as sedatives. The specific drug regimen could not be controlled as a part of this study.

Method of Data Collection

Records of the male and female patients of the N units were reviewed for selection of all patients who met the criteria of the study. The name, age, sex and diagnosis of each patient were listed for randomized selection and for use in analysis of data. (See Appendix, p. 67.)

The nursing personnel were given a list of all patients selected for this study. A form was placed on each patient's chart

for the convenience of the nursing personnel in noting any unusual incident involving the patients that might influence the outcome of the study. (See Appendix, p. 68.) This form allowed a simple check mark to identify the following incidents:

1. Medication change.
2. Disturbing visit from a friend or relative.
3. Involvement in a traumatic incident with:
 another patient _____.
 other persons _____.
4. Receiving traumatic correspondence.
5. Participation in shock therapy or similar therapy.
6. Need for seclusion and/or restraint.
7. Any other (specify).

There were no incidents recorded by the staff for any patient included in the study.

Assignment of patients to groups. The names of all male patients were placed on a sheet of paper and assigned a number. The table of random numbers was then used for alternate placement of five male patients in each group. This method was repeated for the assignment of female patients to the two groups.

Pretesting preparation. The randomly selected patients were interviewed by both researcher therapists in a group situation. In this interview the patients were oriented to the purpose of the study and the plans for group sessions. (See Appendix, p. 69.) Voluntary cooperation and a written consent were obtained from each patient. (See Appendix,

p. 70.) Consent was refused by one patient and replacement was made by randomization.

TOOLS OF RESEARCH

Physiological Measures

A basal blood pressure and pulse were obtained for all patients included in the sample by a student in the graduate school of nursing who was paid to assist us in our data collection. This student's services were secured to eliminate the bias that might occur from our knowing the blood pressure and pulse measurements prior to the group experience. Blood pressure and pulse recordings were taken from each patient on two days, in the evening, just prior to the beginning of the study. This time of day was chosen because it coincided with the time the blood pressure and pulse were to be taken during the two-week period of data collection that followed the basal recordings. The mean of the two initial blood pressure and pulse recordings for each individual patient was used as his or her basal rate. None of the patients showed a significant disparity in basal rates. During the two-week period of group therapy, December 4 through December 15, 1972, blood pressure and pulse recordings were collected immediately before and after each session. All blood pressure and pulse measurements were made on the same arm of the patient, by the same research assistant using a Steth Lilly Sphygmomanometer and a Tyco's Stethoscope. The variations of 5 mm. Hg. are within the range of technical error. The patients were in the sitting position during all blood pressure and pulse readings.

Psychological Measure

The State-Trait Anxiety Inventory (Self Evaluation Questionnaire) developed by Spielberger, Gorsuch, and Lushene was used for the psychological measurement of anxiety-state and anxiety-trait (Spielberger et al., 1970). (See Appendix, pp. 60-61.) The stimulus of the group experience was expected to produce transitory anxiety, or an anxiety state (Spielberger, ed., 1966, p. 13). It was, therefore, necessary to select a tool which was designed to measure the state of anxiety as differentiated from the trait of anxiety (Spielberger, 1968, p. 241 and Spielberger, 1970, p. 19).

The State-Trait Anxiety Inventory (STAI) is comprised of separate self-report scales for measuring two distinct anxiety concepts, state anxiety (A-State) and trait anxiety (A-Trait). . . . The A-State scale is a sensitive indicator of the level of transitory anxiety experienced by clients and patients in counseling, psychotherapy, behavior therapy or on a psychiatric ward. It may also be used to measure changes in A-State intensity which occur in these situations (Spielberger et al., 1970, p. 3).

For the structured group the Self Evaluation Questionnaire was administered prior to the group experience, during the week of the basal physiological measurements, and at the conclusion of the two weeks of group therapy, immediately after the last group session. The test was given in a group situation rather than individually to minimize the threat of the testing experience. For the nonstructured group the procedure for administration of the test was identical to that of the structured group.

In administration of the A-Trait scale of 20 statements, the patients were asked to describe how they generally felt. In giving the A-State scale of 20 statements initially, the patients were asked to report how they felt at that specific time. In the test situation given

at the conclusion of the study, the patients were asked to report how they felt during group therapy. The range of possible scores varies from 20 to 80 on both the A-State and A-Trait subscales. Higher scores indicate a higher level of anxiety.

EXPERIMENTAL PROCEDURE FOR GROUPS

Group sessions for both groups were held each weekday evening for one hour over a period of two weeks. The groups met in the visitors room of N 16. The seating arrangement was in a circle. The sessions were co-led by the two research-therapists. The therapists' roles were identical for both groups in the promotions of the following therapeutic goals:

1. Identification of faulty adaptation patterns of individuals, such as coping mechanisms.
2. Support of positive mental health habits.
3. Sharing of feelings and emotions.
4. Promotion of free communication, such as acceptance of individual comments and/or ideas.
5. Assisting in problem-solving.
6. Aiding in clarification of issues.
7. Identification of resistance.

