The Effects of Meditation on Counselor Candidates' Self-Actualization

Clifton H. Burrows

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THE EFFECTS OF MEDITATION ON COUNSELOR CANDIDATES' SELF-ACTUALIZATION

by

Clifton H. Burrows

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
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Department of Counseling and Personnel

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The effects of meditation on counselor candidates' self-actualization

Clifton H. Burrows, Ed.D.
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The purpose of this investigation was to (1) determine the effectiveness of meditation in promoting healthy adjustment or self-actualization in counselor candidates; and (2) ascertain whether a meditation group generates a more positive change in self-actualization than do a treatment control and a control group.

The sample consisted of 39 volunteer graduate students in counselor education courses at two major universities. Three intact classes were used, with members of each group made up from the same class. Classroom groups were randomly assigned to two treatment conditions, meditation (M) and relaxation (TC), and to a third no-treatment condition (C).

Treatment was carried out over an eight-week period. A quasi-experimental design was employed, using the Personal Orientation Inventory (POI) as the dependent variable. The construction of a bogus treatment control (relaxation) that closely matched meditation in its training procedures, complexity, and expectation-generating
aspects provided methodological control. Further control was established by using a form of meditation that was relatively unknown while reducing training time to the bare minimum necessary to teach the technique. Both treatment groups were instructed and tested by trainers.

The significance level was set at .05 for all testing. No significant differences existed between groups before treatment. Application of the one-way analysis of variance after treatment revealed no significant differences among groups on the 12 POI scales. As such, the hypotheses of the study were not confirmed when the controls for internal validity were taken into account. To allow for comparison with previous research, t-tests were performed. Testing revealed significant change for the (M) group on the major scale of inner-directedness and five subscales of the POI. The (TC) recorded significant change on four subscales. The (C) improved significantly on one subscale.

The study indicates that when internal validity factors are tightly controlled, meditation does not demonstrate significant effectiveness in promoting positive personality changes. Based on this observation, a recommendation was made that the phenomenon of meditation may be better explored through more subjective styles of inquiry, rather than the group approach.
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Clifton H. Burrows
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CHAPTER I

INTRODUCTION

One of the purposes of graduate programs in counselor education is to train qualified counselors. With modern academic institutions caught between the rising economic cost of providing educational services and a concomitant cutback in budgets, the necessity for counselor training programs to identify those variables and methods that most directly enhance counselor effectiveness becomes increasingly important.

Background

A clearly documented factor in counselor effectiveness or ineffectiveness has been the person, sometimes called the "self," of the counselor. Noted counselor educators and researchers such as Rogers (1951), Tyler (1961), and Wrenn (1962) have underscored the importance of the counselor's self-concept and its role in training.

Thirty years ago, Wrenn (1952), among others, suggested that the most important ingredient in counseling is the personality of the counselor. Since that time research by Allen (1967), Carkhuff and Berenson (1967), Maslow (1962), Rogers (1958, 1962), Truax and

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Carkhuff (1967) has continued to substantiate the existence of a positive relationship between the personal qualities of the counselor and the ability to facilitate positive change in clients.

Arbuckle and Wicas (1957) suggested that technical competence was less important than positive self-perception in the training of counselors. Williamson (1965) recognized the basic importance of non-intellectual qualities to effective functioning in a counseling relationship. Truax and Mitchell (1971) hypothesized and substantiated that successful implementation of counseling strategies was dependent on the personality of the counselor.

Rogers (1951) was among the first to emphasize an individual orientation towards counselor training. He theorized that the human organism has a basic tendency to grow—to expand and to actualize—that this growth is in a forward (positive) direction and is best achieved when the "basic concepts" of empathy, positive regard and genuineness are present. When the basic concepts are available in the emotional environment of the organism, the organism is set free to develop its own unique potentials and capabilities. By stressing individual orientation in counselor training, Rogers was recognizing that the trainee must be set free to develop a unique approach to counseling as a function of his uniqueness.
as a person.

The process of human development has come to be known as self-actualization. Maslow (1954) loosely described the self-actualizing person as one who is making full use of talents, capacities and potentials. Such people are developing toward autonomy and away from control by external forces. Rogers (1959) viewed self-actualization as the basic motivational force, "the inherent tendency of the organism to develop all its capacities in ways which serve to maintain or enhance the organism" (p. 196).

Kell and Mueller (1966) stressed the need for trainees to know the self, their beliefs, attitudes and feelings:

Ultimately. . . it is the counselor's own life experience which is both the greatest asset and obstacle to inducing change in clients. . . His training, then, should set him on the road to discriminating how it is that the various aspects of his own person, as expressed in his relationships with his own clients, can either facilitate or stalemate his client's struggles to change (p. 66).

Studies focusing on the person of the counselor as the key variable in the change process have occupied the attention of counselor educators since the development of the field in the 1950's. However, during the past several decades, a splitting off from the initial line of research inquiry has developed. Counselor educators such as Ivey (1971) and Carkhuff (1972) have called for a change in emphasis from what the counselor is to what he can perform.
From this perspective the counselor is seen as a facilitator who possesses a large repertoire of skills, rather than one who represents subjective and abstract personality traits.

Brammer and Shostrom (1977) have noticed this dichotomy in research efforts and have recognized it as a trend: "Current research and practice efforts appear bent on discovering the best mix of these two key approaches on attitudes and skills" (p. 22). Although both approaches are currently being pursued by educators, a study by Loesch, Crane, and Rucker (1978) notes the continuing popularity of the assumption of a meaningful relationship between counselor characteristics and effectiveness as evidenced "by the extensive number of studies of this nature" (p. 195).

In summary, counseling researchers and theorists have engendered a considerable body of research suggesting a positive relationship between the self of the counselor and the ability to be effective in a counseling relationship. Thus, graduate training programs are in need of techniques and experiences that will promote the personal growth of counselor trainees.

Self-Actualization

The concept of the self-actualized person as a model for the psychologically healthy individual has grown out of the works of, among others, humanistic, gestalt, and
existential theorists.

Horney (1942) talked of man's "wishes to grow and to leave nothing untouched that prevents growth" (p. 185). Goldstein (1940) was the first to use the term "self-actualization" as a description for the striving towards growth and development of the human organism. Maslow (1954) embarked on a series of studies aimed at refining and developing the concept. Although Maslow's "informal" study lacked the usual methodology of scientific investigation, he considered the "problem of psychological health to be so pressing that any suggestions . . . are endowed with great heuristic value" (p. 199).

As a result of his earlier-mentioned investigation, Maslow (1962) developed the following generalized definition of self-actualized people:

healthy people who have sufficiently gratified their basic needs for safety, belongingness, love, respect and self-esteem so that they are motivated primarily by trends to self-actualization (defined as ongoing actualization of potentials, capacities and talents, as fulfillment of mission (or call, fate, destiny, or vocation), as a fuller knowledge of, and acceptance of, the person's own intrinsic nature, as an unceasing trend toward unity, integration or synergy within the person). (p. 25)

Maslow (1962) gave a more descriptive and operational definition of self-actualizing people by describing their clinically observed characteristics:
1. Superior perception of reality.
2. Increased acceptance of self, of others, and of nature.
3. Increased spontaneity.
4. Increased problem-centering.
5. Increased detachment and desire for privacy.
6. Increased autonomy and resistance to enculturation.
7. Greater freshness of appreciation and richness of emotional reaction.
8. Higher frequency of peak experiences.
9. Increased identification with the human species.
10. Changed (the clinician would say, improved) interpersonal relations.
11. More democratic character structure.
12. Greatly increased creativeness.
13. Certain changes in the value system.

An attempt to define self-actualization operationally led to the development of the Personal Orientation Inventory (POI) (Shostrom, 1963). The POI is a 150-item forced choice inventory which purports to measure the values and behaviors related to effective personal functioning or self-actualization.

Since its development, a number of studies have used the POI to examine the relationship between counselor effectiveness and levels of self-actualization. For example, Foulds (1969), Graff and Bradshaw (1970), and
Jenson and Garvey (1973) associated effective counselors with high levels of self-actualization as measured by the POI. After interviewing counseling participants as to who or what influenced their behavior change, Boy (1975) found that clients acknowledged the "person" of the counselor as the primary influence in their change. Selfridge and Vanderkolk (1976) determined that the ability to communicate the core facilitative conditions (non-possessive warmth, accurate empathy, genuineness within the personality of the therapist) was positively related to the personality characteristics of the self-actualized person as measured by the POI. The authors concluded that graduate programs should include experiences that enhance self-actualization.

The early works of Maslow and Rogers have contributed considerably to what is known in psychology as the "third force," and labeled more broadly as the humanistic movement. As such, many of the concepts of self-actualization, with its emphasis on being and becoming while living fully in the present, are addressed continually in the research literature. More specifically, the focus on self-actualization as a major component of counselor effectiveness continues.

Recent research efforts concerning self-actualization have zeroed in on the clients' satisfaction with the counseling experience as an index of counseling
effectiveness. Studies by Thames and Hill (1980) and Zarski, Bubnzer, and Walter (1980) are representative of the new direction. Although such studies as the above have produced conflicting results in the literature, self-actualization continues to be the basis for determining the success of treatments in a large number of studies.

In summary, then, substantial research linking counselor effectiveness with self-actualization suggests a basis for efforts directed towards increasing the self-actualization of counselor candidates. Obviously, many things may enhance self-actualization. What is needed is a technique which is inexpensive, is easy to learn and can be mastered during a training program. A possible technique which fulfills the above requirements may be meditation.

Meditation

The technique of meditation has become well known throughout the world during the past decade. The term "meditation" is defined by Smith (1975):

a family of mental exercises that generally involve calmly limiting thoughts and attention. Such exercises vary widely and can involve sitting still and counting breaths, attending to a repeated thought, or focusing on virtually any simple external or internal stimulus. (p. 558)
Meditation appears to have several distinct advantages as an aid to personal change. It is a natural, easily learned technique that requires only occasional supervision; as such, training can be incorporated into counselor education at a low cost.

The process and goal of the meditation technique appear to be theoretically similar to Maslow's model of the self-actualized person. "It is our fullest 'humanhood,' the fullest use of what it means to be human, that is the goal of meditation," LeShan (1974, p. 2). Ferguson (1975) describes meditation as a "technique to actualize and integrate the personality of man to those higher fulfilled states of personal integration" (p. 16). On the basis of their personal experience with meditation, Carrington and Ephron (1975) noted a number of positive effects concerning their therapeutic skills: "As a facilitator of spontaneity, empathy and improved physical stamina in the psychotherapist, meditation is potentially valuable in the training of psychotherapists" (p. 107).

