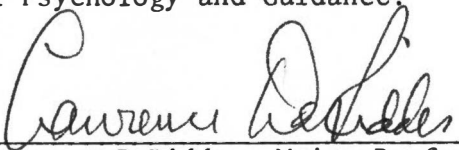
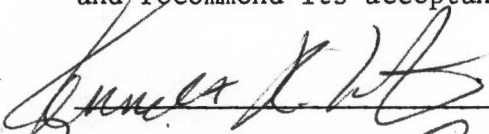


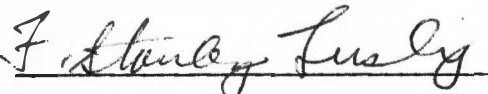
To the Graduate Council:

I am submitting herewith a dissertation written by Timothy J. Thorpe entitled "The Effects of Integral Hatha Yoga on Self-Actualization, Anxiety and Body-Cathexis in Drug Users." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Educational Psychology and Guidance.


Lawrence DeRidder, Major Professor

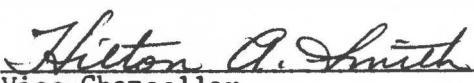
We have read this dissertation
and recommend its acceptance:





Accepted for the Council:


Vice Chancellor
Graduate Studies and Research

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THE EFFECTS OF INTEGRAL HATHA YOGA ON
SELF-ACTUALIZATION, ANXIETY AND
BODY-CATHEXIS IN DRUG USERS

A Dissertation
Presented for the
Doctor of Education
Degree
The University of Tennessee, Knoxville

Timothy J. Thorpe

June 1976

1301101

DEDICATION

One day in July of 1974, while living, studying and teaching with friends at the Integral Yoga Institute in Garfield, New Jersey, we were visited by our founder, director and guide in yoga. A humble and simple man, he generated an aura of inner peace and beauty which touched me deeply. During that visit he responded with encouragement to both my interest and doubt about developing a yoga research project in graduate school. The fruit of his blessing has been a master's thesis and this doctoral dissertation. I wish to dedicate this work to that man, Swami Satchidananda.

ACKNOWLEDGMENTS

I would like to thank the members of my doctoral committee, Larry DeRidder, Kathy Davis, Mark Hector, Ken Newton and Stan Lusby, for allowing me the academic freedom to pursue yoga as the topic of this dissertation. Especial gratitude is extended to Mark for the clarity of thought he brought to the central ideas and methods of the study, as well as for his significant expenditure of time. The Department of Educational Psychology and Guidance of The University of Tennessee at Knoxville, which supported me emotionally and financially in this study, must be acknowledged as a bastion of integrity and humanism in an academic world all too often characterized by a rigid and self-serving intellectualism.

The teachers and members of the Integral Yoga Institutes, who provided me with my initial training in Yoga, Margabandu Matarano, Swami Abhyananda and Swami Shaadananda most notably, are extended my warmest appreciation and hope for their spiritual enlightenment. Martha Madison of the Knoxville YWCA and David Bean of Non-credit Programs and Workshops, have, over the past year and a half, provided settings to continue and hopefully refine my skill as a yoga instructor.

My family also deserves acknowledgment for their support of my study. Dora, my mother, Les, my brother, and Annie, my grandmother, have all provided assistance via their concern for my well-being. Joanie Harrigan has been a loving friend and fellow yogi and this has been delightful.

ABSTRACT

The study was designed to discern the possible effects of Integral Hatha Yoga administered five times a week for four weeks to drug users at "Freedom House," a drug rehabilitation community at Eastern Psychiatric Hospital in Knoxville, Tennessee. The experimental data were to provide sufficient information to reveal differences in self-actualization, anxiety, body-cathexis and behavioral progress through the overall rehabilitation program, between a treatment and a control group.

In August of 1975, 11 patients at the drug unit received a lecture and demonstration of Integral Hatha Yoga. Eight of the patients agreed to take part in the study and took the Personal Orientation Inventory, IPAT Anxiety Scale Questionnaire and Body-Cathexis Scale. After four weeks of Integral Hatha Yoga they were posttested on the same measures and given a structured interview. Three participants dropped out of the study during the first week of treatment. Staff and patient evaluations of behavioral progress through the overall drug program for the participants were recorded during the four weeks of experimental treatment.

In December of 1975, after total patient turnover at the unit, the lecture and demonstration of Integral Hatha Yoga was again presented. Ten of the 15 patients on the unit agreed to participate and were assigned to the control group. They were given the same pretest measures as the treatment group and after a control period of four weeks during which time they received only the standard "reality" based treatment of the community, were posttested on the same measures. Staff and patient

evaluations of their overall behavioral progress through the program were recorded during the four weeks between the pre and posttests.

Using an analysis of covariance procedure, there were no significant differences between the groups for self-actualization, and significant differences for anxiety and body-cathexis. The behavioral progress through the overall drug program was greater for the experimental group. Probable reasons for the significant and nonsignificant results were discussed and a number of directions for future research were considered.

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CHAPTER I

PROBLEM, RATIONALE AND RELATED LITERATURE

Need

The goals and methods of counseling and psychotherapy are as diverse as the theories which attempt to explain the nature of man and the dynamics of his change. While numerous variations of behaviorism, humanism and psychoanalysis form the basis for most of the theory and technique within contemporary counseling, there has emerged a serious interest in yoga as an approach to understanding and alleviating personal conflict. Generically, yoga represents a philosophy of man, a comprehensive system of self-actualization and the applied techniques of hatha yoga (physical postures and breath control) and meditation. Integral Hatha Yoga is a specific technique integrating hatha yoga and meditation and is the experimental treatment in this study.

Within fields as diverse yet interrelated as education (Sen, 1951), counseling (Seeman, Nidich & Banta, 1972), behavior therapy (Boudreau, 1972), humanistic therapy (Jourard, 1974), physiology (Wallace & Benson, 1972), psychiatry (Shaffi, Lavelly & Faffee, 1971) and psychoanalysis (Chakrabortz, 1970) there are theoretical and experimental investigations into the effects of yoga. Physiological parameters of change effected through the applied yogic techniques are being mapped out with increasingly sophisticated instrumentation (Benson, 1975) and claims that it is an occult phenomenon unworthy of scientific investigation are being

voiced much less frequently than even the recent past. However, little empirical investigation has been conducted on the psychological effects of the applied techniques of yoga which would be of interest to the educator or counselor. Most of the studies have used physiological measures as dependent variables. Also, few studies have compared a yogic technique to another form of treatment. As a prior investigation (Thorpe, 1975) indicated that Integral Hatha Yoga, which is representative of applied yoga in general, may bring about positive changes in self-actualization, anxiety and body-cathexis, a need presently exists to quantify what these effects may be.

Purpose

The purpose of this study is to discern the possible effects of Integral Hatha Yoga applied five times a week for four weeks with patients in "Freedom House," a drug rehabilitation community at Eastern State Psychiatric Hospital in Knoxville, Tennessee. It is suggested that the participants instructed in Integral Hatha Yoga will reveal significant improvements in self-actualization, anxiety and body-cathexis in comparison to a control group drawn from the same population and receiving only the standard "reality" oriented treatment.

Theory

The theoretical basis of Integral Hatha Yoga may be presented most fruitfully from a psychological perspective. Emerging from a pre-historic verbal tradition and first put in written form by Patanjali some 2,500 years ago (Prabhavananda & Isherwood, 1953), it has provided the

fundamental assumptions for all traditional Oriental psychology (Zimmer, 1951). The purpose of this section is to relate this theory to humanistic, existential, psychoanalytic and behavioral thought and thereby provide multiple points of comparison with contemporary psychology.

Humanism

From the humanistic view, man has an innate drive toward self-actualization. Under favorable environmental conditions he strives to gratify physiology, security, esteem and love needs. He then attains the peak-experiences of truth, goodness and beauty which are the culmination of the self-actualization drive (Maslow, 1970). By contacting the world through an act of will, existence becomes conscious, free, responsible and meaningful (Bugental, 1967). Humanism assumes that man is capable of states of being which far surpass the average in personal fulfillment (Jourard, 1974).

Yogic theory is also humanistic. Man is seen as possessing intrinsic value which becomes increasingly manifest through a yogic method (Satchidananda, 1970). The obstacles toward expanding consciousness, freedom and responsibility derive from unfavorable environmental conditions. Though the social and physical environment is seen as neither good nor bad, it usually acts to cover the innate drive toward maturity and integration. Through the practice of yoga, the will is mobilized and developed, thereby reducing the negative affects of the environment. As the yoga practitioner eliminates reflexive and regressive patterns of expression he gradually experiences deeper levels of human value (Thorpe, 1975). The ultimate goal to be achieved is

"samadhi," a superconscious state in which the individual experiences oneness with the universe (Prabhavananda & Isherwood, 1953).

Although humanistic and yogic theory are highly similar in their concepts of man, they differ in their emphasis on need gratification. Maslow (1968) recommended that individuals learn to fully gratify physiology, security, esteem and love needs. Peak-experiences and self-actualizing behavior would then naturally and spontaneously occur. While yogic theory recognizes the fulfillment of lower order needs as essential for self-actualization, it suggests that the individual consciously reduce his need for their gratification (Binderman, 1974). The superconscious state, synonymous with peak-experience (Maslow, 1964) should be the goal of all behavior. Only to the extent that the gratification of other needs is necessary for survival should they be fulfilled (Sivananda, 1974).

Existentialism

Though existentialism as a body of knowledge eschews theory, characteristic themes emerge from its proponents. First, the proper study of psychology is the individual as he experiences himself in the world (Merlau-Ponty, 1962). Behavior is a function of perception (Rogers, 1963). Second, man is divided against himself. To know one's self deeply is to experience dread or anxiety at one's inevitable physical and social dissolution (Kierkegaard, 1967). Man shrinks back from his capacity for self-unification because the endeavor demands creation of meaning and life-affirmation in the face of death (Frankl, 1969). To the extent that this anxiety is known it can be transformed into healthy vitality (Perls, 1969).