The therapists' roles differed in the method of fostering the mechanics of group process. The group interaction was guided by the therapists for the structured group (McGrew and Jensen, 1972). The process of interaction was not guided by the therapists in the non-structured group.

Structured Group

The process of group interaction in the structured group was directed by the therapists in five identifiable steps (see Appendix, pp. 62-63 for examples):

Step 1. Opening the group session.

Step 2. Drawing out the individual patient who presents a problem by encouraging the individual patient to verbalize concerning a problem or feeling.

Step 3. Involving a second group member in the discussion. Another person is included who may be expected to share similar feelings.

Step 4. Referring the problem to the group and maintaining the focus of the group on the issue.

Step 5. Summarizing the group session to promote support and benefit to members through an awareness of shared feelings.

Nonstructured Group

The process of group interaction in the nonstructured group was group directed. The therapists' roles in the mechanics of group process were limited to:

Step 1. Opening the group on the first day only.

Step 2. Encouraging group directed interaction by reflecting questions and comments, directed to the leaders, back to the groups.

Step 3. Therapists withdrawing as a focus of group interaction by allowing the patients to control the flow of conversation which varied from a particular theme to frequent change in focus.

Step 4. Therapists maintaining the protection of the patients by intervening when members of the group focused aggression and hostility

on one individual. Intervention was also made on behalf of any patient whose acting-out behavior posed a threat to himself or others.

Step 5. Therapists allowing summarization by group members if this occurred spontaneously. Therapists terminating the group session (see Appendix, pp. 64-66 for examples).

SUMMARY

Experimental research methods were set up to compare the level of anxiety experienced by chronic schizophrenic patients in group therapy, comparing two leadership styles. Blood pressure and pulse were used as physiological measures of arousal. The psychological tool for measurement of subjective anxiety was the Spielberger Self Evaluation Questionnaire.

Chapter 4

ANALYSIS AND INTERPRETATION OF THE DATA

At the conclusion of group therapy and collection of data, the results of the physiological and psychological measurements of anxiety were programmed on computer data cards for processing and analysis. The treatment, significance and interpretation of this data will be considered here.

TREATMENT OF THE DATA

Analysis of covariance was selected as a statistical technique for processing the data. This method tests the significance of the differences between the two groups after the initial random sampling errors are statistically eliminated. The statistical analysis included:

1. Analysis of covariance for psychological data to determine the difference between groups in the amount of anxiety experienced. The independent variables included design variables and covariables. The design variables were treatment and sex. The treatment consisted of either structured or nonstructured group therapy. The covariable was the psychological prescore. The psychological postscore was the dependent variable.

2. Analysis of covariance for the physiological data to determine the difference between groups in the amount of anxiety and/or arousal experienced. The design variables were treatment, sex and the individual. The covariables were (a) the prescores of pulse and time

with a dependent variable of pulse postscores, (b) the prescores of systolic blood pressure and time with a dependent variable of systolic blood pressure postscores and (c) the prescores of diastolic blood pressure and time with a dependent variable of diastolic blood pressure postscores.

3. Analysis of prestimulus blood pressure, over time (blood pressure taken before each daily session) to determine the difference between groups in the amount of anxiety and/or arousal experienced in anticipation of the group sessions. The design variables were treatment, sex and the individual. Covariables included time regression for each group to determine if there was a significant difference in the slope of the line fitted to the data. The dependent variables were (a) the prescores of systolic blood pressure and (b) the prescores of diastolic blood pressure.

PRESENTATION OF THE DATA

The central questions guiding the collection and analysis of the data were:

1. Will there be a significant difference between the amount of anxiety and/or arousal experienced by chronic schizophrenic patients in a structured group as compared with a nonstructured group? If there is a significant difference in the amount of anxiety experienced between the groups, in which group will the greater anxiety and/or arousal be experienced?

2. Will there be a significant difference between the amount of anxiety and/or arousal experienced by chronic schizophrenic patients in

anticipation of group therapy in structured sessions with directive leadership as compared to nonstructured sessions without directive leadership? If there is a significant difference in the amount of anxiety experienced between the groups in anticipation of the group sessions, in which group will the greater anxiety and/or arousal be experienced?

In preparation for data collection other questions were raised. These additional questions were:

1. Is sex a significant factor in the amount of anxiety and/or arousal experienced by chronic schizophrenics in group therapy?
2. Is interaction a significant factor within the groups? That is, does the treatment affect males and females in each group differently? If so, is there a significant difference between the two groups?

Anxiety and/or Arousal Experienced in the Experimental Groups

We used both psychological and physiological measurements to provide a more reliable index of the difference between groups in the amount of anxiety and/or arousal experienced by the subjects. The Spielberger Self-Evaluation Questionnaire provided a subjective evaluation of the patient's level of anxiety. Correlation was made between the A-Trait, or anxiety proneness, and the A-State, or transitory anxiety. Pulse and blood pressure measurements were used to determine the level of physiological arousal.