Regarding the goals of meditation, Roberts (1981) wrote "There are many methods . . . but a highly suggestive state of mind results, in which spiritual, mental, and physical goals are sought" (p. 57). Sallis (1982) compared the theoretical foundations of meditation as they related to the goals of humanistic psychotherapy,
specifically self-actualization, and concluded that "meditation is compatible with the goal of self-actualization and may be employed by those pursuing that aim or those who facilitate the search of others" (p. 117).

Statement of the Problem

The purpose of this investigation was to (1) determine the effectiveness of meditation as a psychotherapeutic agent of healthy adjustment or self-actualization in counselor candidates; and (2) ascertain whether meditation generates a more positive change in self-actualization than the treatment control (relaxation) and control groups.

With the above questions in mind, the following research hypotheses have evolved.

$H_1$: There will be a significant difference between the pretreatment measurement and the posttreatment measurement of subjects who participate in the meditation treatment.

$H_2$: There will be a significant difference in movement toward self-actualization between the meditation group, the treatment control group (relaxation), and the control group.

Definition of Terms

To delineate the use of terms, the following definitions were used in this study.

**Self-Actualization**

This concept, developed by Maslow (1959) recognizes
the inherent tendency within all humans to develop their capabilities and potentials to the fullest. The self-actualizing individual has met basic needs for safety, love, respect, belongingness, and self-esteem while demonstrating a healthy balance between inner- and other-directed being, living in the present, interpersonal sensitivity, self-acceptance, capacity for spontaneous behavior and a positive belief in the nature of man. For the purpose of this study, self-actualization is operationally defined as the scores obtained on the Personal Orientation Inventory as developed by Shostrom (1963).

**Meditation**

Modification of Roberts' (1974) meditation technique which involves concentrating on a short phrase for five minutes a day was used. The meditation is highly structured and does not result in an altered state of consciousness. Roberts states:

> it is thought that the conscious mind is lulled and its activity suspended. Quite the contrary. It is focused, intensified, narrowed to a specific area, and all other stimuli are cut out. (p. 324.)

For a more complete description of how the meditation is performed and the rationale for its performance, see Appendix A and Appendix B, respectively.
Treatment Control

The relaxation technique used in the present study was developed as a close approximation of the theoretical complexity and expectations generated by the study's meditation technique. The exercise is highly structured to prevent the onset of altered states of consciousness and involves tensing and relaxing muscle groups for five minutes a day. For a more complete description of how the relaxation exercise is performed and the rationale for its performance, see Appendix C and Appendix D, respectively.

Limitations of the Study

The generalizability of this study has been affected by certain factors. The population chosen for investigation did not represent a random selection from the assessible population. The use of groups that were already organized into classes limits the ability to generalize with probabilistic rigor to the target population.

A second limiting factor is generalizing the results was the relatively small number of subjects who participated in the study. With a total of 39 volunteers available, membership in any one of three groups did not exceed 14. It is difficult to conclude that groups of 14 subjects or less are representative of the population.
A third area of concern, the interaction/selection effect, is heightened by the lack of complete randomization. The likelihood of an extraneous variable, rather than treatment, being responsible for outcome should be considered.

A final area of difficulty is the experimenter bias effect. Since the researcher is a practitioner of meditation, the chance of projecting one's own beliefs into the methodology and treatment in a subtle way is very possible, and not likely to be detected by the researcher. However, this tendency was modified by using only trainer contact with the treatment population.

Review of Selected and Related Literature

Numerous benefits are claimed to result from the practice of meditation; among them have been positive changes in psychological inventories (Ballou, 1973; DeGrace, 1976; Domino, 1977; Ferguson and Gowen, 1979; Glueck and Strobel, 1975; William, Francis and Durham, 1976) that, when considered together, can be viewed as support suggesting a movement towards the development of the healthy adult personality.

In particular, the present research focuses on the concept of self-actualization. While research has indicated a positive relationship between self-actualization and meditation (Dick, 1974; Hjelle, 1974; Nidich,
Seeman, and Banta, 1972; Stek and Bass, 1973), several problems have been inherent in that research that must be resolved before adequate conclusions can be reached. Also, recent studies with greater methodological control have contradicted some of the earlier findings (Bartels, 1977; Smith, 1976; Joseph, 1979; Weiner, 1977).

In Smith's (1975) review of the research literature on meditation, he cites two main areas of difficulty that are not controlled for: (1) the subjects' set or expectation of relief, and (2) the regular practice of sitting quietly, which may be the crucial therapeutic variable rather than the meditation exercise. Thus, Smith concluded that the therapeutic potential of meditation remains to be demonstrated.

A review of the literature by Shapiro and Giber (1978) acknowledges that meditation research has advanced sufficiently in design sophistication and control "to result in a general agreement that meditation does bring about a state of relaxation" (p. 296). However, the authors emphasize that Smith's earlier criticisms of claims that meditation brought about positive changes in psychological health or self-actualization are still valid.

A third area of difficulty noted by the above-mentioned authors is the failure of researchers to define clearly whether they are "conceptualizing meditation as
a self-regulation strategy, or as an altered state of consciousness" (p. 298).

**Self-Actualization and Meditation**

Various personality inventories, including the POI, have been used in a number of recent studies to investigate the influence of meditation on self-actualization. Seeman, Nidich, and Banta (1972) examined the effects of a transcendental meditation (TM) program on self-actualization. The POI was administered to an experimental group of 15 college students and a control group of 20 two days prior to the start of the program and two months after initiation. Significant mean changes in a positive direction were obtained for the experimental group on the major scale of inner directedness and the subscales of self-actualizing value, capacity for intimate contact, self regard, acceptance of aggression and spontaneity. No changes were significant for the control group.

In a replication of their earlier study, Nidich, Seeman and Dreskin (1973) used the same testing procedures on an experimental group and a control group, each consisting of nine college students. The time between pre- and posttesting was lengthened to ten weeks. Eight of the 12 POI scales, including both the major scales of inner-directedness and time competence, demonstrated a significant difference between experimental and control subjects in the direction of self-actualization.

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Addressing the question as to whether meditators differed significantly from others before beginning the TM program, Stek and Bass (1973) compared the performance of four groups of college students, three of which were differentially interested in the TM program and one unselected base-rate group, on Rotter's Internal-External Locus of Control Scale and the POI. The groups were composed of 17 self-selected students participating in TM prior to the beginning of the research study, 34 self-selected subjects who attended the introduction lecture but did not take instruction in the technique, 27 subjects who were not interested in the lectures, and 30 randomly selected subjects who provided a control group. No significant differences were found among groups, suggesting that the level of interest in meditation was not related either to perceived locus of control or to personal adjustment.

In a pre-posttest design using the Omnibus Personality Inventory, Penner and associates (1973) compared 100 Edmonton, Canada, public school students who had taken a 22-day course in TM, with a normative group that had been previously tested. Students who selected the TM course were found to be more relaxed, considerate, imaginative, liberal with regard to religion, and prone to "act out" feelings than the normative group. The TM group was similar to the normative group in personal integration,
thinking introversion, and response bias (a fake good scale indicating a tendency to try to "look good" on the inventory). In conclusion, the study found that the TM course increased personal integration, response bias, relaxation, and thinking introversion, and decreased sociability, "acting out," and religious liberalality. In contrast to the results obtained in Stek and Bass (1973), the authors' findings suggest that prospective meditators may differ significantly from the general population with regard to psychological characteristics.

Curtain (1973) reported a study examining the influence of TM on adaptive regression, a psychoanalytic term referring to the process of experiencing reality with a minimal use of defenses. One hundred college students about to begin a TM program were tested on the Fitzgerald Experience Inquiry. Half of the population was randomly selected as the control group and tested the day before instruction. The experimental group of 50 was tested the day after instruction. The after-instruction group evidenced significantly more ability to regress adaptively.

An interesting comparison of regular meditators with beginning meditators using Bendig's Anxiety Scale, Rotter's Locus of Control Scale, and the POI was reported by Hjelle (1974), who attempted to minimize demand characteristics (subjects expect personality to change as a result of practicing meditation). The regular meditators averaged
almost two years of practice at the time of testing. The beginning meditators were tested one week prior to receiving the usual instruction for TM. Analysis of the results showed that the regular meditation group, when compared to the beginning group, exhibited significantly more internal control on Rotter's scale, less anxiety on the Bendig scale, and more time competence, inner-directedness, feeling reactivity, self-actualizing value, self-regard, spontaneity, and capacity for intimate contact on the POI.

Dick (1974) investigated the effect of TM on university counselee's experience of well-being as revealed by the Adult Nowicki, Strickland Internal-External Locus of Control Scale and the time competence and inner-directed scales of the POI. The experimental group of randomly assigned counseling clients was instructed in TM. A meditation control group that was self-selected and not clients began meditation within a week of the experimental group. A second control group was instructed to rest 15 minutes, twice a day. The hypothesis that increases in self-actualization would be greatest for the meditation groups was supported on both major POI scales. No significant difference was found in locus of control.

Investigating the effects of a TM program on juvenile offenders, Childs (1974) administered the Taylor Manifest Anxiety Scale, the POI, and Semantic Differential to five subjects prior to training and again two months later.
Data analysis showed significant change on the Taylor scale and Semantic Differential. Significance was found only on the self-regard scale of the POI. Results were interpreted as being sufficient to recommend the techniques to those who counsel juvenile offenders.

Shapiro (1975) studied the effects of TM on self-actualization (Northridge Development Scale, NDS), negative personality dimensions (depression, aggression, neuroticism), and anxiety (State-Trait Anxiety Inventory, STAI). One hundred eighty subjects were tested before the initiation of TM and four months after. The results indicated significant improvement on self-actualization, reduced depression, aggression, neuroticism, and anxiety. A preliminary expectations questionnaire was given as a pretest only. The use of the questionnaire was an interesting attempt to assess the effects of subjects' "set" or expectations of improvement. The fact that no correlation was established between expectation and the NDS and STAI scores suggests that expectation alone did not account for the results. A significant correlation was established between regularity of practice and changes in self-actualization. Since no control group was employed in the study, the results are suggestive rather than conclusive.

In a related study, Russie (1976) used the POI, an expectations questionnaire, and measures of rigidity.
and self-control to assess the effectiveness of TM as a psycholotherapeutic agent of positive mental health and self-actualization. The experimental TM group of 26 subjects and the control group of 26 non-meditators were tested prior to the start of the TM program and again five months later. Increases in POI scores for the TM group reached significance for eight of the 12 POI scales. No significant change in rigidity or self-control was found. However, contrary to Shapiro's (1975) study, expectation was correlated positively with improvement on six of the POI scores.