The theoretical basis of Integral Hatha Yoga recognizes the existential condition of man as the locus of personal growth. Behavior changes as the experience of the self changes. For example, yogic practices are done in a quiet environment free of physical and social distraction. These conditions bring the individual to recognize that conflict resolution and self-actualization proceed from the experience of being. Yogic theory places high priority on facing the existential fear of death (Yogananda, 1969). It is still not uncommon in India for yoga students to engage in their practices amongst the funeral ghats along the Ganges River (Koestler, 1962). The purpose behind this seemingly bizarre setting for self-actualization is the recognition that anxiety inhibits self-actualization and the higher states of being cannot be attained without confronting and overcoming the fear of death.

There is one clear difference between existentialism and yogic theory. In contrast to the existential notion that essence cannot precede existence (Kaufman, 1961) yogic theory postulates a spiritual identity in man. Spiritual essence is the first cause of creation and all existential awareness is but a derivation. Essence precedes existence.

Psychoanalysis

At a time when rational philosophy dominated the conceptualization of human motivation, psychoanalysts boldly stated that most behavior is determined by unconscious forces. Though forever in a state of theoretical modification, adherents of psychoanalysis concur that the essential goal of psychotherapy is to bring about an integration of the

conscious and unconscious components of psychic life (Guntrip, 1971). Personal conflict is the result of thought and feelings complexes which are unacceptable to the individual's ego-ideal and therefore kept unconscious through the ego-defense mechanism of repression. When, through the process of free association and therapist interpretation these complexes are made conscious, they lose their power to produce conflict.

Brar (1970) and Chakrabortz (1970), themselves analysts, conceptualize the theory and benefits of yoga as comparable with psychoanalysis. Both aim at integration of personality and both recognize the effects of unconscious complexes on behavior. An additional similarity can be seen between psychoanalytic technique and the meditational component of Integral Hatha Yoga. In meditation the individual sits in a comfortable position in a quiet environment and focuses awareness on a sound which is produced subvocally. When thoughts, feelings, images and other facets of psychic life distract the individual, he recognizes their content, feeling and meaning but wills his attention back to the sound he is producing. In this way the unconscious complexes lose their power to determine irrational behavior. Psychoanalytic technique is similar. The patient is reclined in a relaxing position in the quiet setting of the analyst's office with the analyst out of sight in back of the couch. The patient also lets his thoughts and feelings emerge into consciousness without censorship and thereby becomes more integrated and mature.

The difference between the yogic and psychoanalytic techniques is in how the newly conscious material is handled. In psychoanalysis it is

interpreted by the therapist while in meditation it is merely observed. Psychoanalytic theory assumes the necessity of a trained therapist to give meaning to the complexes. Yogic theory assumes that by keeping to the task of meditation the complexes will spontaneously lose their irrational influences on behavior.

Another very clear difference between psychoanalytic and yogic theory exists. Psychoanalysis recognizes only the interplay of the unconscious and conscious components of psychic life while yoga postulates the addition of a superconscious state (Coster, 1932). Yogic theory sees man as possessing the inherent ability to transcend the limitations of the mind. When the unconscious/conscious mind becomes calm through yogic technique there is a state of being wherein conceptual activity ceases and superconscious or spiritual awareness develops. Maslow (1964) observed this superconscious state to occur most frequently in self-actualizing persons.

Behaviorism

Behaviorism is characterized by the belief that behavior is learned through patterns of environmental reinforcement. If an individual is in conflict, it is because he/she has learned to be that way and remediation is based on altering environmental contingencies (Skinner, 1953). Wolpe (1958), a mediational learning theorist, focuses on reconditioning in therapy. Maladaptive behavior is based on a physiological "anxiety" response wherein sympathetic nervous system activity becomes conditioned to environmental stimuli. Reconditioning occurs when a relaxation response, synonymous with activity in the parasympathetic nervous

system, becomes conditioned to the formerly anxiety provoking stimuli. With the proof that learning is possible in the central and autonomic nervous system (DiCara, 1972), behaviorism has significantly expanded its scope of applications. A wide range of anxiety and psychophysiological disorders are now being treated through biofeedback training (Budzynski, 1973).

The theoretical basis of Integral Hatha Yoga is in congruence with the above assumptions of behaviorism. Conflict is learned through environmental interaction and may be unlearned through rearranging environmental contingencies. Concordant with mediational learning theory, the technique of Integral Hatha Yoga aims to condition, a physiological relaxation response. Anxiety is removed through psychophysiological methods wherein deep states of relaxation are learned. While western science has only recently recognized that learning occurs in the nervous system, this knowledge has been accepted by yogis for centuries. Integral Hatha Yoga places high priority on preventing physical and mental disorders by teaching persons to control their underlying neurophysiological mechanisms (Kavalayananda, 1972).

The main difference between behaviorism and Integral Hatha Yoga is in the differential emphasis on consciousness. While behaviorism is almost totally concerned with changes in overt, observable behavior and places low priority on altering consciousness, yogic methods are primarily concerned with altering consciousness. Again, the overriding goal of Integral Hatha Yoga is the superconscious state, not specific patterns of behavior.

In summary, the theoretical basis of Integral Hatha Yoga is an ancient system of Oriental psychology which bears many similarities and some differences with contemporary theories of humanism, existentialism, psychoanalysis and behaviorism. While both humanism and Integral Hatha Yoga share the view that man has an innate drive toward self-actualization, humanism emphasizes full gratification of lower order needs while the yogic theory recommends reducing their affects on behavior. Existentialism and Integral Hatha Yoga both see overcoming death anxiety as a fundamental life task. While existentialism believes that existence precedes essence, yogic theory postulates a spiritual essence of man that precedes his existence. Both psychoanalysis and Integral Hatha Yoga aim at the integration of unconsciousness and conscious facets of psychic life as a therapeutic goal. In distinction to psychoanalysis, Integral Hatha Yoga assumes the existence of an additional superconscious state. Behaviorism assumes that behavior is learned and this is congruent with yogic theory. Integral Hatha Yoga differs from behaviorism in that it places greater priority on altering consciousness than changing behavior.

Review of the Literature

In this section a brief description of the three basic components of Integral Hatha Yoga will be presented. They are physical postures, breath control and meditation. Following each description, literature related to these components and to self-actualization, anxiety and body-cathexis will be cited. A comprehensive introduction to Integral Hatha Yoga has been made by Vishnudevananda (1959) and Satchidananda (1970) and

is therefore not presented here. Other scientific, historical and philosophical literature have been reviewed by Thorpe (1975).

Physical Postures

In Integral Hatha Yoga, 18 physical postures are practiced. Done in a specific sequence with a short period of relaxation following each one, they take about 60 minutes to complete (Appendix A). The overriding goal of these postures is to teach the individual to control his autonomic nervous system. As this goal is achieved, control over muscular states of tension and relaxation develops. Control over the circulatory, respiratory, central nervous, endocrine, reproductive, digestive and urinary organ systems also develops (Rama, Ballentine & Ajaya, 1976).

Physical postures are practiced by statically maintaining the body in a dynamic position for 20 to 120 seconds. Excess muscle tension is reduced. As this tension is reduced a conservation of psychophysical energy is produced. While assuming a given posture, the individual learns to visualize, with eyes closed, the muscles being contracted. This results in the ability to experience the nervous energy flowing into them. With practice, experience expands to include awareness of internal organs, felt as areas of warmth over the corresponding muscles. The ability to systematically concentrate awareness throughout all the organ systems develops control over the autonomic nervous system (Brena, 1972).

In distinction to Occidental forms of physical exercise which aim for increased cardio-respiratory output and striated muscle tonus (Fox & Matthews, 1974), the yogic postures develop all the organ systems

to peak efficiency by producing a vigorous yet gentle massage. With the entire psychophysical self massaged and relaxed, awareness becomes characterized by feelings of unity and alertness (Satchidananda, 1970).

Self-actualization. No studies have been done which directly relate physical postures to self-actualization. However, Udapa and Singh (1972) reported that 12 males undergoing a six month course in physical postures and breath control had improved memory quotients, lowered rates of mental fatigability and decreased neuroticism. An individual experiencing an acceleration of the self-actualization process could be expected to improve his/her psychological functioning in this manner.

Thorpe (1975) reported that 69 practitioners of Integral Hatha Yoga anonymously responding to an open-ended questionnaire showed evidence of increased self-actualization. The number of statements indicating concern with deeper human values and peak experiences were directly related to the number of years regularly practicing the technique. Maslow (1970) reported that self-actualizing individuals showed much concern with deeper human values and peak experiences.

Anxiety. Research related to the effects of physical postures on anxiety is more clearly established. Udapa and Singh (1972) reported a significant enhancement of adrenocortical activity in their experimental subjects. This finding means that, physiologically, the subjects were less anxious. The physiological pattern included increased 17-hydroxycorticosteroid excretion in conjunction with reductions in serum cholesterol and glucose and increases in serum protein and urinary excretion of testosterone. EEG measurements of the subjects in this

study revealed an alpha wave pattern that was interpreted as a "less irritable nervous system." This finding would also suggest reduced anxiety.

On a study of seven subjects of both sexes who regularly practiced physical postures, Das and Gastaut (1955) found "muscular relaxation with perfect immobility The electromyographic electrodes were silent." Boudreau (1972) found that physical postures enhanced the reciprocal inhibition of anxiety. Grossbach (1974) reported that prisoners trained in physical postures learned to relax using GSR and EMG biofeedback significantly quicker than prisoners without the training.