Psychological data. In an analysis of covariance of the psychological A-State data, the difference between groups in the amount of anxiety experienced was found to be significant at the 5 percent (0.05)

level, with an F-ratio of 4.78. The structured group had higher predicted values. Sex was not found to be a significant factor, with an F-ratio of 1.76 (see Table 2). A two by two cell comparison of predicted psychological values is given in Figure 1. The predicted values represent the estimated scores after correction for covariables was made.

	Male	Female
Structured group	39.58	44.16
Nonstructured group	31.87	36.45

Figure 1

Predicted Values for
Psychological Tests

The psychological prescores were found to be significant in indicating the psychological postscores. An F-ratio of 21.20 was significant at the 0.1 percent (0.001) level, indicating little change between prescores and postscores (see Table 2). In a comparison of the means of A-Trait and A-State scores, the A-Trait scores, or anxiety proneness, were generally found to be indicative of the A-State scores, or transitory anxiety for both groups (see Table 3).

Physiological data. An analysis of covariance was made for pulse, systolic blood pressure and diastolic blood pressure measurements.

The F-ratio for treatment was 0.09 in analysis of the pulse recordings (see Table 4). This indicated that there was not a significant difference in the amount of arousal experienced by the individuals in the two groups, when pulse is used as an indicator (see Figure 2 which presents a two by two cell comparison of predicted pulse values).

Table 2
Analysis of Covariance for Group Experience

Psychological Data		
Variable	Degrees of Freedom	F-Ratio*
Treatment	1	4.78171
Sex	1	1.75870
Prescore	1	21.20198

*Statistical Significance: $F_{95}(1,12) = 4.75$, $F_{99}(1,12) = 9.33$,
 $F_{999}(1,12) = 18.6$.

Table 3
Comparison of A-Trait and A-State Scores

Group	Scale	Mean
<u>Before Group Experience</u>		
Structured Group	Trait	42.3
	State	44.0
Nonstructured Group	Trait	37.0
	State	39.5
<u>After Group Experience</u>		
Structured Group	Trait	43.5
	State	43.1
Nonstructured Group	Trait	37.4
	State	32.7

Table 4
Analysis of Covariance for Group Experience

Physiological Data			
Source	Variable	Degrees of Freedom	F-Ratio*
S.B.P.**	Treatment	1	5.58390
"	Sex	1	5.23734
"	Interaction	1	41.12924
"	Time	1	0.81265
"	Prescore	1	18.82558
D.B.P.**	Treatment	1	2.79149
"	Sex	1	11.36324
"	Interaction	1	19.94519
"	Time	1	0.34957
"	Prescore	1	17.81172
Pulse	Treatment	1	0.09905
"	Sex	1	27.65599
"	Interaction	1	12.73639
"	Time	1	3.69298
"	Prescore	1	39.15215

*Statistical Significance: $F_{95} = 3.92$, $F_{99} = 6.85$, $F_{999} = 11.4$.

**S.B.P. = Systolic Blood Pressure; D.B.P. = Diastolic Blood Pressure.

Sex, however, was found to be highly significant (0.1 percent, 0.001, level) with an F-ratio of 27.66. In a comparison of means the males had higher predicted values than the females (see Figure 2). The covariable of pulse prescores was found to be indicative (0.1 percent, 0.001, level) of the pulse postscores with an F-ratio of 39.15. Time was not found to be significant but with an F-ratio of 3.69 there was a strong trend toward the 5 percent (0.05) level of significance at 3.92. Interaction was found to be a significant factor with an F-ratio of 12.73, or a 0.1 percent (0.001) level of significance (see Table 4).

	Male	Female
Structured Group	87.5	85.4
Nonstructured Group	92.0	81.5

Figure 2

Predicted Pulse Values

A significant difference between the two groups in the level of arousal was found when measured by systolic blood pressure. The F-ratio of 5.58 was significant at the 5 percent (0.05) level (see Table 4). The structured group had higher predicted values (see Figure 3).

	Male	Female
Structured Group	105.4	110.3
Nonstructured Group	110.2	100.3

Figure 3

Predicted Values for Systolic
Blood Pressure

Sex was significant at the 5 percent (0.05) level with an F-ratio of 5.24. The males had higher predicted values than the females (see Figure 3). Systolic prescores were significant indicators of systolic postscores. The F-ratio of 18.82 was significant at the 0.1 percent (0.001) level. The time F-ratio of 0.81 was not significant. Interaction was very significant (0.1 percent, 0.001, level) with an F-ratio of 41.13 (see Table 4).