Ferguson and Gowen (1976) created a study designed to test the hypothesis that the regular experience of integrated relaxation associated with TM has a salutary influence on the psychology of practitioners by increasing positive personality characteristics. The testing battery included the Northridge Developmental Scale (NDS), the Cattel Anxiety Scale (CAS), and the Speilburger State-Trait Anxiety Inventory (STAI). Three groups of volunteer college students were involved: a control group of 19 graduate students who did not meditate but were participating in an encounter-group type of class room, an experimental group of 31 students who enrolled in and completed a course in TM, a second experimental group of 19 long-term (43.1 month average) student meditators. All three groups were closely matched for age, sex, and
education levels. The control group and the short-term meditators were tested before initiating the TM course and again six weeks later. The long-term meditators were tested only once. The pretesting indicated that short-term meditators were significantly more anxious on the CAS and more neurotic on the NDS than the control group. Posttesting results showed the short-term group to be significantly less anxious on both the CAS and STAI, and more self-actualized, less neurotic, and less depressed on the NDS. The long-term group repeated the above results by being significantly less anxious on both measures of anxiety, and more self-actualized, less neurotic, and less depressed on the NDS than the short-term group.

Smith (1976) conducted an imaginative study consisting of two separate experiments in an attempt to isolate the trait-anxiety-reducing effects of TM. The first experiment was a double-blind design in which 139 anxious college student volunteers were assigned to either TM or a control treatment which involved sitting quietly with eyes closed. A third group of 39 students acted as a control and received no treatment. To control for subjects' "set" or expectation, the control treatment was designed to match the form and expectation-fostering aspects of TM. Smith was exacting in his efforts to match the TM program in this regard. All groups were pre- and posttested on a
number of psychological inventories, including the POI, over a six-month period. Results showed the treatment control and TM to be equally effective.

In experiment two Smith found that two parallel experimental treatments both called "cortically mediated stabilization" (CMS) were equally effective. CMS\textsubscript{1} was constructed as a TM-like meditation exercise, and CMS\textsubscript{2} was designed to be a near opposite of meditation.

In summarizing the results from both experiments, he concluded that "the crucial therapeutic component of TM is not the TM exercise" (p. 635). One possible shortcoming of Smith's study may lie in his construction of a technique which was intended to be a "near antithesis of meditation." Carrington (1977) relates:

This ingenious effort to find an adequate control for meditation nevertheless created certain difficulties. While the anti-meditation technique which Smith devised may be the opposite of some forms of mantra meditation, it seems closely to resemble certain forms of concentrative meditation . . . Perhaps Smith assigned not a meditation antithesis, but simply a different type of meditation to his control subjects. (p. 68)

Fehr, Nerstheimer, and Torber used the Freiburger Personality Inventory (FPI) in a study of psychological health and the TM technique. In a one-test design, 49 teachers of TM were separated into two groups based on length of time meditating. Comparable standard groups from the FPI were used as normative controls. When the
49 teachers of TM were compared as one group with the standardized sample, they exhibited significantly healthier tendencies on nine of the 12 FPI scales. When separated into two groups, those who meditated less than four years (2.9 average) and those who meditated more than four years (7.1 average), the result indicated significantly increasing psychological health with length of time meditating.

Orme-Johnson and Duck (1977) tested 210 prospective Maharishi International University (MIU) students. MIU is the center for study and advancement of the TM technique. The MIU students scored significantly higher on all but four POI scales when comparing mean standard scores against a normative group of college students. The MIU students were also compared with a normative group judged to be self-actualizing. The results showed the MIU group to have scored significantly lower on five of the 12 POI scales.

Nystul and Garde (1977) administered the Tennessee Self-Concept Scale to 15 Australian subjects who had been practicing meditation for an average of three years and to 15 Australians who had never practiced meditation. A t-test indicated that meditators had significantly more positive self-concept on seven of the 29 test scores.

In a straight forward design, Bartels (1977) examined the effects of a non-TM meditation on self-
actualization as measured by the POI. Advertising in campus newspapers elicited 37 student volunteers who were randomly assigned to either the experimental (meditation) group or the control (non-meditation) group. Meditation subjects participated as a group once a week for six weeks. Sessions were devoted to the instruction and practice of meditation. Meditation was also performed daily for 30 minutes and at the end of six weeks both groups were tested. The findings indicated no significant difference on any of the POI scales when comparing the experimental and control group. However, journal information indicated a variety of interesting experiences for meditators.

In his dissertation research, Weiner (1977) investigated the effects of Ananda Marga Mantra Meditation and progressive relaxation on self-actualization, anxiety, and frontalis muscle tension. Sixty-eight subjects were randomly assigned to one of three groups: a meditation treatment group that included daily meditation, a relaxation treatment group that also practiced daily, and a control group that received no treatment. The POI, State Trait Anxiety A-Trait, and Frontalis Muscle Tension Inventory were administered as pretreatment and posttreatment measurements. The hypothesis that both meditation and relaxation would reduce anxiety and muscle tension but that only meditation would increase self-actualization was not upheld. Results confirmed that
meditation and relaxation only reduced anxiety. Self-actualization measures were not affected by either treatment.

Scott (1971) examined the effect of prognosis expectancy and pretreatment personality upon the degree of reported personality change resulting from a TM program. Forty-three subjects were obtained during an introductory lecture on TM. The beginning meditators were administered a modified Student Health Center Checklist and the POI. The POI was readministered two months later. A significant change in POI scores was reported on eight of the POI scales. The intensity of subjects' expectations was found significantly to predict the amount of change reported on the POI. Also, with knowledge of pretreatment personality, posttreatment personality was found to be predicted to a significant degree. Scott inferred that there may be several systematic patterns of self-actualization to be observed in subjects practicing meditation.

A study designed to control the methodological difficulties in previous studies, namely, the experimenter effect and expectation, led Joscelyn (1978) to hypothesize that a TM group would improve significantly more on a measure of self-actualization than a treatment control (human relations workshop) group or a control group that received no treatment. Joscelyn, controlling
rigorously for the experimenter effect and expectation, was not able to confirm the hypothesis.

Dice (1979) studied the effectiveness of TM on selected measures of self-actualization. Three groups of subjects were involved: a long-term meditation group, a beginning meditation group, and a third group who had heard a preparatory lecture on TM but declined to receive instruction. The latter two groups were tested before and after treatment on the Tennessee Self-Concept Scale, Rotter's Locus of Control, and the What Kind of Person are You? Scale (measures creativity). The long-term meditators were tested only once. For the three selected measures of self-actualization, it was determined that no significant difference existed between the beginning meditators and those who decided not to receive treatment. The research also indicated that TM may promote improvement of self-concept and locus of control, but not creativity.

Examining the influence of Zazen (a zen meditation) on levels of anxiety and self-actualization, Joseph (1979) found no significant effect upon the criterion measures for the 30 rehabilitation counselors who volunteered to meditate over a six-week period. The study was unique in its use of a less widely known form of meditation than TM and its brief, 60-minute training orientation, both of which controlled for expectations. Perhaps it was these
controls that accounted for the fact that no significant changes were recorded for the meditating group. The writer did indicate that meditators manifested a combined psychological profile that was different (in a positive direction) than the inactive control group.

Throll (1981) compared the psychological effects of practicing meditation and progressive relaxation by administering the State-Trait Anxiety Inventory, the Eysenck Personality Inventory (EPI), and two questionnaires on health and drug use to 39 subjects before they learned transcendental meditation or progressive relaxation. Subjects were again tested immediately after they had learned the techniques and at five, 10, and 15 week intervals. No significant differences existed between groups before testing. Both groups later displayed significant decreases in state and trait anxiety. However, the meditation group displayed more significant and comprehensive results on the (EPI) after posttesting than did the relaxation group. For the meditation group, significant decreases in neuroticism/stability, extroversion/introversion, and drug use were recorded.

Turnball and Norris (1982) administered a role construct repertory grid and the Eysenck Personality Questionnaire (EPQ) to seven university students before beginning transcendental meditation (TM) and twice after
starting. A second group of comparison subjects did not learn meditation but were assessed at the same time and in the same way. Both groups were equivalent before testing. The grid results showed the meditation group to have demonstrated a significant and systematic pattern of change over the three tests. Meditators also developed a significantly stronger concept of their actual-selves, which they viewed as being closer to their ideal self. EPQ findings indicated a significant change for meditators on the extroversion scale. The comparison group failed to demonstrate any significant changes. The authors suggested that "Subjects practicing TM appeared to have experienced consistent and definable changes of a generally beneficial nature" (p. 955).

In a review and discussion of the effectiveness of transcendental meditation in a correctional setting, Lester (1982) determined that although meditation has been found to be effective in several correctional settings, "there is no evidence to indicate the superiority of this training in relaxation over others in facilitating . . . adjustment of prisoners" (p. 462). Lester concluded that relaxation techniques can be provided with less expense and without the religious overtones of transcendental meditation.

Kline, Docherty, and Farley (1982) investigated the
effectiveness of transcendental meditation by administering the Minnesota Multiphasic Personality Inventory (MMPI) and the Tennessee Self-Concept Scale (TSC) to subjects in a remedial outpatient program. The MMPI was used as a measure of global personality characteristics, and the TSC as a measure of self-actualization. The experiment included a treatment group of 11 recovering alcoholics and a control group of 12 subjects. Groups were tested before treatment and again three months later. No significant differences existed between groups before treatment or after treatment. The meditation group failed to demonstrate any significant gains in self-actualization.

Summary

The purpose of the study was to investigate an economically feasible method of enhancing counselor effectiveness. A substantial body of research literature has indicated a strong positive relationship between the counselor's "self" and the ability to be effective in a counseling relationship. What is needed then is an inexpensive, easy-to-learn technique that promotes self-growth. Meditation has been identified as a technique that may fulfill the requirements. Although a review of the literature has indicated a positive relationship between self-actualization and meditation,
several methodological problems have been inherent in that research and must be resolved before adequate conclusions can be reached. The present study was designed to control the methodological difficulties found in previous studies. More specifically then, the study examined two issues: (1) whether meditation is effective as a psychotherapeutic agent of healthy adjustment or self-actualization in counselor candidates, and (2) whether meditation will generate a more positive change in self-actualization than will the treatment control (relaxation) and control groups.
CHAPTER II

RESEARCH DESIGN AND METHODOLOGY

The study investigated the effects of meditation on the self-actualization of counselor candidates. The scope of Chapter II encompasses the research design and methodology, which are reported under the following five headings: (1) Design, (2) Sample, (3) Procedures, (4) Instrumentation, and (5) Data Analysis.