Vahia, Vinekar and Doongaji (1966) reported using a form of yoga highly similar to Integral Hatha Yoga with psychiatric patients. Of 35 patients suffering from anxiety, depression and/or psychosomatic complaints who did not respond to psychotherapy, 28 showed a decrease in symptoms after practicing the yoga. Although this study indicates that a technique resembling Integral Hatha Yoga could be of benefit in treating anxiety and related symptoms, the outcome criteria were psychiatric evaluations. These evaluations were totally subjective in nature without the use of more than one evaluator per subject. Also, no matched control group receiving a comparable form of treatment was used.

Body-Cathexis. Investigations of the effects of physical postures on body-cathexis are scant but promising. Both Lilly (1968) and Jourard (1974) suggested that the self-concept could be improved through the practice of physical postures. Thorpe (1975) reported a clear relationship between the ability of subjects to discriminate and correct physical

dysfunction. The more years a subject practiced physical postures, the more able he/she was to reduce or eliminate the effects of insomnia, fatigue, headaches, body aches, spine curvature, nervousness, poor vision, nausea, stiff joints, skin problems, overweight, indigestion, smoking and drinking. Subjects also reported increased relief from sexual frustration, laziness, menstrual cramps, diabetes, colds, migraine, drug dependence, asthma, allergies, hay fever, constipation, hypertension, chest pains, bronchitis, ulcers, hypoglycemia, kidney malfunctions and aging.

Breath Control

Following completion of the postures, a 15-minute period of breath control is practiced. Known in Sanskrit as "pranayama" or control of the life energy, the goal is to reduce the frequency of respirations per minute. The average rate of 18 to 20 respirations per minute is gradually lowered to a rate of one to three per minute. The purpose of this procedure is to increase the relaxation and control of the autonomic nervous system produced by the physical postures and thereby prepare the individual for meditation.

The training of breath control is started in a comfortable, sitting posture. The inhalation, pause and exhalation are controlled and timed. With practice the posture can be maintained for longer periods without fatigue. Control of the breath also becomes easier. Later, the duration of inhalation, pause and exhalation are slowly prolonged " . . . so that after some time the body respire at the trainee's will and not for its own requirements" (Ramamurthi, 1967).

The control of the autonomic nervous system, and with it, increased relaxation, occurs in the following manner. The cortex is the part of the brain which regulates the voluntary process of breath control. However, normal breathing, which is unconscious and involuntary, is controlled by a more primitive part of the brain which is known as a lower medullary center. During the practice of breath control the cortex establishes control over this center. Through an unknown process of generalization this conscious control of the cortex extends over other involuntary areas of the brain such as the emotional centers and the hypothalamus. Although the precise mechanism whereby the cortex establishes control over these autonomic centers is not clear, it is clear that the control does occur.

He (the yogi) is able to control by will many functions that are controlled in ordinary human beings by sub-cortical areas. The mechanism could be neurological and chemical. Once a steady, regular control of respiration is achieved there is perhaps a reciprocal biochemical stability which helps in the maintenance of this control. Further autonomic control through the hypothalamus can presumably affect endocrine functions as well. (Ramamurthi, 1967, p. 169)

Self-actualization. No studies exist which directly relate breath control to self-actualization. The probable reason is that breath control is usually practiced in conjunction with physical postures and/or meditation. Studies cited in this chapter do relate the effects of self-actualization to the practice of physical postures and meditation.

However, Maslow (1970) did report that his sample of self-actualizers were able to transcend conceptual thought during meditation. Behanan (1965) reported that a single subject, undergoing intensive and prolonged

training in breath control for three years, also could transcend conceptual thought. The subject's ability to solve adding, code, color naming, coordination and Chinese puzzle tests during and immediately after a period of breath control was significantly lower than in a control period of normal wakefulness. This would suggest that breath control could produce a transcendence of conceptual thought similar to that of Maslow's subjects. However, a sample size of one, lack of subject controls and a procedure only partially reported, make it difficult to assess the meaning of this finding.

Anxiety. The effects of breath control on anxiety are more clear. Malhotra (1962) conceptualizes hyperventilation, synonymous with a low frequency of respirations per minute, to be a physiological condition incompatible with anxiety. He adds that hyperventilation is probably the least recognized but most common manifestation of anxiety.

The vicious circle (hyperventilation—anxiety attack—hyperventilation—anxiety attack) is put to an end by these breathing exercises. (Malhotra, 1962, p. 382)

Body-cathexis. No studies have been reported which directly relate breath control to body-cathexis. However, the literature cited above would suggest that increased control of the autonomic nervous system could, as a secondary effect, increase body-cathexis. Since subjects practicing breath control in conjunction with physical postures and meditation did report increased physical functioning (Thorpe, 1975), it seems likely that the breath control is somehow related.

Meditation

Meditation comprises the last 15 minutes of an Integral Hatha Yoga session. Sitting in an upright position, the "mantra" or sound syllable

"OM" is produced subvocally in synchronization with the exhalation of the breath. The goal of this technique is to further the control over the autonomic nervous system and deepen the state of relaxation and well-being created initially by the physical postures and breath control.

Self-actualization. During the past five years a body of research has emerged which relates the regular practice of meditation to self-actualization. On the Personal Orientation Inventory, persons meditating for two months showed increased spontaneity, self-regard, acceptance of aggression and capacity for intimate contact (Nidich, Seeman & Dreskin, 1973; Seeman, Nidich & Banta, 1972). Increases in self-actualization showed positive correlations with term of practice as measured by the Northridge Developmental Scale (Ferguson & Gowan, 1974). Other improvements in psychological functioning related to self-actualization include increases in short and long-term memory (Abrams, 1974), improved reaction time to auditory and visual stimuli (Shaw & Kolb, 1974), increased clarity and refinement on perceptual discrimination tests (Brown, Stewart & Boldget, 1971; Grahm, 1974), increased sociability, self-assuredness, emotional stability and ability to concentrate (Fehr, Nerstheimer & Forbes, 1974) and increased grade point averages in college students (Heaton & Orme-Johnson, 1974). Reports of significant reductions in the use of alcohol, amphetamines, marijuana, LSD, other hallucinogens, narcotics and cigarettes were reported for 1,862 students meditating for an average of 20 months (Benson & Wallace, 1972). Shaffi, Lavelly & Jaffe (1974) indicated that the use of marijuana decreased as subjects began meditating regularly.

Anxiety. Reductions in anxiety and related symptoms have been reported for those practicing meditation regularly. Orme-Johnson (1973) reported that subjects who were regular meditators were better able to habituate to stressful stimuli as measured by GSR than nonmeditators. This finding would suggest that the meditators were less anxious than the nonmeditators. Reduced anxiety, psychosomatic disease, depression, irritability, dominance and inhibition were reported by Fehr et al. (1974). Using the Personality and Ability Scale (Farwell, 1974), Spielberger Anxiety Inventory and Cattell Anxiety Scale (Ferguson & Gowan, 1974), decreases in anxiety were correlated positively with the number of months meditating. Decreases on the hypochondria, schizophrenia and anxiety scales were significant after several months of meditation (Orme-Johnson, 1974).

Body-cathexis. No studies have been reported which relate meditation to body-cathexis. However, studies reporting improved neurophysiological functioning as a result of meditation have been made. It seems probable that measurable improvement in neurophysiological functioning could, as a secondary effect, produce improvements in body-cathexis.

During a 20-minute period of meditation, oxygen consumption decreases to a level significantly lower than in an equal period of sleep or hypnosis (Wallace & Benson, 1972). Allison (1970) noted a spontaneous decrease in respirations per minute during meditation. Significant decreases in cardiac output (Wallace, 1970) and serum lactate (Wallace, Benson & Wilson, 1971) have been reported.

Regular meditators show a characteristic pattern of alpha wave activity in the brain. This predictable pattern is indicative of enhanced flexibility and stability of the entire nervous system and is not found in nonmeditators. Banquet (1972, 1973) suggests analytic and verbal skills of the left brain hemisphere become integrated with the spatial and synthetic skills regulated by the right brain hemisphere.

The frequency of this highly ordered pattern indicates inner wakefulness and, in correlation with deep metabolic rest, may represent the underlying physiology of the reported experience of "profound wakefulness," or "pure awareness," or "unbounded awareness." (Banquet, 1973, p. 145)

The overall review of the literature suggests that physical postures, breath control and meditation, when practiced regularly, enhance self-actualization, decrease anxiety and increase body-cathexis. However, two methodological problems found in these studies suggested design improvements which were implemented in the present study. The problems were lack of precise definition of the independent variable and lack of a control group receiving a comparable form of treatment.

None of the studies reviewed presented a detailed description of the yogic technique which served as an independent variable. A precise account of Integral Hatha Yoga, the treatment procedure of interest, is found in Appendix C. In addition, Integral Hatha Yoga was presented uniformly in each treatment session.

There have been two major methods of experimental control used in the literature cited. They are repeated measures with an experimental group and no control group, and an experimental group matched against a control group receiving no treatment. This study uses a quasi-experimental design with two intact groups.

The 15 participants used in this study all volunteered to receive Integral Hatha Yoga but it was only given to five of them in August of 1975. It was included in the comprehensive "reality" based treatment which is standard procedure at "Freedom House" by deleting a 60-minute gym and 30-minute "free-time" period, daily during the experimental treatment. The ten participants in the control group received only the standard "reality" based treatment in December of 1975. It may therefore be possible to discern the effects of Integral Hatha Yoga on self-actualization, anxiety and body-cathexis in relation to a comparable form of treatment.

Hypotheses

The four hypotheses which were tested in this study make reference to a treatment and a control group. All participants in these groups were inpatients at "Freedom House," a drug rehabilitation community at Eastern State Psychiatric Hospital in Knoxville, Tennessee. The standard treatment program in which all participants engaged is described in Appendix A and the experimental treatment, Integral Hatha Yoga, is in Appendix C. A further description of participants, procedures, measures, design and statistical analyses are found in Chapter II.

Hypothesis I

The posttreatment mean score for the experimental group on the Time Incompetence/Time Competence Ratio of the Personal Orientation Inventory will significantly exceed the mean score of the control group.