A trend toward a significant difference between groups in the level of arousal was found in diastolic blood pressure measurements, with an F-ratio of 2.79 (see Table 4). This trend becomes relevant when assessed with the significance shown by the systolic blood pressure. Again, the structured group had higher predicted values (see Figure 4). Sex was significant at the 0.1 percent (0.001) level with an F-ratio of 11.36 (see Table 4). The males had higher predicted values than the females (see Figure 4). Diastolic prescores were significant indicators of diastolic postscores (0.1 percent, 0.001, level) with an F-ratio of 17.81. Time was not significant with an F-ratio of 0.35. Interaction was significant at the 0.1 percent (0.001) level with an F-ratio of 19.95 (see Table 4).

	Male	Female
Structured Group	69.0	70.6
Nonstructured Group	72.3	64.0

Figure 4

Predicted Values for Diastolic
Blood Pressure

Anxiety in Anticipation of the
Group Experience

Some authorities have noted that anxiety and/or arousal is experienced in anticipation of a situation that is expected to be stressful. We decided to analyze the daily pregroup blood pressure recordings to determine if there was a difference between the two groups in the level of physiological arousal in anticipation of the group experience. Blood pressure was chosen as a measurement for this analysis because it is considered to be less labile, over time, than pulse.

Systolic blood pressure. A significant difference in the arousal level in anticipation of the group experience was reflected in the systolic blood pressure measurements. The structured group was higher with an F-ratio of 7.76, significant at the 1 percent (0.01) level (see Table 5). These results must be viewed with caution since the results chiefly reflect the difference found between the scores for the female patients. Sex had an F-ratio of 4.33 which was significant at the 5 percent (0.05) level with the men showing higher predicted values than women (see Figure 5).

	Male	Female
Structured Group	109.8	113.4
Nonstructured Group	109.5	100.6

Figure 5

Predicted Values for Anticipation
Systolic Blood Pressure

Table 5
Analysis of Physiological Data for Anticipation

Source	Variable	Degrees of Freedom	F-Ratio*
S.B.P.	Treatment	1	7.75774
"	Sex	1	4.33477
"	Interaction	1	24.06230
"	$B_1 = B_2^{**}$	1	3.90584
D.B.P.	Treatment	1	4.70081
"	Sex	1	0.65923
"	Interaction	1	42.90228
"	$B_1 = B_2$	1	1.32732

*Statistical Significance: $F_{95} = 3.92$, $F_{99} = 6.85$, $F_{999} = 11.4$.

** $B_1 = B_2$ is regression analysis.

A regression analysis was done to compare the difference between the covariable of time regression for the structured group with time regression for the nonstructured group as measured by systolic blood pressure. This difference was not significant.

Diastolic blood pressure. Diastolic blood pressure analysis showed a significant difference in the arousal level in anticipation of the group. The difference was significant at the 5 percent (0.05) level with an F-ratio of 4.70 (see Table 5). The structured group again had higher values (see Figure 6). Sex was not significant with an F-ratio of 0.66. The regression analysis again showed no significant difference between the structured and nonstructured groups (see Table 5).

	Male	Female
Structured Group	64.7	71.5
Nonstructured Group	67.0	61.7

Figure 6

Predicted Values for Anticipation
Diastolic Blood Pressure

DISCUSSION

Analysis of the psychological data showed that there was significantly more anxiety experienced by the structured group. This finding supports our alternate hypothesis which states that there will be significantly less anxiety and/or arousal experienced by chronic schizophrenic patients in a nonstructured group as compared with a structured group.

An appraisal of the scores of the Spielberger tests showed that the defense mechanisms of some patients prevented a realistic view of their level of anxiety. Low scores on both A-Trait and A-State scales indicated that some individuals were blocking an awareness, or revelation of even a normal state of anxiety. This observation is consistent with the findings of Barry (1967) and the defense theories of schizophrenic thought disorder, which postulates that chronic schizophrenics show less increase on anxiety measures than acute schizophrenics. The use of the covariable of the individual was included to counteract a bias in the results of the analysis.

The significant difference found on analysis of the systolic blood pressure measurement, together with the trend toward significance of the diastolic blood pressure measurements, supports the psychological data. The structured group experienced a higher level of arousal as a result of group therapy, when measured by these indices.

The lack of significance of the heart rate data raises the question of the limited duration of this parameter as an indicator of arousal over time. While pulse has been found to be a stable measurement of physiological arousal in many studies, these results were obtained by measuring heart rate during the experience of the stressful stimuli (Kelly et al., 1970, Gibby, 1969, and Johnson and Spielberger, 1968). In our study, all physiological measurements were collected before and after each group session, not during the experience.

The findings of the analysis of systolic and diastolic blood pressures taken before each group session revealed that the highest blood pressure recordings for most of the individuals in both groups

were found to be in anticipation of the group experience. The patients in the structured group had a significantly higher level of arousal in anticipation of group therapy than the patients in the nonstructured group. These results support the findings of several other researchers who have concluded that the greatest arousal occurs in anticipation of a stimulus (Elms, 1964 and Deane, 1969). We also believe that the significant difference in the level of arousal between groups is in agreement with Epstein's and Clark's conclusion that the physiological arousal is directly related to the anticipated intensity of the noxious stimuli (Epstein and Clark, 1970, pp. 105-112).