Design

Due to scheduling conflicts and time constraints, it was necessary to elicit the sample of volunteers as they were already organized into university classes. Since random assignment of subjects to one of three groups was not possible, the quasi-experimental design used in this study was a variation of the pretest-posttest design referred to by Ary (1972) as the classical design for change experiments.

The independent variables, as depicted in Table 1 on the following page, were meditation and relaxation. The dependent variable was the change in Personal Orientation Inventory (POI) scores obtained between the pretesting and posttesting.
The mean and standard deviation scores on the pretest were recorded ($POI_1$) for the experimental group, the treatment control group, and the control group. The mean and standard deviation scores on the posttest were recorded ($POI_2$) for the above-mentioned groups. The quasi-experimental design used in the study is presented in Table 1.

Table 1

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Independent Variable</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>$POI_1$</td>
<td>Meditation</td>
<td>$POI_2$</td>
</tr>
<tr>
<td>Treatment Control</td>
<td>$POI_1$</td>
<td>Relaxation</td>
<td>$POI_2$</td>
</tr>
<tr>
<td>Control</td>
<td>$POI_1$</td>
<td>No-Treatment</td>
<td>$POI_2$</td>
</tr>
</tbody>
</table>

Three separate classes were called for in this study, with members of each group made up from the same class. A table of random numbers was used to decide which of the classroom groups would be assigned to the experimental, treatment control, and control categories.

Several advantages were derived as a result of using intact classrooms. An increase in generalizability is achieved over approaches that require subjects to be reassigned from classroom conditions to experimental
conditions, since reassignment increases awareness of an experiment being conducted. Also, the awareness generated by obvious manipulation of the subjects' normal environment increases the expectations of change. This occurrence, known as the "Hawthorn effect," was in part controlled by the use of intact classrooms.

Attrition or "dropout" rate is often a problem to contend with when research requires a group of individuals to perform a particular task over a period of time. Research involving meditation has been no exception. Previous studies of the meditation technique report attrition rates ranging from 20 to 70 per cent, with a majority of those studies citing a dropout rate of approximately 50 per cent.

With attrition rates often approaching half the experimental population or more in long-term (over six weeks) meditation research, conclusions reached regarding the effects of meditation should be qualified. When the dropout population is excluded from the final statistical determination, the effects of meditation may be presented more positively than should be. All that can be legitimately concluded from such studies is that among those who continued to perform the meditation, a certain improvement has occurred. However, the above qualification is seldom announced.
Although self-improvement programs such as meditation may be terminated for a number of different reasons, one possible reason could be the daily amount of time required to perform the techniques. In today's fast-paced society where time is at a premium, asking for 20 to 30 minutes a day may be asking for too much, thus inviting a high dropout rate.

In this study an attempt was made to control the dropout rate by using a brief meditation that takes only five minutes a day to perform. This compares most favorably to the transcendental meditation technique that requires the practitioner to perform for 20 minutes twice a day. Most other forms of meditation reviewed in the literature required at least 30 to 40 minutes daily.

**Methodology and Meditation**

The present study is designed to control the methodological difficulties mentioned above. Since the majority of research undertaken to date has incorporated the Transcendental Meditation (TM) technique, the subjects' "set" or expectation of relief has not been adequately controlled.

The TM program is presented and taught in a highly standardized manner. Although this ensures that regardless of the particular instructor or place of learning the method is approximately the same, the two introductory
lectures and three teaching lessons amount to an indoctrination program that stresses the benefits scientifically "proven" to result from TM. Carrington (1977) noted, "By the time the meditators are left on their own, they are now deeply embedded in a belief system about the benefits TM brings" (p. 66).

Considerable research supports the position that a subject who expects relief from a particular treatment will experience relief regardless of the "real" effectiveness of the treatment (Goldstein, 1962; Lazarus, 1968; Shapiro, 1971).

Several steps were taken to control the subjects' "set." The treatment control process was constructed to match the complexity and expectation-generating aspects of meditation. For a treatment control to play an effective role in determining which variables are responsible for outcome, it must be perceived as authentic and credible by both subject and experimenter.

A study by McReynolds, Barnes, Brooks and Rehagen (1973) found that a placebo treatment that was contrived, yet had a highly credible theoretical rationale, was as effective in reducing minor phobias as systematic desensitization when taught by a therapist who was unaware of its placebo nature. The study also pointed out that a "disguised" placebo treatment was significantly more
effective than a placebo treatment that was not coupled with a theoretical rationale and was conducted by a therapist aware of its placebo nature.

To further control expectations, the form of meditation used is relatively unknown and presentation was reduced to the bare minimum necessary to teach the technique.

To insure against the development of an altered state of consciousness during meditation, a structured or concentrative meditation of brief duration was used. A concentrative meditation is simply defined as keeping the mind purposely occupied with a short statement that is repeated over and over again. Thus, both the short time span involved in meditating and the need to concentrate in a structured way combine to control for altered state.

The relaxation control group used the same time limitation and structured procedure to aid in preventing the onset of altered states of consciousness.

Sample

Three groups consisting of 39 graduate students participated in the project. The experimental group (meditation) and the control group (no-treatment) were comprised of 12 and 14 subjects respectively. They were enrolled in a master's degree program in the Department of Counseling and Personnel at Western Michigan University.
The treatment control group (relaxation) was composed of 13 Michigan State University students enrolled in a master's degree program in the department responsible for counselor education. The number of subjects in each group and the university the group was selected from are shown in Table 2.

Table 2
Arrangement of Subjects by Treatment, University, and Size

<table>
<thead>
<tr>
<th>Treatment</th>
<th>University</th>
<th>n(^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental (meditation)</td>
<td>Western Michigan</td>
<td>12</td>
</tr>
<tr>
<td>Treatment Control (relaxation)</td>
<td>Michigan State</td>
<td>13</td>
</tr>
<tr>
<td>Control (no-treatment)</td>
<td>Western Michigan</td>
<td>14</td>
</tr>
</tbody>
</table>

\(^a_n = 39\)

The experimental group of 12 subjects consisted of five males and seven females, ranging in age from 22 to 46, with a mean age of 31.7 years. The treatment control group of 13 subjects had six males and seven females, ranging in age from 22 to 42, with a mean age of 29.6 years. The control group of 14 subjects was comprised of six males and eight females, ranging in age from 23 to 40, with a mean age of 28.4 years. A presentation of the above demographic data is made in table 3 on the following page.
Table 3

Group Demographic Data

<table>
<thead>
<tr>
<th>Group</th>
<th>Males</th>
<th>Females</th>
<th>Mean Age</th>
<th>Age Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>5</td>
<td>7</td>
<td>31.7</td>
<td>22-46</td>
</tr>
<tr>
<td>Treatment Control</td>
<td>6</td>
<td>7</td>
<td>29.6</td>
<td>22-42</td>
</tr>
<tr>
<td>Control</td>
<td>6</td>
<td>8</td>
<td>28.4</td>
<td>23-40</td>
</tr>
</tbody>
</table>

\(n = 39\)

As mentioned in the section on design immediately preceding, the attrition or dropout rate was a factor to consider. As expected, a number of subjects in this study were unable to complete their voluntary commitments.

Of the original 47 volunteers, eight dropped out during the course of the experiment. Since data was incomplete on eight volunteer subjects who never finished treatment, only data on the 39 subjects who completed treatment were used in the final statistical procedures. The breakdown of attrition rate by group is depicted in Table 4.

The final group of 39 subjects upon which the analysis was based consisted of 17 males and 22 females, ranging in age from 22 to 46, with a mean age of 29.8 years.

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Table 4

Breakdown of Attrition Rate\(^a\) by Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Original Volunteers(^b)</th>
<th>&quot;Dropouts&quot;(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Treatment Control</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Control</td>
<td>17</td>
<td>3</td>
</tr>
</tbody>
</table>

\(^a\)Total = 17 percent.
\(^b\)\(n = 47\).
\(^c\)\(n = 8\).

Procedures

The present study compares the psychotherapeutic effects of meditation and a control treatment (relaxation) on a measure of self-actualization. Subjects were Western Michigan University and Michigan State University graduate students who volunteered to take part in a "study of personality." All subjects were thoroughly screened to assure that none were involved in self-improvement instruction, psychotherapy or university practicums, or had ever practiced a meditation or relaxation technique.

The three treatment groups of this study were comprised of three separate or intact university classrooms, with subjects of each treatment group made up from the same classroom. Classroom groups were randomly assigned.
using a random numbers table to two treatment conditions, meditation and relaxation, and to a third no-treatment condition.

All subjects who agreed to take part in the study began by filling out a Subject Information Questionnaire (see Appendix F) to provide the necessary background information. After completing the questionnaire, subjects were pretested on the Personal Orientation Inventory (POI; Shostrom, 1963).

The complete meditation instruction included two 30-minute training sessions. The first session was conducted after completion of the above-mentioned materials. The second session was held one week later. The initial training session provided complete instruction on how to perform the short meditation and a rationale for performing it, with subjects beginning to meditate on that same day. The objective of the second training session was to review the previous week's instruction, to refine technique, and to answer any questions that may have resulted from one week of meditation.

The meditation technique involved sitting or reclining quietly for five minutes a day while passively and continuously meditating on a short phrase. For a more complete description of how the meditation was performed, see Appendix A.
The training procedure for the relaxation technique was designed to be approximately similar to the format used in meditation training. Two half-hour training sessions, held one week apart and on days corresponding with the meditation training, were employed. The initial training session involved instruction on how to perform the relaxation technique with an accompanying rationale for its performance. The second session reviewed instruction, discussed technique, and answered questions. Performance of the relaxation exercise commenced on the day of the first training session. Meditation and relaxation subjects were informed during the second training session that they could contact their instructor should questions or problems arise about the performance of their respective techniques. Instructors recorded the reason and nature of all contact beyond the two training sessions.

The relaxation technique used in this study was designed as a close approximation of the theoretical complexity and expectations generated by the study's meditation. Specifically, the treatment matched the meditation closely in rationale, instruction, and time of performance. The relaxation exercise involved sitting or reclining quietly for five minutes a day while concentrating on various muscle groups to the exclusion
of everything else.

In order to view more clearly the similarity in instruction and rationale for performance between the two treatments, compare Appendix A (Directions for Performing a Short Meditation) with Appendix C (Directions for Performing a Short Relaxation Technique) and Appendix B (Rationale for Performing the Meditation Technique) with Appendix D (Rationale for Performing the Relaxation Technique).