Time competence refers to an individual's capacity to live in the here-and-now (Perls, 1947) and is a prime indicator of self-actualization

(Jourard, 1974). Integral Hatha Yoga is designed to increase the individual's capacity for here-and-now experience and thereby accelerate his self-actualization.

Hypothesis II

The posttreatment mean score for the experimental group on the Outer Support/Inner Support Ratio of the Personal Orientation Inventory will significantly exceed the mean score for the control group.

Inner support refers to independence and reliance on personal experience as opposed to being supported by others. Developing out of the ability for here-and-now experience (Perls, 1969) it is the second prime index of self-actualization (Shostrom, 1964). As an individual becomes more capable of here-and-now experience through Integral Hatha Yoga, he will increase his inner support and hence his self-actualization.

Hypothesis III

The posttreatment mean score for the experimental group on the Total Anxiety Score of the IPAT Anxiety Scale Questionnaire will be significantly less than the mean score of the control group.

Integral Hatha Yoga alters the neurophysiological functioning of the individual. The control of this functioning becomes conscious. As this skill develops, the individual learns to control the physiological correlates on anxiety. Increased relaxation on a physiological level is also manifest in reports of decreased anxiety.

Hypothesis IV

The posttreatment mean score for the experimental group on the Total Cathexis Score of the Body-Cathexis Scale will significantly exceed the mean score of the control group.

As Integral Hatha Yoga alters the neurophysiological functioning of the individual, this should be manifest in an increase in overall physical functioning (Satchidananda, 1970). This should then be expressed in self-reports of increased satisfaction with body parts and overall physical appearance.

Overview

The remaining three chapters of this study will be organized in the following manner. In Chapter II the participants, treatment, procedure and measures are presented. The type of statistical analyses and design are also described. Chapter III is an analysis of results and Chapter IV concludes the study with a summary and discussion.

CHAPTER II

EXPERIMENTAL DESIGN AND METHODOLOGY

Participants

The participants in this study were inpatients at "Freedom House," a drug rehabilitation community at Eastern State Psychiatric Hospital in Knoxville, Tennessee. Eight of the participants took part in the experimental group in August of 1975 and 10 were in the control group in December of 1975. All participants took part in the standard "reality" based treatment which is normal procedure in the community (Appendix A).

Participation in the study was voluntary and all participants signed a consent form (Appendix B). It was explained that participation or non-participation in the study would not affect the normal treatment they would receive. Of the 18 participants, three dropped out of the study in the first week. They would have been in the experimental group.

The participants ranged in age from 17 to 46 with the average age being 23.15. Nine were male and nine were female. Two participants had graduated from college and five had high school degrees. Eleven had not finished high school. Of the dropouts, two were male and one was female.

Treatment

Integral Hatha Yoga is a standardized and replicable technique and was the experimental treatment in this study. A detailed description is found in Appendix C. Each session lasted approximately 90 minutes and was administered to the experimental group five times a week for four consecutive weeks by the experimenter. The sessions were scheduled from 8:45 a.m. until 10:15 a.m. and took the place of a 60-minute gym and 30-minute "free time" period.

Procedure

In August of 1975, Integral Hatha Yoga, degree of time commitment and necessity of pre and posttesting were explained to all 11 patients in the drug unit (Appendix D). Three were scheduled for discharge during the subsequent week and did not wish to participate for that reason. The eight remaining patients agreed to participate and were assigned to the experimental group. The Personal Orientation Inventory, IPAT Anxiety Scale Questionnaire and Body-Cathexis Scale were then administered. Two days later the experimental treatment began.

A Human Services student at the University of Tennessee assigned to the unit as a practicum placement accompanied the participants to the treatment sessions and took part in the Integral Hatha Yoga. She was not included as an experimental participant in the study. In addition, she collected information on staff evaluations of participants during the four weeks of treatment.

Following the last day of treatment the participants were posttested on the same three measures and were given a structured interview (Appendix E). The 10 questions of the interview allowed the participants to phenomenologically describe the treatment effects. The testing was delayed for three hours after the end of the final treatment session to allow for the immediate effects of the Integral Hatha Yoga to diminish.

A control group was formed in December of 1975 after there had been complete patient turnover at the unit. This time, the patients were told that the Integral Hatha Yoga would not be available for one month but were presented with the technique, degree of time commitment and necessity of pre and posttesting. Of the 15 patients on the unit, five expected to be discharged within the upcoming month and so declined to participate. The remaining 10 took the pretest measures and, after a control period of four weeks, took the posttest measures. After the posttesting, participant evaluations by the staff were recorded for the four weeks of the control period. No structured interview was given to this group.

Measures

Three psychological tests were used to measure changes in participants and are the Personal Orientation Inventory (Shostrom, 1964), IPAT Anxiety Scale Questionnaire (Cattell & Scheier, 1963) and Body-Cathexis Scale (Jourard & Secord, 1953). A consideration of the validity and reliability of these instruments will be found in the discussion section of Chapter IV.

The Personal Orientation Inventory was developed to determine the degree to which an individual is self-actualizing. Self-actualization means the manifestation of maturity, integration and fulfillment in behavior (Maslow, 1970). The Time Ratio (Time Incompetence/Time Competence) and the Support Ratio (Outer Support/Inner Support) are the prime indicators of self-actualization on the test (Appendix F).

Twenty-three of the 150 items on the test provide an index of the individual's ability to live in the here-and-now and tie the past and future together in meaningful continuity. This is the Time Ratio (Shostrom, 1964). A high score reveals the ability to make mature decisions relatively unhampered by guilt or anxiety. A low score indicates a reduced capacity.

The Support Ratio uses 127 items and is based on the concept of inner versus outer directedness (Reisman, Glazer & Denney, 1950). The inner directed person would have a high score on this measure indicating reliance on personal experience and independence. The outer directed person would be more reliant on others and have a low score.

The IPAT Anxiety Scale Questionnaire consists of 40 self-report items which measure overt anxiety (Cattell & Scheier, 1963). Designed as a means of assessing clinical anxiety rapidly, objectively and in a standard manner, it tends to rank patients in the same order as psychiatric interviews by good diagnosticians (Cattell & Scheier, 1961). Five factor analytically determined components combine to give a Total Anxiety Score. There are: (a) defective integration, lack of self-sentiment, (b) ego weakness, lack of ego strength, (c) suspiciousness or paranoid

insecurity, (d) guilt proneness and (e) frustrative tension of id pressures (Appendix G).

These five components have been shown to cluster together through correlation and factor analysis (Cattell, 1957). The questions themselves suggest psychiatric symptoms of anxiety. They specifically ask the same examinee whether, for example, he has nightmares, insomnia, guilt or cries easily.

The Body-Cathexis Scale has the individual indicate on a seven point scale the relative degree of satisfaction or dissatisfaction he feels toward 40 specific body parts plus overall physical appearance. Summing the responses gives a Total Cathexis Score. Body-Cathexis is conceptualized by Jourard (1974) to be a sensitive index of overall mental health.

A behavioral measure was used to assess participant progress through the overall rehabilitation program. Each week each patient at the unit is discussed by the staff and other patients at a large group meeting. If the majority of patients agree that an individual has shown positive behavioral change during the preceding week the staff makes a decision. If the majority of staff concur with this judgment, a vote of Pass is made. If a patient does not get a majority of Pass votes from other patients, or, receiving that, does not get majority agreement from the staff, a vote of Fail is given. Simply each patient is evaluated weekly by staff and other patients on behavioral changes made during the week and this Pass or Fail vote was used as a dependent measure. A Pass vote is equivalent to positive behavioral change.

Design and Statistical Analyses

A pretest-treatment-posttest control group, quasi-experimental design with two intact groups was used (Figure 1). The data gathered on the control group occurred four months after that of the experimental group. Use of the quasi-experimental design was preferred over an experimental design with randomization of participants for two reasons. First, the participants live together 24 hours a day in a single housing unit. Interaction between experimental and control participants would have posed threats to internal validity on the dependent measures. Second, the total number of patients on the unit seldom exceeds 15. Randomization into two groups, along with inevitable transfer, discharge and attrition would have reduced the sample size and therefore the power of statistical analyses.

The four posttest variables were separately analysed using an analysis of covariance design with the appropriate pretest as a covariate in each analysis. This test was used to statistically control any initial differences which might have confounded differences between the two groups. Posttest differences therefore reflect the initial adjustments on the pretests.

Analysis of weekly staff evaluations were expressed in terms of percentages. For each group, the total number of Pass evaluations were presented in relation to the total number of evaluations for that group.

$$\text{Percentage} = \frac{\text{total Pass}}{\text{total Pass} + \text{total Fail}}$$

	Covariates (Pretest)	Independent Variable	Dependent Variable (Posttest)
Experimental Group August 4-29, 1975 N=5	Personal Orientation Inventory IPAT Anxiety Scale Questionnaire Body-Cathexis Scale	Integral Hatha Yoga included in the "reality" based program	Personal Orientation Inventory IPAT Anxiety Scale Questionnaire Body-Cathexis Scale
Control Group December 1-29, 1975 N=10	Personal Orientation Inventory IPAT Anxiety Scale Questionnaire Body-Cathexis Scale	"Reality" based program	Personal Orientation Inventory IPAT Anxiety Scale Questionnaire Body-Cathexis Scale

Figure 1. Diagram of the independent and dependent variables.

CHAPTER III

ANALYSIS OF RESULTS

The data presented in this chapter bear directly on the study's hypotheses. Analysis of the data was performed on the IBM 360/65 computer at The University of Tennessee Computer Center using the Statistical Analysis System. The level of significance for all tests was .05.

Results of Major Hypotheses

The four posttest variables were separately analysed using an analysis of covariance design with the appropriate pretest as a covariate in each analysis. Following are restatements of the major hypotheses relative to the results of the analysis.