The increased arousal and subjective evaluation of anxiety is consistent with our observation that there was more direct verbal interaction in the structured group, in which the process was leader-directed, than occurred in the nonstructured group. This verbal interaction increased the "groupness" and working potential of the group members.

We also observed that the members of the nonstructured group used more acting-out and more obvious defense mechanisms against anxiety than members of the structured group. Several theorists have cited the necessity for increased structure to decrease the need for these methods of withdrawal by chronic schizophrenic patients (Johnson, 1963, O'Connor, 1969, Harrow, 1967).

In the nonstructured group where the process of interaction was not directed the patients were obviously freer to employ anxiety reducing avoidance patterns, characteristic of the chronic schizophrenic patient. This observation raises the question of whether or not the results would have remained the same if the study were over a longer period of time,

when more interaction (verbal) might be expected in the working phase of both groups.

The incidences of acting-out in the nonstructured group took the forms of increased amounts of smoking, insistence on leaving the group situation, withdrawal from verbal participation, hallucinations, switching seats and nervous gestures (i.e., shaking feet, playing with hair, tapping fingers, etc.). These anxiety-reducing and avoidance patterns may have prevented an increase in measurable anxiety and/or arousal in these patients.

In our analysis of the covariance of sex, we found that the male patients experienced a significantly higher degree of physiological arousal than the female patients. This finding was consistent for all physiological measurements, but was not borne out by psychological evaluation, in which the difference was not found to be significant.

The analysis of interaction showed that the treatment affected males and females in each group differently but there was no consistency in the pattern of reaction.

SUMMARY

Results of this study showed that the chronic schizophrenic patients in our nonstructured group sample showed significantly less anxiety and/or arousal than the patients in the structured group sample, thereby supporting our alternate hypothesis H_2 . Also, we noted that higher recordings of physiological arousal were found in anticipation of the group experience, with the structured group showing significantly higher levels than the nonstructured group.

In an analysis of the covariance of sex, we found that the male patients experienced a significantly higher degree of physiological arousal than the female patients but this finding was not borne out by the psychological data.

No consistent pattern was found in an analysis of interaction to determine whether or not the treatment affected the males and females in each group differently.

The results of this study must be viewed with caution due to the relatively small number in the sample and the short duration of group experience. In addition, different results might have been obtained if other methods of measuring anxiety and/or arousal had been used.

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

While some anxiety may be a useful aid to the learning process in groups, the tenuous anxiety tolerance of chronic schizophrenics poses some problems for group leadership. There is a need for an assessment of the level of anxiety that can be anticipated with different methods of leadership. This assessment process allows the therapist to choose the leadership style which best meets his goals. There is, however, a dearth of literature on the relationship of leadership style to the amount of anxiety experienced by these patients.

The problem set forth in this paper is that of assessing the level of anxiety and/or arousal experienced by chronic schizophrenics when two methods of group leadership are used. A structured group in which the leader maintained a directive role was compared with a non-structured group in which the leader maintained a nondirective role in the group process.

In this experimental explanatory study, we selected a sample of 20 chronic schizophrenic patients (10 female and 10 male) from a population of three inpatient units at Patton State Hospital, Patton, California. The group sessions and data collection occurred in December, 1972.

We used the Spielberger Self-Evaluation Questionnaire for the

subjective measurement of anxiety. Physiological indices of arousal were blood pressure and pulse measurements.

A computer was used for an analysis of covariance of psychological and physiological data.

CONCLUSIONS

1. In our sample of chronic schizophrenic patients, there was a significantly higher amount of anxiety and/or arousal experienced by the patients in the structured group when compared with the patients in the nonstructured group.

2. There was a significantly higher level of anxiety experienced by the patients in the structured group in anticipation of group therapy when compared with the patients in the nonstructured group.

3. Sex was found to be a significant factor in the amount of anxiety experienced by these chronic schizophrenic patients with the males experiencing greater anxiety than the females.

4. Interaction was found to be a significant factor but no consistency in reaction was found.

IMPLICATIONS FOR NURSING

1. The nurse-therapist should be aware of the relationship of leadership style to anxiety.

2. The nurse-therapist, in leading group therapy, should be able to choose the method of leadership that best meets the goals of the group.

3. Interdisciplinary staff meetings should be used to minimize

discrepancy between leadership approaches being used with the same patients.

RECOMMENDATIONS FOR FURTHER RESEARCH

1. This study might be repeated over a longer period of time to see if the same results would be obtained when a greater amount of interaction might be expected in the nonstructured group.

2. The same type of study might be done using other methods of assessing anxiety, especially forearm blood flow and Galvanic Skin Response.