The relaxation technique was designed to control for the subjects' "set" or expectations of relief. For a treatment control to play an effective role in determining which variables are responsible for outcome, it must be perceived as authentic and credible by both subject and trainer. For this reason, the relaxation technique was taught double blind; that is, the trainer and the subject were led to believe that the treatment was widely researched and legitimate rather than a bogus treatment.

The rationale for performing the relaxation technique was developed by Smith (1975) and appears in modified form in Appendix D. Smith describes the construction of his PSI (relaxation technique) in the following way:

One important feature of PSI was its rationale. Care was taken to construct a rationale that was credible and complex. To enhance credibility, actual psychological concepts and research were woven together in a superficially elegant manner. That not one component of PSI theory was false
or deceptive (although supporting "process" and "outcome" research was faked) made it unique among bogus treatment rationale. (p. 273)

The meditation and relaxation instructors were graduate students attending Western Michigan University and Michigan State University, respectively. Neither trainer had previous experience with the technique he would instruct, and both appeared to be equally enthusiastic about the project. Since the meditation trainer was chosen first, the relaxation trainer was chosen for the degree to which he resembled the meditation trainer. Both trainers were taught by the experimenter. Trainers practiced all aspects of instruction until they could proceed from memory. The relaxation trainer was deliberately deceived into believing that the relaxation technique was highly effective and that the main purpose of the project was to investigate its effectiveness in bringing about self-actualization.

The no-treatment or control group of subjects was informed that all had been assigned to a "wait group" that would receive treatment in eight weeks. At the end of the eight weeks, the experimenter informed the group of their control nature and offered to teach relaxation or meditation to any subjects who desired instruction.

Both treatments continued for eight weeks, after which a final questionnaire (see Appendix G) was given.
assessing the regularity of subjects' meditation and relaxation practice, the POI was readministered, and, finally, the trainer and subjects who wanted to know were debriefed and made aware of all deceptions.

Instrumentation

The Personal Orientation Inventory was developed by Shostrom (1963) to measure the construct of self-actualization. The POI was used as both a pretest and a posttest in this study.

The POI is a 150-item forced choice inventory which purports to measure the values and behaviors related to effective personal functioning. The examinee is instructed to select the one statement in each pair that is most representative of the self. The major scales of the POI are time competence and inner-directedness. The 10 subscales which represent various aspects of a self-actualizing person are these: Self-actualizing value, Existentiality, Feeling reactivity, Spontaneity, Self-regard, Self-acceptance, Nature of man, Synergy, Acceptance of aggression, and Capacity for intimate contact.

Validity and reliability studies of the POI have established it as an effective measure of self-actualization. The inventory has been extensively validated and has been
used in hundreds of published articles and unpublished reports and dissertations. For example, reviews of the POI (Buros, 1972; Robinson and Shaver, 1973) have indicated that it is the most appropriate measure of self-actualization available. Buros did issue warning, however, that persons who score well on the major scale of inner-directedness are "not necessarily utilizing all of their capabilities in a way consistent with complete self-actualization" (p. 292). Both reviews cautioned against over-interpretation, since doubt exists about the independence of the 10 subscales.

Maslow himself (1971), commenting on the POI as a measure of self-actualization, stated:

In studying healthy people, self-actualizing people, etc., there has been a steady move from the openly normative and the frankly personal, step by step, toward more and more descriptive, objective words, to the point where there is today a standardized test of self-actualization. Self-actualization can now be defined quite operationally, i.e., self-actualization is what the test tests. It correlates well with external variables of various kinds, and keeps on accumulating additional correlational meanings. As a result, I feel heuristically justified in starting with my "determined naivete." Most of what I was able to see intuitively, directly, personally, is being confirmed now with numbers and tables and curves. (p. 28)

Shostrom (1974) reported a test-retest reliability for the major scales of time competence and inner-directedness as .71 and .77; coefficients for the subscales ranged
from .52 to .82.

Further support for acceptable reliability standards was obtained by Illardi and May (1968) in their study of 46 nursing students over a one-year period. They reported coefficients ranging from .32 to .74, which the authors concluded are at a level commensurate with other personality inventories such as the Minnesota Multiphasic Personality Inventory and the Edwards Personal Preference Schedule. Shostrom's (1964) study of the POI provided important evidence of the inventory's ability to discriminate between a sample of subjects that had been clinically nominated by psychologists as self-actualizing persons and a sample that had been nominated as non-actualizers. Results indicated that the POI significantly differentiated the groups (in the expected direction) on the two major scales and on nine of the 10 subscales. In his (1972) review of the POI, Buros stated that "in general, the content validity of the scales of the POI is good" (p. 121).

In a test of construct validity, Goldman and Olczak (1975) examined the inner-directedness of 53 undergraduates enrolled in an introductory psychology course. Students were requested by their instructors to participate in a lengthy research project; however, no benefit or punishment would be contingent on participation. Results of the analysis indicated that those who volunteered were significantly lower than those who did
not on both major scales of the POI. The results concurred with the author's hypothesis that yielding to the demand characteristics of such a situation would be much more typical of a less self-actualized group.

One issue of particular concern to the present research is the susceptibility of the POI to "faking good." This issue involves the notion of subjects' "set" and the possibility of subjects attempting to "look good." If the POI is an inventory that can easily be "faked good," its effectiveness as an instrument by which meditation can be evaluated would be sharply limited.

Foulds and Warehime (1971) investigated this matter by administering the POI to a sample of 95 college students who were asked to respond to the POI as if they wanted to make a good impression in applying for a job. The students scored below the norm on all but two of the subscores.

Investigating the plausibility of deliberately responding to the POI in a manner that would be considered socially desirable, Abbot and Harris (1973) hypothesized that the values involved in becoming or being "self-actualized" do not appear to represent contemporary social values. They further suggested that this may explain the instrument's resistance to "faking good."

The ability of "knowledgeable" respondents to score higher on the POI should be considered when research
involves a college population that is in the process of
developing sophistication in mental health studies. Ecker
and Watkins (1975) set out to investigate this type of
situation. They did so by comparing the performances of
three groups of college students with varied course work
backgrounds. Each group contained a sample of 20 students.
The first group was composed of students enrolled in an
introduction to psychology course that provided no back­
ground on "good mental health." The second group of
students was from upper level psychology courses but did
not have training in the humanistic branch of psychology
or personality theory, and the final group consisted of
psychology majors with backgrounds in humanistic psychology
and/or personality theory. All subjects were tested twice,
with the initial administration following standard POI
manual procedures. On the second testing, subjects were
informed that the POI measures positive mental health
and that they should respond to the inventory by checking
the best possible answer. Final results indicated signi­
ficant differences between groups on the first testing,
while change scores were not found to be significant. An
emerging pattern in the data suggests that naïve subjects
who attempt to raise their scores may instead lower them.
Also, the pretest differences between groups indicated
that the most highly trained group scored differently
from the other groups in a random fashion. The study concluded that knowledge of self-actualization and mental health concepts will not raise POI scores unless specific instruction as to what the inventory measures is provided.

Statistical Procedures

The data were analyzed in three ways using parametric statistics. The three modes of parametric statistics used were the one-way analysis of variance, the t-test, and the Tukey-Kramer procedure for multiple comparisons in unbalanced cases.

The one-way analysis of variance was applied to POI pretest data for all scales to assess the initial differences among the groups. The F level is not to exceed the .05 level of significance.

A t-test of the differences within groups was performed on the scales of the POI to detect whether all subjects' posttest scores were significantly different from their pretest scores. The significance level was set at .05.

A second application of the one-way analysis of variance was used on each scale of the POI across groups to assess final differences among groups. The F level of significance was set at .05.

The Tukey-Kramer method was used as a multiple comparison procedure for the simultaneous estimation of
all pairwise differences of means. The level of significance, again, was set at .05.

Summary

The present study compared the psychotherapeutic effects of meditation and a control treatment on a measure of self-actualization. The research sample consisted of 39 volunteer graduate students enrolled in counselor education courses at Western Michigan University and Michigan State University. Three separate or "intact" classes were used, with members of each group made up from the same class. Classroom groups were assigned by use of random numbers table to a meditation group, treatment control (relaxation) group, and a no-treatment control group.

Treatment was carried out over an eight-week period during the winter semester of 1983. A quasi-experimental pretest-posttest design was employed, using the POI as a measure of self-actualization. A unique feature of this design was the use of a brief meditation (five minutes) to control the high dropout rate that has plagued meditation research. The construction of a bogus treatment control that closely matches meditation in its training procedures, complexity, and expectation-generating aspects provided methodological control in
assessing the effectiveness of meditation.

Hypotheses were tested by use of a one-way analysis of variance, a $t$-test, and the Tukey-Kramer method for multiple comparisons.
CHAPTER III

ANALYSIS PROCEDURES

Introduction

In chapter three the results and analysis of the data are discussed. The following subsection, The Problem, restates the study's two hypotheses. The body of Chapter Three presents the research findings which are reported under the following two subsections: (1) Data Sample, the results of an analysis of the sample prior to application of treatments; (2) Research Findings, the results and presentation of the analyzed data used in testing the hypotheses.

The Problem

The study (1) assessed the effectiveness of meditation as a psychotherapeutic agent of self-actualization in counselor candidates, and (2) determined whether meditation generated a more positive change in self-actualization than the treatment control and control groups.

Sample Data

The research sample consisted of 39 volunteer graduate students enrolled in counselor education programs at

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Western Michigan University and Michigan State University. Three separate classes participated, with members of each group made up from the same class. Classroom groups were then randomly assigned to two treatment conditions, meditation and relaxation, and to a third no-treatment or control condition. The final group of 39 subjects upon which the analysis was based consisted of 17 males and 22 females, ranging in age from 22 to 46, with a mean age of 29.8 years.

To determine whether the three groups comprising the research sample were similar with regards to self-actualization and homogeneity of variance, a one-way analysis of variance was applied to the group means of the two major scales and the 10 subscales of the Personal Orientation Inventory.

The pretest comparisons for the groups on the major POI scales, time competence and inner-directedness, are depicted in Tables 5 and 6. A chart summarizing the comparison data on the sample for the 10 subscales appears in Appendix I.