Hypothesis I

The posttreatment mean score of the experimental group on the Time Incompetence/Time Competence Ratio of the Personal Orientation Inventory was not significantly different from the control group mean scores.

Hypothesis II

The posttreatment mean score of the experimental group on the Outer Support/Inner Support Ratio of the Personal Orientation Inventory was not significantly different from the control group mean score.

Hypothesis III

The posttreatment mean score of the experimental group on the Total Anxiety Score of the IPAT Anxiety Scale Questionnaire was significantly less than the control group mean score.

Hypothesis IV

The posttreatment mean score of the experimental group on the Total Cathexis Score of the Body-Cathexis Scale was significantly greater than the control group mean score.

The subsequent portion of this chapter includes a description and analysis of the findings reported above. A further discussion of the results is found in Chapter IV.

Time Incompetence, a measure of self-actualization, did not reveal significance (Table 1).

Table 1

Analysis of Covariance for Hypothesis I: Final
Scores on the POI Time Incompetence/Time
Competence Ratio Adjusted by Initial
Scores

Source of Variation	df	SS	MS	F	p less than
Groups	1	4.17	4.17	2.44	.14
Error	12	20.46	1.70		

As measured by the Personal Orientation Inventory, there was no significant increase in the ability of the experimental group to live in the here-and-now as compared to the control group.

Outer Support/Inner Support, the second measure of self-actualization, also did not reveal significance (Table 2).

Table 2

Analysis of Covariance for Hypothesis II: Final
Scores on the POI Outer Support/Inner Support
Ratio Adjusted by Initial Scores

Source of Variation	df	SS	MS	F	p less than
Groups	1	15.58	15.58	.14	.71
Error	12	1321.56	110.13		

As measured by the Personal Orientation Inventory, there was no significant increase in the ability of the experimental group to be inner directed as compared to the control group.

Anxiety was significantly lower for the experimental group (Table 3).

Table 3

Analysis of Covariance for Hypothesis III: Final
Scores of Total Anxiety on the IPAT Anxiety
Scale Questionnaire Adjusted by Initial
Scores

Source of Variation	df	SS	MS	F	p less than
Groups	1	478.77	478.77	5.71	.03
Error	12	1005.42	83.79		

As measured by the IPAT Anxiety Scale Questionnaire, there was a significant decrease in the anxiety level of the experimental group as compared to the control group. It seems likely that Integral Hatha Yoga directly altered the neurophysiology of the experimental participants. Sympathetic, "anxiety" activity in the autonomic nervous system was replaced by parasympathetic "relaxation" activity.

Body-Cathexis was significantly increased for the experimental group (Table 4).

Table 4

Analysis of Covariance for Hypothesis IV: Final
Scores of Total Cathexis on the Body-Cathexis
Scale Adjusted by Initial Scores

Source of Variation	df	SS	MS	F	p less than
Groups	1	4484.64	4484.64	9.26	.01
Error	12	5810.86	484.24		

As measured by the Body-Cathexis Scale, there was a significant increase of satisfaction with physical functioning for the experimental group as compared to the control group. It is suggested that the overall neurophysiological functioning of the experimental participants was enhanced by Integral Hatha Yoga. This increased functioning appeared to be experienced directly as evidenced by the self-reports of increased body-cathexis.

An additional variable was analysed. The dependent measure was behavioral progress through the overall treatment program. Each week,

as part of normal procedure at the unit, each patient is evaluated by the staff and other patients for behavioral progress such as being more cooperative, more responsible and less disruptive. If the majority of staff and patients agreed that a participant had made progress a vote of Pass was given. If a participant was judged not to have made behavioral progress a vote of Fail was given.

It seems that the experimental group made better progress through the overall drug rehabilitation program as compared to the control group (Table 5).

Table 5
Weekly Evaluations of Participants by Staff
and Patients

TREATMENT					CONTROL				
participant	week				participant	week			
	1	2	3	4		1	2	3	4
1	P	P	P	P	1	P	P	P	P
2	P	P	P	P	2	P	P	P	P
3	P	P	P	P	3	F	F	F	F
4	P	P	P	P	4	F	F	P	P
5	P	P	P	P	5	F	F	P	P
					6	P	P	P	P
					7	P	F	F	P
					8	P	P	F	P
					9	F	P	P	F
					10	P	P	P	F

Note: P = Pass and F = Fail

The percentage of Pass evaluations for the experimental group was 100%. For the control group the percentage of Pass evaluations was 65%. It

seems likely that the decreases in anxiety and increases in body-cathexis for the experimental group were observed by the staff and patients and contributed to the positive behavioral evaluations.

CHAPTER IV

SUMMARY AND DISCUSSION

Summary

The purpose of this study was to discern the possible effects of Integral Hatha Yoga on self-actualization, anxiety and body-cathexis. Physical postures, breath control and meditation, the components of Integral Hatha Yoga, have been increasingly investigated for their potential contributions to education, psychology and medicine. Most of these studies, however, have used physiological rather psychological measures.

Studies of a psychological nature have generally had two methodological problems. They have not included a detailed description of the main treatment, thereby preventing replication by an independent investigator. Also, they have not used a control group receiving a comparable form of treatment. Integral Hatha Yoga, the main treatment in the present study, was precisely described and included in a comprehensive "reality" based treatment (Appendix A). For the four weeks the experimental group received this treatment, normally scheduled gym and "free time" periods were deleted from their schedules. The control group received the comprehensive "reality" based treatment without Integral Hatha Yoga.

The participants in this study were 18 drug users who were inpatients at "Freedom House," a comprehensive drug rehabilitation community at

Eastern Psychiatric Hospital in Knoxville, Tennessee. During August of 1975 a lecture and demonstration of Integral Hatha were presented to the 11 patients at the drug unit. Eight of them agreed to participate in the study and were assigned to the experimental group. With the exception of three participants who dropped out of the study during the first week, the experimental group participated in the treatment five times a week for four weeks with each treatment session lasting for approximately 90 minutes. The dropouts were not included in any subsequent aspect of the treatment. All the experimental participants attended each treatment session.

The experimental group was pre and posttested using the Personal Orientation Inventory, IPAT Anxiety Scale Questionnaire and Body-Cathexis Scale. In addition, behavioral progress through the overall treatment program was assessed during the four weeks of the experimental treatment. This behavioral progress was measured by the weekly evaluations made by the staff and patients for the experimental group. A structured interview was also administered immediately following the posttesting.

During December of 1975 the lecture and demonstration of Integral Hatha Yoga were presented to the 15 patients at the drug unit. None of them had been present during the prior phase of the experiment. Ten of these patients agreed to participate in the study and were assigned to the control group. They were also pre and posttested on the Personal Orientation Inventory, IPAT Anxiety Scale Questionnaire and Body-Cathexis Scale. During the four week interval between pre and posttesting, the behavioral evaluations made by the staff and patients on the control group were recorded. No structured interview was administered.

The control group was to participate in four weeks of Integral Hatha Yoga as a reward for taking part in the study. However, after three days of the treatment they were all discharged from the unit. They had all violated cardinal rules of the program.

It was hypothesized that the experimental group would show significant improvements in self-actualization, anxiety and body-cathexis in comparison to the control group. The dependent measures were the Time Competence and Inner Support ratios of the Personal Orientation Inventory, Total Anxiety on the IPAT Anxiety Scale Questionnaire and Total Cathexis on the Body-Cathexis Scale. To assess behavioral progress through the overall treatment program an additional variable was analysed. The percentage of weekly Pass evaluations made by the staff and patients for the experimental group was compared to the percentage of Pass evaluations for the control group.

There was no evidence of significant differences for Time Competence or Inner Support, the measures of self-actualization. However, the experimental group had significantly less anxiety and greater body-cathexis than the control group. The experimental group apparently made faster progress through the overall treatment program than the control group. Their percentage of Pass evaluations was 100% while the percentage for the control group was 65%.

Discussion

Since nonsignificant as well as significant differences were found relative to the hypotheses, it is useful to examine some of the known

aspects of the experiment in retrospect. It seems likely that some of these aspects can clarify the results of this study and suggest lines for future investigation. The following topics are discussed: theory, participants, treatment, measures, design and statistical analyses. The chapter ends with a conclusion and some recommendations for future studies.

Theory

In this section the relationship between the theory and results of the study will be discussed. As stated previously, the purpose of this study was to discern the possible effects of Integral Hatha Yoga on self-actualization, anxiety and body-cathexis.

The two measures of self-actualization will be considered first. They are Time Competence and Inner Support as measured by the Personal Orientation Inventory. In contrast to the theoretical propositions of Integral Hatha Yoga, no significant differences were found between the experimental and control groups.

The time competent person is able to experience himself in the here-and-now and this ability contributes to self-actualization (Shostrom, 1966). Based on an identical theoretical proposition, Integral Hatha Yoga is designed to attain this goal (Satchidananda, 1970). Keeping in mind that significant differences cannot be implied by trends, the probability that the differences occurred by chance was .14. Does this result represent some significant treatment effect which was covered by unexplained variance? Possibly future studies can answer this question.

The inner directed person relies on personal experience for support rather than the support of others. Being more independent he is also more self-actualizing than the other directed person (Maslow, 1970). Reliance on inner support is also a goal of Integral Hatha Yoga (Vishnudevananda, 1959). The technique of Integral Hatha Yoga is designed to create the kind of personal experience and independence which are facets of self-actualization.

There was no statistical evidence that a significant difference existed between the experimental and control groups for Inner Support. It seems likely, however, that this nonsignificant result can be attributed to sources other than a misinterpretation of the theory or related literature. An initial explanation is that the duration of treatment was inadequate to produce changes on the measure and a second possibility is that the Personal Orientation Inventory was not a valid measure. Both these points will be discussed in subsequent sections of this chapter.