3. Since the "after-group" physiological measurements were taken after patients had been in a sitting position for an hour, we suggest a repeated study that would include having the patients sit for a longer period of time prior to "before-group" measurements.

4. The study might be repeated with other styles of leadership.

5. The study might be repeated with all patients of the same sex.

6. The study might be repeated for schizophrenic patients in a community facility, both for inpatients and outpatients.

7. The study might be repeated on groups of patients in which the researchers are not the therapists.

8. The study might be repeated with cultural and socioeconomic factors as variables.

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APPENDIX

SELF-EVALUATION QUESTIONNAIRE

STAI FORM X-2

NAME _____ DATE _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
21. I feel pleasant	①	②	③	④
22. I tire quickly	①	②	③	④
23. I feel like crying	①	②	③	④
24. I wish I could be as happy as others seem to be	①	②	③	④
25. I am losing out on things because I can't make up my mind soon enough	①	②	③	④
26. I feel rested	①	②	③	④
27. I am "calm, cool, and collected"	①	②	③	④
28. I feel that difficulties are piling up so that I cannot overcome them	①	②	③	④
29. I worry too much over something that really doesn't matter	①	②	③	④
30. I am happy	①	②	③	④
31. I am inclined to take things hard	①	②	③	④
32. I lack self-confidence	①	②	③	④
33. I feel secure	①	②	③	④
34. I try to avoid facing a crisis or difficulty	①	②	③	④
35. I feel blue	①	②	③	④
36. I am content	①	②	③	④
37. Some unimportant thought runs through my mind and bothers me	①	②	③	④
38. I take disappointments so keenly that I can't put them out of my mind	①	②	③	④
39. I am a steady person	①	②	③	④
40. I become tense and upset when I think about my present concerns	①	②	③	④

SELF-EVALUATION QUESTIONNAIRE

Developed by C. D. Spielberger, R. L. Gorsuch and R. Lushene

STAI FORM X-1

NAME _____ DATE _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you *feel* right now, that is, *at this moment*. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	NOT AT ALL	SOMEWHAT	MODERATELY SO	VERY MUCH SO
1. I feel calm	①	②	③	④
2. I feel secure	①	②	③	④
3. I am tense	①	②	③	④
4. I am regretful	①	②	③	④
5. I feel at ease	①	②	③	④
6. I feel upset	①	②	③	④
7. I am presently worrying over possible misfortunes	①	②	③	④
8. I feel rested	①	②	③	④
9. I feel anxious	①	②	③	④
10. I feel comfortable	①	②	③	④
11. I feel self-confident	①	②	③	④
12. I feel nervous	①	②	③	④
13. I am jittery	①	②	③	④
14. I feel "high strung"	①	②	③	④
15. I am relaxed	①	②	③	④
16. I feel content	①	②	③	④
17. I am worried	①	②	③	④
18. I feel over-excited and rattled	①	②	③	④
19. I feel joyful	①	②	③	④
20. I feel pleasant	①	②	③	④



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STRUCTURED GROUP

Step One - Opening the Group Session.

Examples: First Day. Orient the patients to the group process.

Reintroduction of the leaders and welcome. Following days open with a greeting.

"We want to welcome you to the group. We are very glad each of you is here this evening. This is Lee McGrew and I am Judy Jensen.

"We will be meeting each evening Monday through Friday, for two weeks, at 6:00 P.M., for one hour. We will be using this room for our meetings. Each one of you is an important member of this group. We feel it is very important for you to be here for each session. There may be times when you feel uneasy about coming to the group, but you will find that being in the group will help you as you share conflicts and problems with each other."

(For the first day only, group sharing was facilitated by each member discussing the "thing I like best to do.")

Step Two - Drawing out the individual patient who presents a problem by encouraging the individual patient to verbalize concerning a problem or feeling.

Example:

Patient: "I came here to get some help from group therapy."

Therapist: "You are saying you have definite things you want to get from group therapy?"

Step Three - Involving a second group member in the discussion. Another person is included who may be expected to share similar

feelings.

Example: Therapist: "Mr. B., maybe you could tell us if you feel the same about the group since you are a new member here also."

Mr. B.: "Well, I think it can help, but I don't know just exactly what I want to get from the group."

Step Four - Referring the problem to the group and maintaining the focus of the group on the issue.

Example: Therapist: "Are there others of you who have similar feelings about the group?"

Miss C.: "I think it's a place you can talk about feelings, but I don't think they know what their feelings are."

Step Five - Summarizing by the therapist to promote support and benefit to members through an awareness of shared feelings.

Example: Therapist: "So you're all saying there is something you feel you can get out of the group, but you have a hard time explaining it."

NONSTRUCTURED GROUP

Step One - Opening the Group Session.

Example: First day the therapists open the meeting and orient the patients to the group process. There is a reintroduction of the leaders and welcome. The following days the therapists will not open the session.