As evidenced in Table 5, the research sample was similar with regard to tested level of self-actualization and homogeneity of variance between groups on the time competence scale prior to treatment. As evidenced in Table 6, the sample was similar with regard to tested level of self-actualization and homogeneity of variance between
### Table 5
Comparison of Personal Orientation Inventory Time Competence Scale Scores Between Groups Before Treatment (One-Way Analysis of Variance)

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meditation</td>
<td>12</td>
<td>16.08</td>
<td>2.94</td>
</tr>
<tr>
<td>Relaxation</td>
<td>13</td>
<td>15.62</td>
<td>2.47</td>
</tr>
<tr>
<td>No-Treatment</td>
<td>14</td>
<td>15.57</td>
<td>3.08</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>2.014</td>
<td>2</td>
<td>1.001</td>
<td>.12</td>
<td>.883</td>
</tr>
<tr>
<td>Within</td>
<td>291.422</td>
<td>36</td>
<td>8.095</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>293.436</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
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</table>

### Table 6
Comparison of Personal Orientation Inventory Inner-Directed Scale Scores Between Groups Before Treatment (One-Way Analysis of Variance)

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meditation</td>
<td>12</td>
<td>80.58</td>
<td>7.38</td>
</tr>
<tr>
<td>Relaxation</td>
<td>13</td>
<td>81.92</td>
<td>6.53</td>
</tr>
<tr>
<td>No-Treatment</td>
<td>14</td>
<td>83.57</td>
<td>10.28</td>
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<table>
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<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>58.320</td>
<td>2</td>
<td>29.160</td>
<td>.42</td>
<td>.658</td>
</tr>
<tr>
<td>Within</td>
<td>2483.269</td>
<td>36</td>
<td>68.980</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2541.589</td>
<td>38</td>
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<td></td>
</tr>
</tbody>
</table>
groups on the inner-directed scale prior to treatment.

It is therefore concluded that prior to treatment the three groups did not differ significantly from each other in tested level of self-actualization as measured by the major POI scales of time competence and inner-directedness. In addition, groups were similar prior to treatment on all 10 of the subscales.

Since the variance from group to group was within the bounds of random variation, homogeneity of variance can be claimed; thus, the study meets one of the primary conditions for using parametric statistics.

Research Findings

The research findings are presented in the following manner: (1) statement of the research hypotheses, (2) presentation of the data, and (3) discussion of the findings.

Hypothesis 1

There will be a significant difference between the pretreatment measurement and the posttreatment measurement of subjects who participate in this study.

In an attempt to discern if the data of this study resembled previous research on mediation, a one-tailed t-test was performed on all scales of the POI to test whether subjects' posttest scores were significantly
different from their pretest scores. Results of the hypotheses testing were accepted or rejected at the .05 level of probability. The results of the t-test for the major scales of time competence and inner-directedness are presented in Table 7. See Appendix J for a brief description of the 12 POI scales and their raw scoring range.

As evidenced in Table 7, no significant differences were discovered between subjects' pretest and posttest scores on the time competence scale. However, Table 7 does show a significant difference was found between the meditation group's pretest and posttest scores on the inner-directed scale. Table 7 reveals a pretest mean of 80.58 for the meditation group, which is categorized by the POI manual as the non self-actualizing range. The average meditators's score on the posttest was 88.33, which the manual categorizes as the low normal range.

Shostrom (1966) indicated that a quick estimate of self-actualization may be obtained by scoring the major scales of the POI only. Knapp (1971) demonstrated that the inner-directed scale provided the best single estimate of self-actualization. As such, it can be concluded from the results of hypothesis testing on the two major scales that only the meditation group demonstrated a significant increase in tested level of self-actualization.

Testing results from the subscales, which represent
Table 7

A Within Group Comparison of Pretest-Posttest POI Scale Scores

<table>
<thead>
<tr>
<th>POI Scale</th>
<th>Group</th>
<th>Pretest M</th>
<th>Posttest M</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tc</td>
<td>Meditation</td>
<td>16.08</td>
<td>16.42</td>
<td>0.29</td>
<td>.385</td>
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<tr>
<td></td>
<td>Relaxation</td>
<td>15.62</td>
<td>15.69</td>
<td>0.08</td>
<td>.470</td>
</tr>
<tr>
<td></td>
<td>No-Treatment</td>
<td>15.57</td>
<td>15.14</td>
<td>-0.37</td>
<td>.359</td>
</tr>
<tr>
<td>I</td>
<td>Meditation</td>
<td>80.58</td>
<td>88.33</td>
<td>2.17</td>
<td>.027*</td>
</tr>
<tr>
<td></td>
<td>Relaxation</td>
<td>81.92</td>
<td>84.31</td>
<td>1.00</td>
<td>.168</td>
</tr>
<tr>
<td></td>
<td>No-Treatment</td>
<td>83.57</td>
<td>83.93</td>
<td>0.08</td>
<td>.468</td>
</tr>
<tr>
<td>SAV</td>
<td>Meditation</td>
<td>18.58</td>
<td>18.41</td>
<td>-0.12</td>
<td>.454</td>
</tr>
<tr>
<td></td>
<td>Relaxation</td>
<td>19.23</td>
<td>19.07</td>
<td>-0.14</td>
<td>.447</td>
</tr>
<tr>
<td></td>
<td>No-treatment</td>
<td>19.36</td>
<td>19.50</td>
<td>0.18</td>
<td>.432</td>
</tr>
<tr>
<td>Ex</td>
<td>Meditation</td>
<td>19.67</td>
<td>22.42</td>
<td>1.59</td>
<td>.070</td>
</tr>
<tr>
<td></td>
<td>Relaxation</td>
<td>20.23</td>
<td>19.46</td>
<td>-0.50</td>
<td>.313</td>
</tr>
<tr>
<td></td>
<td>No-treatment</td>
<td>20.57</td>
<td>20.19</td>
<td>-1.64</td>
<td>.121</td>
</tr>
<tr>
<td>Fr</td>
<td>Meditation</td>
<td>16.08</td>
<td>18.50</td>
<td>2.08</td>
<td>.031*</td>
</tr>
<tr>
<td></td>
<td>Relaxation</td>
<td>15.92</td>
<td>17.85</td>
<td>5.25</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td>No-Treatment</td>
<td>17.21</td>
<td>17.50</td>
<td>0.32</td>
<td>.376</td>
</tr>
<tr>
<td>S</td>
<td>Meditation</td>
<td>11.50</td>
<td>13.25</td>
<td>4.71</td>
<td>.001*</td>
</tr>
<tr>
<td></td>
<td>Relaxation</td>
<td>11.19</td>
<td>12.75</td>
<td>3.14</td>
<td>.034*</td>
</tr>
<tr>
<td></td>
<td>No-Treatment</td>
<td>12.57</td>
<td>12.64</td>
<td>0.37</td>
<td>.360</td>
</tr>
<tr>
<td>Sr</td>
<td>Meditation</td>
<td>11.33</td>
<td>12.58</td>
<td>2.61</td>
<td>.012*</td>
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<td>13.14</td>
<td>2.05</td>
<td>.032*</td>
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<td>11.64</td>
<td>-0.11</td>
<td>.462</td>
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<td>Sa</td>
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<td>15.50</td>
<td>2.93</td>
<td>.007*</td>
</tr>
<tr>
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<td>15.84</td>
<td>16.23</td>
<td>1.32</td>
<td>.105</td>
</tr>
<tr>
<td></td>
<td>No-treatment</td>
<td>16.21</td>
<td>16.29</td>
<td>0.32</td>
<td>.376</td>
</tr>
<tr>
<td>Nc</td>
<td>Meditation</td>
<td>11.16</td>
<td>11.50</td>
<td>0.39</td>
<td>.352</td>
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<tr>
<td></td>
<td>Relaxation</td>
<td>10.85</td>
<td>11.23</td>
<td>1.00</td>
<td>.169</td>
</tr>
<tr>
<td></td>
<td>No-treatment</td>
<td>11.57</td>
<td>11.42</td>
<td>-0.25</td>
<td>.402</td>
</tr>
<tr>
<td>Sy</td>
<td>Meditation</td>
<td>6.33</td>
<td>6.58</td>
<td>1.92</td>
<td>.041*</td>
</tr>
<tr>
<td></td>
<td>Relaxation</td>
<td>6.54</td>
<td>6.31</td>
<td>-1.59</td>
<td>.095</td>
</tr>
<tr>
<td></td>
<td>No-treatment</td>
<td>7.02</td>
<td>6.84</td>
<td>-1.16</td>
<td>.142</td>
</tr>
</tbody>
</table>

Note. Table 7 is continued on the following page.

*P < .05.
Table 7 continued

<table>
<thead>
<tr>
<th>POI Scale Group</th>
<th>Pretest M</th>
<th>Posttest M</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Meditation</td>
<td>14.75</td>
<td>16.58</td>
<td>1.47</td>
<td>.085</td>
</tr>
<tr>
<td>Relaxation</td>
<td>15.61</td>
<td>16.84</td>
<td>2.89</td>
<td>.007*</td>
</tr>
<tr>
<td>No-Treatment</td>
<td>16.21</td>
<td>17.64</td>
<td>2.42</td>
<td>.016*</td>
</tr>
<tr>
<td>C Meditation</td>
<td>17.41</td>
<td>19.41</td>
<td>1.32</td>
<td>.107</td>
</tr>
<tr>
<td>Relaxation</td>
<td>16.97</td>
<td>17.00</td>
<td>0.07</td>
<td>.472</td>
</tr>
<tr>
<td>No-Treatment</td>
<td>18.07</td>
<td>17.92</td>
<td>0.12</td>
<td>.455</td>
</tr>
</tbody>
</table>

Note. Abbreviations: $T_C =$ Time Competence; $I =$ Inner-Directedness; $SAV =$ Self-Actualizing Value; $Ex =$ Existentiality; $Fr =$ Feeling Reactivity; $S =$ Spontaneity; $Sr =$ Self-Regard; $Sa =$ Self-Acceptance; $Nc =$ Nature of man; $Sy =$ Synergy; $A =$ Acceptance of Aggression; $C =$ Capacity for Intimate Contact.

*p .05.

the characteristics and values of the self-actualized person, are also presented in Table 7. Significant increases in subscale scores were found for the meditation group on the following: feeling reactivity ($Fr$), spontaneity ($S$), self-regard ($Sr$), self-acceptance ($Sa$), and synergy ($Sy$).

The relaxation group was found to have increased significantly on the subscales of feeling reactivity ($Fr$), spontaneity ($S$), self-regard ($Sr$), and acceptance of aggression ($A$).

The no-treatment group increased scores significantly.
on the acceptance of aggression subscale (A) only.

Hypothesis 2

There will be a significant difference in movement toward self-actualization between the meditation group, the relaxation group, and the no-treatment control group.

To determine whether the three treatment groups were significantly different in their tested level of self-actualization after treatment, a one-way analysis of variance was applied to the group means of the 12 POI scales. Hypothesis testing was again accepted or rejected at the .05 level of probability.