Anxiety was significantly lower for the experimental group. According to the theory of Integral Hatha Yoga, these changes occur as a result of increased control of the autonomic nervous system. Physiological "anxiety" responses of the sympathetic branch of the autonomic nervous system are reconditioned by "relaxation" responses of the parasympathetic branch. Apparently, this reconditioning in the autonomic nervous system was reflected in the self-reports of decreased anxiety for the experimental group.

Body-Cathexis was significantly increased for the experimental group. These changes would also be congruent with the theory of Integral

Hatha Yoga. As increased control of the autonomic nervous system developed, it was reflected in the self-reports of increased satisfaction with bodily parts and overall physical appearance.

Behavioral progress through the overall treatment program seemed to be greater for the experimental group. The experimental participants received 100% Pass evaluations by the staff and patients at the weekly large group meetings while the control participants received 65% Pass evaluations. A possible explanation for these results is that they were secondary effects of the increased control of the autonomic nervous system. As the experimental group became less anxious and more satisfied with their bodies, they were observed as such by the staff and patients. Social approval was given for these changes with Pass evaluations.

Participants

The sample of participants used in this study was selected for three reasons. First, the experimental design called for participants to attend treatment sessions five times a week for four consecutive weeks. Since the sample was residing at an inpatient drug rehabilitation community on the grounds of a psychiatric hospital, it was felt they could meet this criteria. Second, since the treatment was designed to produce an intensive therapeutic experience in a relatively short period of time, participants highly motivated to engage in a personal growth activity were essential. The patients were considered to be highly motivated, because a sincere desire for personal growth is an important admission criteria at the drug rehabilitation community. Finally, since Integral Hatha Yoga includes a structured form of physical exercise, a

relatively young sample (mean age was 23.15 years) without severe mental or physical disabilities was chosen.

It was the intention of the experimenter that the results of the study could be generalized to the population of young adults without severe mental or physical disabilities who are highly motivated to engage in a personal growth activity. The ability to generalize the results of the study to this population are limited by the homogeneous nature of the sample. They were all drug users seeking comprehensive treatment as inpatients at a psychiatric hospital.

A second limitation to be considered in generalizing results to the larger population is the small sample size. Data was collected on 15 participants. Five were in the experimental group and ten were in the control group. Finding significance on two dependent variables, anxiety and body-cathexis, may indicate that the treatment effects were powerful enough to overcome the small sample size in the statistical analysis. However, a larger sample size would have increased the clarity of the results, especially in relation to the nonsignificant findings for the measures of self-actualization.

The third aspect of the sample which might limit generalization of the results was interaction between subject characteristics and the treatment (Campbell & Stanley, 1966). As mentioned in Chapter II, two participants voluntarily dropped out of the experimental group during the first week of Integral Hatha Yoga. (The third dropout was involuntarily transferred to another unit at the hospital for evaluation of a possible pre-existing neurological problem.) What effects, if any, of the treatment contributed to these two participants dropping out?

One dropout said he did not like to feel peaceful. It may be that persons who do not value relaxation may not respond well to Integral Hatha Yoga. A second explanation is based on the experimenter's experience as an instructor of Integral Hatha Yoga. When some individuals become relaxed through Integral Hatha Yoga, unpleasant feelings which are normally repressed sometimes enter awareness. Not having the inclination or ability to deal directly with these feelings, such individuals will terminate their involvement with Integral Hatha Yoga. Such individuals may also not be candidates for Integral Hatha Yoga.

The second dropout said she was learning to assert herself and was quitting the treatment even though she enjoyed it. It is the experimenter's inference that another reason underlied the apparently illogical reason given by this participant. She was a very obese woman who may, as a result of Integral Hatha Yoga, have been becoming increasingly aware of the limitations her obesity was placing on her in relation to the other participants. It may be that Integral Hatha Yoga is not an appropriate treatment for some obese persons.

In summary, the sample was chosen because of characteristics lending themselves to particular design aspects of the study. There are also problems with the representativeness and unique characteristics of the sample which may limit generalization of the results to the larger population.

Treatment

Integral Hatha Yoga, the experimental treatment in this study, was highly standardized and uniformly administered in each of the 20 treatment sessions. This controlled a threat to the internal validity of the results and it seems unlikely that differences in the administration of the treatment from session to session produced any variance in the results. The precise description of Integral Hatha Yoga in Appendix C allows for replication by an independent investigator.

Some external threats to the validity of the results related to the treatment may have been present in the study. First, the novelty and innovative nature of the treatment in relation to the normal routine of the drug rehabilitation community may have contributed to the positive results found for anxiety and body-cathexis. Second, unconscious and subtle cues in the treatment situation may have conveyed the purpose of the study to the experimental group. Finally, the experimenter also administered the treatment. Demand characteristics may have been unintentionally conveyed to the sample (Rosenthal, 1966).

Twenty experimental sessions over a four-week period may have been too few to produce significant differences for Time Competence and Inner Support, the measures of self-actualization. A prior study did indicate that the number of months practicing Integral Hatha Yoga was related to the number of statements indicating self-actualization on an open-ended questionnaire (Thorpe, 1975). However, all but five of the 69 participants in that study had been practicing Integral Hatha Yoga for more than one month. A future study could clarify the effects of Integral Hatha

Yoga on self-actualization by increasing the number of treatment sessions.

In summary, the highly standardized experimental treatment used in the study controlled a source of threat to the internal validity of the results. The standardization also allows for replication by an independent investigator. Three sources of threat to the external validity of the results may have existed. The number of treatment sessions could be increased in a future study to clarify the effects of Integral Hatha Yoga on self-actualization.

Measures

Three psychological tests were used as pre and post measures in this study. They are the Personal Orientation Inventory, IPAT Anxiety Scale Questionnaire and Body-Cathexis Scale. Weekly evaluations by staff and patients were used to measure the behavioral progress of participants through the overall treatment program. In addition, a structured interview was administered to the experimental group along with the posttest measures.

Personal Orientation Inventory. The Time Competence and Inner Support scores of the Personal Orientation Inventory were used as dependent measures. In terms of validity, it is most important that these scores discriminate persons who have attained a high degree of self-actualization from those who have not. Shostrom (1964) reported that a group of 29 persons judged by certified clinical psychologists to be self-actualizing was compared to a group of 34 persons judged by the same psychologists to be nonself-actualizing. Differences between the

groups were significant at the .01 level on both the Time Competence and Inner Support scores.

Studies on the concurrent validity of the Time and Support scales have also been reported. Shostrom and Knapp (1966) administered the test to a group of 37 patients entering psychotherapy and compared them to a group of 39 patients who were presently in psychotherapy from 11 to 64 months with a mean time of 26.6 months. The Time Competence and Inner Support scores differentiated the groups at the .01 level. Fox (1965) administered the test to a group of 100 hospitalized psychiatric patients and compared the scores to the norms reported by Shostrom (1964) for self-actualizing, normal and nonself-actualizing groups. The Time and Support scores differentiated the psychiatric patients from the normal and self-actualizing groups at the .001 level. A significant difference between the group of psychiatric patients and the nonself-actualizing group existed at the .01 level.

Test-retest reliability coefficients were obtained on a sample of 48 undergraduate students. The test was administered twice with a one week interval between administrations. Reliability coefficients for Time Competence and Inner Support were +.71 and +.84 respectively (Shostrom, 1964).

Since these scales have been reported to significantly discriminate self-actualizing, normal, nonself-actualizing and psychiatric groups, it seems unlikely that the lack of significant results can be attributed to invalidity of the measures. Though the test-retest reliability coefficients are at a level as high as that reported for most personality

measures, it remains possible that variance was introduced into the results from this source, however.

IPAT Anxiety Scale Questionnaire. The IPAT Anxiety Scale Questionnaire consists of 40 self-report items which purport to measure overt anxiety (Cattell & Scheir, 1963). It was designed to assess clinical anxiety rapidly, objectively and in a standard manner. The discussion of this instrument begins with a consideration of its validity.

Cattell and Scheir (1963) reported that the mean correlation between the 40 individual test items and the total test score was $+ .40$ with no cases of inconsistent direction. The multiple correlation between all 40 test items and the total test score produced an estimate of construct validity which was $+ .92$. In the same study, a second estimate of construct validity was made by taking the square root of the known split-half reliability of $+ .84$. This produced an estimate of construct validity which was also $+ .92$.

Criterion related validity has also been established for this measure. A statistical comparison was made between 795 normal adults and 59 anxiety hysterics seen in an outpatient clinic. A difference was found between the groups on these scales which was significant at the $.01$ level (Cattell & Scheier, 1963).

The following estimates of reliability were also reported in the above study. Test-retest reliability at a one week interval was $+ .93$ for 87 normal adults. A reliability coefficient of $+ .87$ was reported for a sample of 277 Japanese university students (Japanese language form)

retested at a two week interval. Split-half reliability was $+ .91$ estimated on a mixed sample of 120 normal adults and hospitalized neurotics. Another estimate of split-half reliability on a sample of 240 normal adults was $+ .84$.

Overall, the validity and reliability of the IPAT Anxiety Scale Questionnaire seem established. It seems unlikely that the significant difference in this study for anxiety was due to uncontrolled variance contributed by the measure itself.

Body-Cathexis Scale. The Body-Cathexis Scale consists of a seven point rating scale on which the participants rated the degree of satisfaction they felt toward 40 specific parts of their body plus overall physical appearance. Though the measure has been used in a number of studies, little data on reliability has been reported. In the original study of 88 subjects, Secord and Jourard (1953) reported a split-half reliability coefficient of $+ .78$ for males and $+ .83$ for females. They had been retested at a one week interval. Bauste (1971) reported a test-retest reliability coefficient of $+ .73$ on 54 undergraduates who were retested at a three to four week interval.