"We want to welcome you to the group. We are very glad each of you is here this evening. This is Lee McGrew and I am Judy Jensen.

"We will be meeting each evening Monday through Friday, for two weeks, at 7:30 P.M., for one hour. We will be using this room for our meetings. Each one of you is an important member of this group. We feel it is very important for you to be here for each session. There may be times when you feel uneasy about coming to the group but you will find that being in the group will help you as you share conflicts and problems with each other.

"In this group you will have an opportunity to talk about your feelings and whatever you would like to share together. Since this is your group, you may discuss whatever you would like together, in any way you choose. We will leave it up to you to bring up the things you want to discuss at each meeting." (In the following days of group therapy, the patients were allowed to open the group meetings and to initiate the topic for discussion.)

Step Two - Encouraging group directed interaction.

Example: Reflect questions and comments directed to the therapists back to the group.

Patient: "What are we supposed to talk about?"

Therapist: "You are wondering what to tell the group?"

Step Three - Therapists withdraw as the focus of group interaction.

After the initial orientation, the group process will be group directed. Leadership of the therapists will be limited to, identification of faulty adaptation patterns of individuals, support of positive mental health habits, sharing of feelings and emotions, promotion of free communication, assisting in problem solving, aiding in clarification of issues, and identification of resistance.

Step Four - Maintaining protection of the patient.

As a part of our therapeutic role, we will maintain protection and safety of the individual by intervention when members of the group focus aggression and hostility on one member. Intervention will also be made on behalf of any patient whose acting-out behavior poses a threat to himself or others.

Example: Mr. B. to another patient: "What would you do if I punched you in the nose?"

Therapist: "Mr. B., you are feeling angry this morning?"

The therapist promotes expression of feelings rather than acting-out behavior.

Step Five - Allowing summarization by group members. Therapists terminate group sessions.

In this group no assessment will be made by the therapists. The members will be allowed to summarize the group meeting to promote group directed leadership and to promote group cohesiveness. If

the patients do not do this, the therapists will simply close the session.

Example: Therapists: "That is all the time we have for today."

INFORMATION SHEET

Name:

Hospital Number:

Age:

Sex:

Diagnosis:

Reads:

Writes:

Arteriosclerotic Disease:

Neurologic Disease:

Veneral Disease:

ATTENTION ALL NURSING STAFF

REGARDING (PATIENT'S NAME)

This patient is a voluntary participant in a group therapy study during the period between (dates) and (dates) . We would appreciate your notation of any of the following incidences and/or any other unusual events you feel might influence the outcome of the study.

Medication change								
Disturbing visit from a friend or relative								
Involvement in a traumatic incident with: another patient								
other persons								
Receiving traumatic correspondence								
Participation in shock therapy or similar therapy								
Need for seclusion and/or restraint								

Any other (specify): _____

We appreciate your helpfulness in making this study effective and beneficial to the patients. Thank you.

EXAMPLE OF THE PATIENT INTERVIEW

Introduction	Mrs. Zerox, this is Lee McGrew and I am Judy Jensen. We are Registered Nurses in graduate study at Loma Linda University. We are leading in group therapy here at Patton.
Statement about the Study	We are interested in finding out the best approach to group therapy for you and the other patients here. We will be leading two groups each weekday evening for two weeks.
Statement about Group Therapy	To help us know how you are feeling, we will be taking your blood pressure before and after the group each day. Also we would like to give you an opportunity to express your feelings on a paper and pencil questionnaire before we start group therapy and at the end of the two weeks.
Statement about Confidentiality	We would like to have you in the group and we want you to know that any information obtained through these groups will be held confidential.
Statement about Mechanics	You will be in a group each evening, Monday through Friday from _____ P.M. to _____ P.M. in _____ room.
Securing Consent	The patient signs a written consent (see page 70).

PATIENT CONSENT FORM

Hospital # _____ Code # _____

Name: _____ Sex: _____ Age: _____ Date: _____

Education: Elementary and High College Postgraduate

1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10

College Degrees: BA(BS)___ MA(MS)___ Ph.D. ___ MD ___ DO ___ DDS ___
 Other (specify) _____

It has been explained to me that participation in this experimental study is voluntary, that the information obtained through this study about me will be treated in a confidential manner in accordance with the California Welfare and Institutions Code Section 5328, and that any report or publication resulting from this study will not contain any information which might lead to the identification of the participants in this study.

I hereby state that I am participating in this study on a voluntary basis.