The results of the one-way analysis of variance for the major scales of time competence and inner-directedness are presented in Tables 8 and 9 on the following page.

As evidenced in Tables 8 and 9, the meditation group was not found to have increased its self-actualization scores significantly more after completion of treatment than the relaxation and no-treatment groups on the major scales of time competence and inner-directedness. In addition, groups did not differ significantly from each other on any of the 10 POI subscales. The subscale data are reported in summary for in Appendix K.

It was concluded that after treatment the three groups did not differ significantly from each other in average level of self-actualization as measured by the POI.
Comparison of Personal Orientation Inventory Time Competence Scale Scores Between Groups After Treatment

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meditation</td>
<td>12</td>
<td>16.42</td>
<td>3.00</td>
</tr>
<tr>
<td>Relaxation</td>
<td>13</td>
<td>15.69</td>
<td>2.66</td>
</tr>
<tr>
<td>No-Treatment</td>
<td>14</td>
<td>15.14</td>
<td>2.98</td>
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</table>

<table>
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<tr>
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<th>DF</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td>10.497</td>
<td>2</td>
<td>5.249</td>
<td>.63</td>
<td>.538</td>
</tr>
<tr>
<td>Within</td>
<td>299.400</td>
<td>36</td>
<td>8.317</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>309.897</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comparison of Personal Orientation Inventory Inner-Directed Scale Scores Between Groups After Treatment

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meditation</td>
<td>12</td>
<td>88.33</td>
<td>7.48</td>
</tr>
<tr>
<td>Relaxation</td>
<td>13</td>
<td>84.31</td>
<td>5.99</td>
</tr>
<tr>
<td>No-Treatment</td>
<td>14</td>
<td>83.93</td>
<td>9.74</td>
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<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
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<td>74.54</td>
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<td>.320</td>
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<td>Within</td>
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<td>63.29</td>
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<td></td>
</tr>
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<td>2427.437</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Summary

Prior to treatment, a one-way analysis of variance performed on the pretest scores of the POI indicated no significant differences among the three groups at the .05 level of probability.

A t-test of the differences within groups (pretest-posttest) at the .05 level revealed a significant change for the meditation group on the major scale of inner-directedness and five of the subscales: feeling reactivity, spontaneity, self-regard, self-acceptance, and synergy. The relaxation group recorded significant changes on four of the subscales: feeling reactivity, spontaneity, self-regard, and acceptance of aggression. The no-treatment group increased significantly on the acceptance of aggression subscale. From the t-test results, it can be concluded that both the meditation and relaxation groups made significant changes in tested level of self-actualization.

After treatment, application of a one-way analysis of variance on posttest scores for each scale of the POI across groups indicated no significant differences in self-actualization among the three groups at the .05 level.
CHAPTER IV

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

SUMMARY

One of the goals of graduate programs in counselor education is the development of qualified counselors. However, the most proven intervention strategies for increasing counselor effectiveness, such as individual or group therapy, are costly from the standpoint of staffing requirements and financial outlay. With academic institutions caught between the rising cost of providing educational services while simultaneously facing monetary cutbacks, or maintenance-level budgets, the necessity for counselor training programs to identify those variables and methods that most directly enhance counselor effectiveness at a reasonable cost becomes increasingly important. One intent of the study, then, was to investigate an economically feasible method of increasing counselor effectiveness.

Counselor educators have long been aware that a substantial body of research literature has indicated a strong positive relationship between the counselor's "self" and the ability to be effective in a counseling relationship. What is needed is an inexpensive, easy-to-
learn technique that promotes self-growth. Meditation has been identified as a technique that may fulfill the requirements. Although a review of the literature has indicated a positive relationship between self-actualization and meditation, several methodological problems have been inherent in that research and must be examined before acceptable conclusions can be reached. The present study was designed to control the methodological difficulties found in previous studies. The purpose of the study, then, was to (1) investigate the effectiveness of meditation as a psychotherapeutic agent of healthy adjustment or self-actualization in counselor candidates, and (2) ascertain whether meditation will generate a more positive change in self-actualization than will the relaxation group and the no-treatment group.

The research sample consisted of 39 volunteer graduate students enrolled in counselor education courses at Western Michigan University and Michigan State University. Three separate or "intact" classes were used, with members of each group made up from the same class. Classroom groups were randomly assigned to one of three treatment procedures.

Treatment was carried out over an eight-week period. A quasi-experimental pretest-posttest design was employed using the POI as a measure of self-actualization. The
construction of a bogus treatment control that closely matched the meditation in its training procedures, complexity, and expectation-generating aspects provided methodological control in assessing the effectiveness of meditation. The use of a brief meditation (five minutes in duration) may have played a part in limiting the experimental "dropout" rate to 17 per cent.

A one-way analysis of variance indicated that the average level of self-actualization between the three groups before treatment was not significantly different on any of the 12 POI scales.

The t-test of changes within groups revealed a significant change for the meditation group on the major scale of inner-directedness and five of the 10 subscales. The relaxation group changed significantly on four subscales. The no-treatment group changed significantly on only one subscale. Results of the t-test indicated that both meditation and relaxation were effective in increasing levels of self-actualization.

A one-way analysis of variance performed on the posttest scores of the 12 POI scales failed to indicate any significant differences between groups. Clearly, when the more rigorous controls are applied, the effectiveness of meditation again becomes a question mark.
The Tukey-Kramer method of analyzing multiple comparisons was not used because no significant differences were found using the ANOVA method.

Discussion

The first research hypothesis states that an increase in the average level of self-actualization would take place for counselor candidates who participated in this study. Support for the hypothesis was provided by a t-test of the changes within groups. Results from the data analysis affirmed that both the meditation and relaxation group demonstrated significant increases in the average level of self-actualization as measured by the POI. The meditation group improved scores significantly on six of the 12 POI scales, including the major scale of inner-directedness. The relaxation group improved significantly on four subscales, while the no-treatment group improved on one subscale only.

The results of the t-test are similar and comparable to the results obtained from previous studies (Dick, 1974; Ferguson and Gowen, 1976; Hjelle, 1974; Seeman, Nidich, and Banta, 1972) that were conducted during the early-to-mid 1970's. Based on the t-test data only, it can be concluded with a high degree of probability that subjects who meditate will increase their average level of self-actualization. Interestingly, this same statement can be
claimed for the bogus treatment control (relaxation) that was disguised as an effective augmenter of mental health. It would appear that the practice of meditation and/or the bogus treatment control would bring about increased self-actualization, and, indirectly, increased counselor effectiveness in the future. This situation poses an interesting question that will be discussed later in the chapter, namely, whether subjects changed because of the particular treatment they experienced or some intervening variable was responsible for the change.

Clearly, an analysis based on t-test results only would be as weak as the least-controlled meditation studies. To avoid the pitfalls of previous research in meditation, hypothesis two examined the effectiveness of meditation when compared to a bogus treatment control and a no-treatment control. A one-way analysis of variance applied to the 12 POI scales failed to detect any significant differences among the three groups.

Again, the outcome is similar to previous research. Recent studies (Bartels, 1977; Joseph, 1979; Smith, 1976; Weiner, 1977) employing more elaborate controls have contradicted many of the earlier findings.

One conclusion that can be drawn from the lack of positive results is that the three groups were not, in fact, significantly different from each other. However, results

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from the t-test would seem to indicate some caution in accepting such an interpretation. For example, differences found between groups offer support for the possibility that a differential influence of treatment may exist. Thus, closer investigation of factors that may have suppressed significance in the one-way analysis of variance should be considered.

Examination of the mean differences between groups on pretest scores reveals a high level of variability, that, when coupled with a relatively small sample size per group, could have eliminated the possibility of significance when groups were compared.

A second explanation for the failure of the meditation group to improve significantly more than the control groups might be found in the low regularity of performance. The mean regularity of performance was 13 meditations missed. This equals almost a full quarter (23 per cent) of the available meditating opportunities.

Also of interest are the significant results obtained by performance of what was intended and constructed to be a bogus treatment control. The possibility of the bogus treatment being effective "in and of itself" would seem doubtful, since the tensing and relaxing of various muscles, as performed in the bogus treatment, is known primarily as an anxiety and stress-reducer. If the bogus treatment is not an effective method for increasing
self-actualization, then the likelihood of an intervening variable being responsible for the changes in both treatments becomes a possibility to explore.

Unfortunately, this research can only provide tentative insight into the exploration. An accumulating amount of research literature (Borkovec, 1972; Borkovec and Nau, 1972; Lazarus, 1968; Rosen, 1975) has found that a bogus treatment can be effective if certain conditions are present either singularly or in combination: (1) the treatment is elaborate and highly structured; (2) that treatment is taught by someone who believes in it; and (3) a complex theoretical rationale is provided. It can be recognized that the conditions have in common the appearance of mimicking the qualities that are usually associated with "believability" in treatments. Perhaps the intervening variable is the expectation or "belief" in a treatment's effectiveness. A variable of this nature could account for the significant increases in self-actualization scores that accompanied performance of the treatments in this study.

Finally, a brief, five-minute meditation was used in an attempt to reduce the high attrition rate so prevalent in meditation research. Although it can not be concluded with certainty that the "briefness" of the meditation was responsible for the dropout rate, it was a low 17 per cent.
Recommendations

Great care was taken in the construction of this experiment to limit the influence of the subjects' "set" or expectation of change. Both the meditation treatment and the bogus treatment were taught by trainers who believed in their effectiveness. Both incorporated an elaborate and structured rationale to provide credibility. The training procedure for the bogus treatment was designed to be approximately similar to the format used in meditation training. In addition, the form of meditation used was brief and relatively unknown, and the training procedure was reduced to the bare minimum necessary to teach the technique.

Even though the above controls were imposed, results of the study seem to indicate the possibility that the significant changes recorded by the treatment groups may be attributable to the subjects' expectation of change, rather than to the inherent qualities of the treatments. Replication of the basic study is recommended with a closer focus on frettng out the crucial therapeutic variable, which may not be meditation.

The replication would be further advanced by a more random drawing of the sample from the target population, by a larger sample size to control for the fluctuation of variance that often occurs with smaller samples, and
by increasing the time of treatment beyond the eight weeks used in this study. Perhaps a two-month period of treatment does not allow for the development of group differences.