No mention of validity is found in the literature on the Body-Cathexis Scale. No supposition can be made that the test measures anything other than the participant's reports of their own satisfaction or dissatisfaction with their bodies. The methodological and theoretical difficulties that would exist in finding a criterion reference for how a person feels about his body are transparent. In defense of the measure it may be noted that it possesses clear face validity. Maslow (1968, p. 12) also considers direct self-reports to be a valid method to obtain

data in psychological research, "By far the best way we have to learn what other people are like is to get them, one way or another, to tell us."

The fact remains, however, that the .01 level of significance for body-cathexis found in this study may not reflect any formal test validity. In addition, since only moderate high reliability coefficients had been previously established for this measure, the scores may have been spuriously inflated.

A final comment may be made on the relationship between the psychological tests and results of the study. It is possible that pretest and posttest sensitization contributed to uncontrolled variance on the test scores. The pretest measures may have sensitized the participants to the treatment and therefore confounded the results. It is also possible that the posttest measures called attention to the treatment in a way that may not have occurred without the administration of the posttests (Barber, 1973).

Behavioral Evaluations. As part of standard procedure at "Freedom House," each patient is evaluated by the staff and other patients at a weekly, large group meeting. The purpose of these evaluations is to feed back to each patient objective facts and subjective impressions of their behavioral progress through the overall treatment program. If the majority of patients and staff agree that a particular patient had made behavioral progress during the preceding week, an evaluation of Pass is given. A Pass evaluation results in increasing privileges and responsibilities leading to discharge while a Fail evaluation results in no new privileges and responsibilities.

The criteria for a Pass evaluation includes both specific and non-specific components. Specifically, a Pass evaluation is not given if a patient deliberately violated any of the community rules (Appendix A). The nonspecific criteria are subjective impressions of the other patients and staff. If a patient is perceived to be more cooperative, taking increasing responsibility for his behavior and acting less irritable, for example, a Pass evaluation would probably be made. In the absence of such behavioral progress, a Fail evaluation would probably be made.

The results of these weekly evaluations were recorded during the four weeks between pre and posttesting for both the experimental and control groups. As reported in Chapter III, the experimental group received 100% Pass evaluations while the control group received 65% Pass evaluations.

At this point a question must be asked. How valid and reliable are these results in showing differences of behavioral progress between the experimental and control groups? The question of validity will be considered first.

Tharp and Wetzel (1969) argue that reliably reported behavioral change is the most essential and valid measure of psychological treatment. This opinion adequately summarizes the behavioral position that treatment effects must always be publically observable and measurable. Therefore, to the extent that the observations in the present study possess reliability, they can be considered a valid measure of behavioral progress through an established "reality" oriented drug rehabilitation community.

The interrater reliability of these observations could not be precisely established. It would not have been possible for the experimenter to be present at the evaluation meetings and record the evaluations made by each staff member and patient on each participant. Also, it was not possible to even let the staff and patients know that the behavioral evaluations were being used as a dependent measure in the study. This would have introduced a strong demand characteristic into the evaluation meetings and could have introduced uncontrolled variance into the results. Because a Pass evaluation was made only when the majority of staff and patients agreed that behavioral progress had occurred, the most conservative estimate of interrater reliability would be that it must exceed 50%.

Overall, the results of the behavioral evaluations complement the other significant findings. Not only did self-report measures of anxiety and body-cathexis show significance, but also a behavioral index of increased adaptiveness within a "reality" oriented drug-rehabilitation community. It may be inferred that the regular practice of Integral Hatha Yoga for one month modified individual behavior in such a manner as to increase social approval from those in the natural environment.

Structured Interviews. Each experimental participant was given a short, structured interview immediately following the administration of the test measures. The purpose of these interviews was not to provide data for formal analyses, but to complement the analyses actually carried out with descriptions of the effects of Integral Hatha Yoga in the participant's own words. It should be kept in mind that the following

discussion reflects only the experimenter's overall impressions of the interviews. The inferences and speculations drawn from the interviews may not reflect an accurate appraisal of the participant's actual responses. The reader is encouraged to read the transcripts of the interviews in Appendix I and draw his/her own conclusions.

Without exception, the experimental participants considered their involvement with Integral Hatha Yoga to be a positive experience. They felt that they learned new and important ways to experience themselves and others. The ability to relax deeply was the most apparent of these new experiences.

Along with the ability to relax deeply, the participants reported an increased functioning and appreciation of their bodies. They felt that they could control themselves physically in ways that increased their overall feelings of worth, confidence and optimism. In a subsequent study of Integral Hatha Yoga a measure of self-concept could quantify what these changes might be.

Although the sample in this study were drug users, there was no attempt to estimate treatment effects on drug taking behavior. However, the experimental participants all made reference to the possibility that the treatment produced experiences which could serve as a healthy and reinforcing substitute for drug abuse. Although speculation, it seems possible that the physiological correlates of pleasant drug experiences could be reconditioned through Integral Hatha Yoga. The established physiological responses to the components of Integral Hatha Yoga which were reported in Chapter I could represent internal experiences which

have potentially greater reinforcing properties than pleasant drug experience.

It seems plausible that the importance these participants place on pleasurable drug experience represents the essentially healthy need for peak-experience. It is hypothesized that the drug taking behavior would not have occurred if the family and community social systems in which they were raised had provided conditions whereby peak-experience needs could have been gratified.

Finally, it may be noted that the participants frequently expressed a difficulty in finding words to describe the experiences produced by Integral Hatha Yoga. An initial possibility is that this difficulty reflects the generally low educational level of young adult drug users. A second explanation is that these were peak-experiences. As mentioned in Chapter I, the ultimate goal of Integral Hatha Yoga is to produce a transcendence of conscious thinking called the superconscious state, and this superconscious state has been called peak-experiences by Maslow (1964). It may be that the most significant finding of the structured interviews is that Integral Hatha Yoga does facilitate peak-experience, despite a lack of supporting evidence on the Personal Orientation Inventory.

Design

In this study a pretest-treatment-posttest quasi-experimental design with two intact groups was used. In August of 1975 the five experimental participants received 90 minute sessions of Integral Hatha Yoga, five times a week for four consecutive weeks. This experimental treatment was

incorporated into the overall drug rehabilitation program by deleting a 60-minute gym period and 30-minute "free time" period from their normal schedules.

In December of 1975 the control group was formed. The 10 participants in this group received the standard rehabilitation program which is described in Appendix A. This comprehensive treatment included the gym and "free time" periods which were replaced by Integral Hatha Yoga for the experimental group. The control group was to receive Integral Hatha Yoga as a reward for participating in the study but they were all discharged from the program for infractions of rules. This occurred after three days of Integral Hatha Yoga. If the discharges had not occurred, the data from participants who might have voluntarily dropped out of Integral Hatha Yoga could have been deleted from the experimental analyses. This might have allowed a more equivalent comparison of the groups on the dependent measures.

As mentioned in Chapter II, the use of intact groups was preferred over a true experimental design for two reasons. First, the patients live together 24 hours a day in a single housing unit. To divide them into experimental and control groups without being able to control their natural and required interactions could have posed a threat to the internal validity of the results. Second, since the total number of patients on the unit seldom exceeds 15, transfer, discharge and attrition would have reduced the sample size and therefore the power of the statistical analyses.

The use of intact groups at different points in time controlled for both these problems. However, nonrandomization of participants introduced the possibility that the groups were not equivalent and therefore posed a threat to the internal validity of the results. However, the use of nonequivalent groups is appropriate when research is conducted in a natural setting, especially when the implementation of a true experimental design is not possible (Campbell & Stanley, 1963).

As mentioned in Chapter I, this study attempted to expand upon prior research by comparing the experimental treatment to a similar type of treatment. All the participants in this study took part in the overall "reality" oriented program. This program is an intensive, 24 hour a day treatment. The difference between the experimental and control groups is that the experimental group received the Integral Hatha Yoga in place of a 60-minute gym period and 30-minute "free time" period. It is proposed that the routine and supervised gym periods which consisted of activities such as basketball, swimming, tennis, volleyball, etc., in conjunction with free time, represented as aspect of the overall treatment which is comparable to Integral Hatha Yoga.

Statistical Analyses

The four posttest variables were separately analysed using an analysis of covariance design with the appropriate pretest as a covariate in each analysis. This test was used to statistically control any initial differences which might have been present and which might have confounded differences between the two groups. Posttest differences therefore reflected the initial differences on the pretests. Another

correct method of statistical analysis could have been used in place of the analysis of covariance. This method would have involved subtracting, for each participant, the pretest score from the posttest score, calculating mean gain scores and using the parametric independent samples t test to compare the two groups. It was felt that the analysis of covariance was a better method, however, because it eliminated the possibility that initial differences in the level of pretest scores introduced error variance into the results.

The analysis of weekly behavioral evaluations was expressed in terms of percentages. For each group, the total number of Pass evaluations was presented in relation to the total number of evaluations for that group. A statistical test to assess differences between the groups was not used because of the clear differences the percentages expressed. While the experimental group received 100% Pass evaluations the control group received only 65% Pass evaluations. A simple description of these results suffices to indicate that obvious differences existed between the groups.

Conclusion

The purpose of this experiment was to discern the possible effects of Integral Hatha Yoga on self-actualization, anxiety and body-cathexis. The design of the experiment was organized so that the experimental treatment, Integral Hatha Yoga, was included in a comprehensive "reality" based drug rehabilitation program. By replacing a gym and "free time" period with the experimental treatment, a comparison was drawn between

two apparently similar forms of treatment. No significant differences were found for Time Competence and Inner Support, the measures of self-actualization. Significant differences were found for anxiety and body-cathexis. Although no statistical test was employed to compare behavioral progress through the overall treatment program between the groups, an obvious difference existed.

Four topics will be covered in this conclusion section. They are nonsignificant results, significant results, practical applications of Integral Hatha Yoga and suggestions for future research.