(signed)

LOCAL RESEARCH PROJECT No. 208

DEPARTMENT OF MENTAL HYGIENE

Patton State Hospital

APPLICATION FOR LOCALLY SUPPORTED RESEARCH PROJECT

PRINCIPAL INVESTIGATOR(S) Judith L. Jensen and W. Leona McGrewTITLE OF PROJECT: Leadership Techniques in Groups with Chronic
Schizophrenics.APPROX. DATES OF STUDY December 1972 through January 1973OTHER PUBLIC OR PRIVATE FACILITY INVOLVED: Yes Name Loma
Linda UniversityPRIMARY SOURCE OF FUNDS: None ___ Local ___ DMH ___ Amount \$ ___
Non-state ___ (specify source) ___ Amount \$ ___OTHER SOURCE OF FUNDS (specify source) HEW Public Health Service
Tuition
Grant for Graduate Studies Amount \$ & Stipend

SUMMARY (Problem, Hypotheses, Subjects, Procedure, Analysis):

Problem: The tenuous anxiety tolerance of Chronic Schizophrenic patients poses a particular problem in group therapy. Leadership techniques can be used to modify group process, which affects anxiety, with these patients.

Hypotheses: H_0 - There will not be a significant difference between the amount of anxiety and/or arousal experienced by Chronic Schizophrenic patients in a structured group as compared with a nonstructured group.
 H_1 - There will be significantly less anxiety and/or arousal experienced by Chronic Schizophrenic patients in a structured group as compared with a nonstructured group.
 H_2 - There will be significantly less anxiety and/or arousal experienced by Chronic Schizophrenic patients in a nonstructured group as compared with a structured group.

Subjects: A random sample of ten male and ten female patients will be chosen from the N units.

Procedure:	E ₁	E ₂
A pretest of blood pressure and pulse daily, before group.		
A psychological test prior to the study.	x	x
Stimulus of the group session	x ₁	x ₂
E ₁ = structured group		
E ₂ = nonstructured group		

Procedure (continued)

A post test of blood pressure and pulse daily.

x x

A psychological test after the sessions ended.

Analysis:

An analysis of covariance will be done on the psychological and physiological data. The subjective findings will be looked at for possible correlation with the analysis of other data.

DATE APPROVED BY HOSPITAL RESEARCH COMMITTEE September 28, 1972

Department of Mental Hygiene

Patton State Hospital

Patton, California 92369

Date November 22, 1972

As a condition of doing research concerning persons who have received services from Patton State Hospital, I, Judith L. Jensen, R.N., agree not to divulge any information obtained in the course of such research to unauthorized persons, and not to publish or otherwise make public any information regarding persons who have received services such that the person who receives services is identifiable.

I recognize that unauthorized release of confidential information may make me subject to a civil action under provisions of the Welfare and Institutions Code.

Signed

Judith L. Jensen

Institutional Affiliation

Loma Linda University

Department of Mental Hygiene

Patton State Hospital

Patton, California 92369

Date November 22, 1972

As a condition of doing research concerning persons who have received services from Patton State Hospital, I, W. Leona McGrew, R.N., agree not to divulge any information obtained in the course of such research to unauthorized persons, and not to publish or otherwise make public any information regarding persons who have received services such that the person who receives services is identifiable.

I recognize that unauthorized release of confidential information may make me subject to a civil action under provisions of the Welfare and Institutions Code.

Signed W. Leona McGrew

Institutional Affiliation Loma Linda University

LOMA LINDA UNIVERSITY

Graduate School

LEADERSHIP TECHNIQUES IN GROUPS WITH
CHRONIC SCHIZOPHRENICS

by

Judith L. Jensen and W. Leona McGrew

An Abstract of a Thesis
in Partial Fulfillment of the Requirements
for the Degree Master of Science
in the Field of Nursing

April 1973

ABSTRACT

The study was designed to assess the level of anxiety experienced by chronic schizophrenic patients when two different methods of leadership were used in group therapy. A search of literature revealed suggestions for modification of leadership approach due to the tenuous anxiety tolerance of chronic schizophrenics but no studies were found directly related to the amount of anxiety resulting from different leadership approaches.

A structured group in which the leader maintained a directive role was compared with a nonstructured group in which the leader maintained a nondirective role in the group process. The randomized sample included five male and five female patients in each group. The groups met each weekday evening for a period of two weeks.

The Spielberger Self-Evaluation Questionnaire was used for the subjective measurement of anxiety. Physiological arousal was measured by blood pressure and pulse recordings. A computer was used for an analysis of covariance on both psychological and physiological data.

The findings generally supported the alternate hypothesis that there would be significantly less anxiety and/or arousal experienced by chronic schizophrenic patients in a nonstructured group as compared with a structured group. Analysis of the psychological data and the systolic and diastolic blood pressures showed significantly higher scores for the structured group. Analysis of pulse revealed no significance.

The "before-group" recordings of blood pressure were analyzed

to see if there was a significant difference in arousal in anticipation of the group experience. The structured group was found to have a significantly higher level of arousal when measured by blood pressure. Both groups had higher blood pressure means in anticipation of the group experience.

Sex was found to be a significant factor in the amount of anxiety experienced by these chronic schizophrenic patients, with the males having higher scores than the females.

An analysis of interaction, to determine whether or not the treatment affected males and females in each group differently, showed significance but no consistent pattern.