However, that meditation is not effective in promoting positive personality changes is suggested by the increasing number of studies that have applied greater methodological control. Based on this observation, it is highly recommended that the phenomenon of meditation be explored through a more subjective style of inquiry, rather than the group approach. Further research should focus on the inclusion of subjective input from the meditator. The use of direct interviews during treatment and the keeping of journals during the meditation experience are suggested approaches. Perhaps the blend of subjective and objective inquiry would elucidate the role of meditation, if any, in creating personality change.
APPENDICES
Directions for Performing a Short Meditation

To perform this meditation requires an intense concentration upon one simple statement to the exclusion of everything else. Therefore the messages given are clearcut, to the point. No conflicting information is received, no cross messages are given.

The shutting out of superfluous data and the narrowing of perceptual focus are the two most important ingredients. Relaxation can help simply because the body messages are also quieted, and the mind not concerned with them.

Sit in an easy chair or recline on a sofa or bed. Take a minute or two to relax yourself and close your eyes. At this point do not think of the future, but only of the present. During this period concentrate your attention as vividly as possible upon one simple statement. Repeat it over and over while focusing upon it for this time. The statement may be spoken verbally or repeated mentally, whichever is personally preferred. Try to feel the statement in whatever way is possible—that is, do not allow distractions, but if your mind insists upon running about then channel its images in line with your declaration.

The repetition, verbally or mentally, is important because it activates biological patterns and reflects them. Do not strain.

During this period, however, do remember that you are using the present as a moment of power to insert a new belief. Realize that you are exerting your initiative to imagine such a situation. Here there can be no comparison with your normal situation. When the meditation is finished do not dwell upon it. Put it from your mind.

The meditation needs to be performed five minutes a day, seven days a week. The meditation can be performed any time during the day.

APPENDIX B

Rationale for Performing the Meditation Technique

In the first century Epictetus wrote, "Men are disturbed not by things, but by the view which they take of them." In the twentieth century Albert Ellis fashioned his Rational Emotive Therapy (RET) on this same principle. Ellis hypothesized that the individual's "belief system" was responsible for their mental health. He suggested that irrational and limiting beliefs are the underlying cause of disturbed behavior. Research has continued to support this position.

A belief can be defined as any idea that is accepted as "truth". In other words, each individual has a unique version of reality (those beliefs that are accepted as truth) that makes up their own private "world view". Since emotions and thoughts follow beliefs according to RET theory, our world view of beliefs will dictate automatically how we feel and think in a certain situation.

Unfortunately, we far too often take our beliefs about reality as truth, and fail to question them. They appear in our mind as statements of fact, far too obvious for examination. They are not recognized as beliefs about reality itself. They become invisible assumptions, but they nevertheless color and form our personal experience.

It is far simpler to recognize our beliefs in regard to religion, politics or similar subjects, than it is to pinpoint our deepest beliefs about ourself and who and what we are - particularly in relationship with our own life.

The following is a short list of limiting false beliefs that are held by many people:

1 Life is difficult and filled with sorrows.
2 I am helpless, a victim of circumstances.
3 I am at the mercy of my past.
4 People are basically bad.
5 I am unworthy.
6 I am not creative and I have no imagination.
7 I am controlled by my subconscious.

Meditation has proven to be an effective way of countering limiting beliefs by replacing them with a more desired belief. Therefore the short statement used in this study is:

The Self Is Not Limited

This is a belief that destroys artificial barriers to perception, an expanding belief that automatically pierces false and inhibiting ideas. This belief is designed to increase psychological health.
Directions for Performing a Short Relaxation Technique

To perform this relaxation technique requires an intense concentration upon various muscle groups to the exclusion of everything else. Therefore the relaxation is clearcut and thorough. No conflicting information is received, no cross messages are given.

The shutting out of superfluous data and the narrowing of perceptual focus are the two most important ingredients. Sit in an easy chair or recline on a sofa or bed. Take a minute or two to relax yourself and close your eyes. At this point do not think of the past or the future, but only of the present. During this period you will concentrate your attention as vividly as possible upon the various muscles of the body beginning with the feet and working up the body towards the head. The following is the correct order for proceeding with the relaxation technique.

Phase 1 of the SRT
1. Tense your feet for 5 seconds & relax for 15 seconds.
2. Tense your calves for 5 seconds & relax for 15 seconds.
3. Tense your thighs for 5 seconds & relax for 15 seconds.
4. Tense your stomach for 5 seconds & relax for 15 seconds.
5. Tense your right arm for 5 seconds & relax for 15 seconds.
6. Tense your left arm for 5 seconds & relax for 15 seconds.
7. Tense your face for 5 seconds & relax for 15 seconds.
8. Take in as deep a breath as you comfortably can - hold it for 5 seconds - and then slowly let your breath out. Repeat this three times.

Phase 2 of the SRT

This phase involves concentrating on any muscles of the body that need further relaxing. This is done by thinking of the muscles in question as you repeat the phrase "calm and relaxing" to yourself. Even in the event that all parts of the body are relaxed, choose one area for further attention. There is no tensing of the muscles during this phase. The statement "calm and relaxing" may be spoken verbally or mentally, whichever is personally preferred. The repetition of the phrase, verbally or mentally, is important because it activates biological patterns and reflects them. Do not strain.

The SRT needs to be performed five minutes a day, seven days a week. The SRT can be performed any time during the day.
Rationale for Performing the Relaxation Technique

Built into life are factors that disrupt inner calm and generate and maintain anxiety. Research has shown that one of these factors is the desynchronization of circadian rhythms, daily rhythmic changes in physiological functioning. SRT works to bring circadian rhythms into synchrony.

The way SRT works is complex. All physical activity, no matter how small, generates a fatigue like and stress like nonspecific physiological by-product called reactive inhibition. Simple physical tensing of muscles followed by inactivity tends to trigger the automatic dissipation of reactive inhibition. Such dissipation appears physiologically as a decrease in physiological activity and as a small dip or signature in the constellation of circadian rhythms. SRT involves tensing and relaxing muscles and body for five minutes a day. The result is that regular inactivity-induced signatures appear at and become classically conditioned to the same point in one's circadian rhythms each day. As one continues practicing SRT, conditioning continues, overlearning occurs, "dips become conditioned onto dips," and gradually, and automatically, the associated physiological changes become deeper and deeper.

The regular appearance of inactivity-induced signatures in circadian rhythms serve as zeitgeber, stimuli that pull and keep circadian rhythms in synchrony. SRT thereby functions to pull and keep circadian rhythms in synchrony, and as a result reduces anxiety and increases psychological health.

Periodic inactivity is the single commonality among a variety of highly effective growth and therapy techniques including biofeedback training, autogenic therapy, self-hypnosis, meditation, and yoga. However, since SRT incorporates only the essentials of these techniques, and does away with all the unnecessary and cumbersome extras associated with them, it is in fact more effective and efficient. SRT is designed to increase psychological health.

Consent Form

I, ______________________________, have agreed to participate as a volunteer in dissertation research conducted by Clifton Burrows, a doctoral student in the Department of Counseling and Personnel at Western Michigan University.

It is my understanding that my individual responses will be kept confidential by the researcher.

I understand that my participation involves responses to the Personal Orientation Inventory, several subject information questionnaires, and daily performance of a five minute self-improvement exercise.

Signed: _________________________

Date: _________________________
Information Given to Prospective Volunteers

Your class has been selected to take part in a dissertation research project. My name is Clifton Burrows, I am a doctoral student at Western Michigan University.

I am looking for volunteers to participate in a study of personality. Individuals taking part in the study will remain anonymous. Individual test results used in the research will be treated as confidential. You may have access to the individual results by making an appointment with me when the study is completed.

Those of you who volunteer to participate in this study will be asked to perform a daily, five minute self-improvement technique for the next eight weeks. A paper and pencil instrument will be administered at the beginning of the study and upon completion. Several subject information questionnaires will also be handed out. The self-improvement technique is designed to add to your understanding of yourself and others. No additional reading or paper work will be required.
Subject Information Questionnaire

All information gathered during the course of this study will be used only as part of an analysis of group results. Your name is needed only for the matching of various materials you complete now and later. The information you share will be kept strictly confidential. Thank you for participating in this study.

1. Name (please print) ________________________________

2. Phone __________________________

3. Age _________________

4. Male or Female ______________________

5. Married or Single __________________________

6. Degrees earned __________________________

7. Are you currently participating in any self-improvement or growth programs? If answer is yes, explain briefly.
   ______________________________________
   ______________________________________
   ______________________________________

8. Are you currently enrolled in either the counseling practicum or the counseling techniques class? If answer is yes, explain briefly.
   ______________________________________
   ______________________________________
   ______________________________________

9. Are you currently or have you previously, used a similar technique. If answer is yes, explain briefly.
   ______________________________________
   ______________________________________
   ______________________________________
Final Questionnaire

1. Name (please print) ____________________________

2. Phone ____________________________

3. How regular has your practice of the technique been? Please estimate below the number of days you did not practice the technique.

__________ Estimation of the number of days I did not practice the technique.

4. Have you participated in any other self-improvement or growth programs during the past two months? If answer is yes, explain briefly.

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________
### APPENDIX I

Summary of Personal Orientation Inventory Subscale Pretest Score Comparison Between Groups Before Treatment (One-Way Analysis of Variance)

<table>
<thead>
<tr>
<th>Subscale</th>
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<td>Capacity for intimate contact</td>
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APPENDIX J

Descriptions and Raw Score Ranges of the Personal Orientation Inventory Scales

1. Time Competence: Living fully in the here and now versus living in the past or future. Raw score range (0-23).

2. Inner Directedness: Independent orientation versus dependent orientation. Raw score range (0-127).

3. Self-Actualizing Value: Accepting or rejecting of values held by self-actualizing people. Raw score range (0-26).

4. Existentiality: Flexibility versus rigidity in application of values held by self-actualizing people. Raw score range (0-32).

5. Feeling Reactivity: Sensitivity or insensitivity to one's own needs. Raw score range (0-23).


7. Self-Regard: High or low self-worth. Raw score range (0-16).

8. Self-Acceptance: Ability to accept one's self in spite of weaknesses or deficiencies. Raw score range (0-26).

9. Nature of Man: Seeing people as essentially good or evil. Raw score range (0-16).

10. Synergy: Ability to see opposites of life as meaningfully related. Raw score range (0-9).

11. Acceptance of Aggression: Acceptance of one's anger and aggression versus denial of such feelings. Raw score range (0-25).

12. Capacity for Intimate Contact: Ability to have warm relationships versus inability to have them. Raw score range (0-28).
### APPENDIX K

Summary of Personal Orientation Inventory Subscale
Posttest Score Comparison Between Groups After Treatment (One-Way Analysis of Variance)

<table>
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<th>Subscale</th>
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BIBLIOGRAPHY


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