Nonsignificant Results

The failure to find significant results for self-actualization is incongruent with the theoretical basis of Integral Hatha Yoga and is consistent with the results of a prior study. It is suggested that the duration of treatment was insufficient to assess the potential effects of Integral Hatha Yoga on self-actualization.

Significant Results

There were significant differences between the groups for anxiety and body-cathexis and apparent differences for behavioral progress through the overall treatment program. In relation to anxiety and body-cathexis, it can be inferred that an increased capacity to control functioning of the autonomic nervous system accounted for the results. The increased control of the autonomic nervous system reduced anxiety and enhanced overall psychophysiological functioning. The enhancement of overall psychophysiological functioning was expressed in self-reports of increased body-cathexis. Behavioral progress was related to the primary

changes in anxiety and body-cathexis. Social approval by others in the natural environment increased as anxiety decreased and body-cathexis increased. Social approval was equivalent to a Pass evaluation.

Practical Applications of Integral Hatha Yoga

Integral Hatha Yoga is a synthesis of specific yogic techniques which have lost their origins in prehistory. However, any claims that they possess utility in education, psychology or medicine demands highly objective verification. The results of this study indicate that Integral Hatha Yoga could be an effective way to decrease anxiety, increase satisfaction with the body and enhance social adaptiveness in young adults without severe mental or physical disturbances, if standardly administered for at least one month.

Suggestions for Future Research

In relation to the present study, there are some suggestions for future studies. (a) The duration of treatment should be increased, probably to at least two months. (b) Sample size should be increased to include at least 25 participants in the experimental group. (c) A true experimental design should be used which employs randomization of participants. (d) Neurophysiological and biochemical measures of anxiety and overall physical functioning should be employed and correlated with psychological measures. (e) A psychological measure of self-concept change should be used. (f) Although outside the scope of this experimenter's academic and professional training, a potentially fruitful line of research would be to clarify the physiological relationship between drug use and Integral Hatha Yoga.

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APPENDICES

APPENDIX A

DESCRIPTION OF THE FREEDOM HOUSE PROGRAM

DESCRIPTION OF THE FREEDOM HOUSE PROGRAM

The Freedom House Program is designed to create an atmosphere which will enable you to bring about desired changes in your life. Change is never easy, but through involvement with others who share similar problems and our staff, the change is easier than if you were alone in your struggle.

A desire to change is not sufficient in itself. You must be willing to work for change to be successful at Freedom House.

The ultimate goal of the rehabilitation program at Freedom House is to assist individuals in developing more responsible means of living. Each patient will have the opportunity to examine his/her lifestyle and to take steps toward changing irresponsible patterns of behavior. Everyone is expected not only to help him/herself, but also, each other. To this end, patients should try to be aware of each other's needs, and to deal with each other with openness and honesty. Here are some things you will want to know before you decide to enter this program:

1. This is a 12 week minimum or 6 month maximum program, depending on your individual motivation, involvement, participation, responsibility and primarily, attitude.
2. You will not be allowed to use the phone until achieving Week II status. In case of emergency, a staff member will make your call for you.
3. You will be searched upon admission.

4. This is a week to week drug program, meaning that you will be evaluated by the entire house each Thursday and at that time are promoted a week or not promoted a week. If you are not promoted at the end of your "recovery" week, you will meet council, which is composed of residents of the cottage with eight weeks of seniority and the other staff to reevaluate your place in Freedom House.

5. You may not have visitors except for family therapy participants one-half hour before or after family therapy in the presence of a staff member until you have achieved Week IV status.

6. You will be required to wear clothes that conform to our initial dress code until you achieve Week IV status.

7. You may leave the building only with a staff member.

8. You will make a tape recording of yourself during your first week here and will keep a daily diary for your entire stay.

9. If you wish to leave the program before completion, you must give a 48-hour notice (week-ends and holidays do not count).

10. You must follow rules and regulations of pre-admission.

11. An individual must have a majority vote from other patients in the house and a majority vote by the staff in order to be promoted each week. A patient has the right and responsibility to vote after they have achieved Week II status (the week begins on Sunday).

House Rules - All Phases

In addition to specific rules for each phase, the following apply to all patients:

1. Cardinal rules of the Program.
 - a. No drugs with the exception of drugs prescribed by our physician.
 - b. No physical violence (no guns, knives, razors, etc.), and no threat of physical violence.
 - c. No criminal mask.
 - d. No sexual relations on the grounds of Eastern State Psychiatric Hospital.
2. General Rules.
 - a. No patient is allowed in the nurses station.
 - b. Record player in group room is not to be used Monday—Friday, from 8:00 a.m. to 4:30 p.m., or whenever it would interfere with a scheduled activity.
 - c. Group room door must be kept open at all times, except when a staff member is present.
 - d. Doors to both wings must always be open.
 - e. Upon admission, patients will be assigned to a bedroom. No one is allowed to change rooms without staff's approval.
 - f. Each patient must have his/her name on door tag.
 - g. Urine specimens may be requested by a staff member at any time!
 - h. Drug culture paraphernalia are not allowed (i.e., no drug posters, earrings for males, patches, etc.).
 - i. Meals: No one starts eating until everyone is seated, and no one leaves until everyone is finished. Meals are considered a scheduled activity and are to be attended by all patients.
 - j. Telephone: Prior to admission, patients are to take care of all their outside calls themselves, as they will not be able to use

the telephone until they reach Week II status. Phone calls may be made during patients free time, but may be received only from 4:00 p.m. until 11:00 p.m. on weekdays and from 9:00 a.m. until 11:00 p.m. on weekends and holidays.

- k. All patients must sign-out upon leaving to a nonroutine activity and must sign-in upon returning to the cottage.
- l. No physical contact, includes hand holding, lounging on sofas, etc.
- m. Patients must be fully dressed at all times when out of their rooms.
- n. Patients who have been infracted should be told in a reasonable time period.
- o. Patients coming up for evaluation should give book reports to their group leader before evaluation.
- p. Scheduled house activities take priority over other activities.
- q. No one can shoot pool after 11:00 p.m. Sunday.
- r. Morning activities in the gym will be planned so that everyone is involved in one activity. Evening activities in the gym will be optional.
- s. Phone calls on the pay phone are limited to 15 minutes.
- t. Urine specimens must be given by 9:30 a.m. If not given by 9:30 a.m., then you will be set back two weeks, and if not given within the day, then you will be discharged.
- u. Dress Code for Sunday dinner is:
Men: Regular slacks (no jeans).

Shoes and socks (no tennis shoes or sandals).

Collared shirts and tie.

Women: Pants suit or dress.

Shoes with socks or stockings.

v. Dress code for all phases: Clients must be neat and clean.

Females must wear bras. No patches will be allowed on clothing.

No drug culture paraphernalia may be worn (i.e., no bracelets or earrings for males, etc.).

w. Until achieving Week V status, patients must be in bed at 11:00 p.m., Sunday through Thursday.

x. Commitments: At the end of Week III, each patient must have commitment for himself. At the end of Week V, each patient must have a commitment for the house.

Council Offenses

1. Breaking any of the "Cardinal" rules of the house.
2. Repeating in the house what has been said in Council or staff meeting about other patients.
3. Taking a slip out of the slip box even if you wrote it.
4. Stealing.
5. Late or dirty urine specimen.
6. Picking lock on front door.
7. Refusal to make tape by end of first week.
8. Third time errand person.
9. Elopement from the house.

Housekeeping Rules

1. Do not use scotch tape on walls.
2. Rooms must be clean at all times.
3. Patients are responsible for their assigned chores throughout the day.
4. Bathroom must be cleaned by person using shower; sign door list after using shower.
5. During daytime, return your dirty snack dishes, cups, silverware, etc. to kitchen and rinse out.
6. There will be a kitchen manager assigned each day. This person will be responsible for making rounds in the kitchen area every hour or so, in between meals, and for making sure kitchen looks clean.
7. After each meal, return your dishes and silverware to kitchen, put silverware in separate tray, rinse off your dishes and stack them up.
8. Do not drive nails in walls.
9. No air-freshener allowed and can only be used by head of housekeeping. Air freshener has to be kept in the chart room.

Initial Dress Code: (1-4 weeks)

1. No shorts except for sports.
2. Shoes and socks (sandals from May to September).
3. No jeans.
4. No patches.
5. Collared shirts.
6. No see-through blouses.

7. No fringes, rivets, studs, etc.
8. Shirts must cover midriff.
9. No tie-dyed clothes.
10. No excessive jewelry.
11. Good grooming (combed hair, etc.).
12. No nonfunctional hats.
13. Sunday dinner: Men: regular slacks, collared shirts and tie, socks and shoes.

Women: pants suit or dress, shoes with socks or stockings.

Advanced Dress Code: (5-12 weeks)

Same as initial dress code with these exceptions:

1. May wear jeans.
2. May wear uncollared shirts (except for Sunday dinner).

Freedom House Therapies and Meetings

1. Concept Therapy - abstract concepts are defined by each person and a consensus is drawn by the group. This helps to clarify concepts used by the group each day and helps prevent misunderstandings due to different individual's definition.
2. Group Therapy - a discussion and planning session held daily. This is the most personal and most confidential activity at Freedom House.
3. Psychodrama - a role-playing therapy situation in which problems are acted out.
4. Encounter Group - an experiential group which uses such activities as relaxing exercises, trust walks, etc.
5. Evaluation Meeting - during this meeting, all people asking for approval to be promoted or asking for a pass will be evaluated by fellow patients.
6. Infraction Meeting - a meeting of the infraction committee during which all violations of the house rules will be dealt with.
7. Quiet Hour - this time is set aside for the purpose of reading books, study, or the writing of book reports.
8. Family Therapy - this therapy is set up on an individual basis. The purpose for holding family therapy is to develop new ways of relating to family members.
9. Remotivation Therapy - scheduled in the evening hours. Remotivation Therapy consists of invited members of the community who come to

Freedom House to give demonstrations in various areas of interest. Demonstrations have been given in karate, backpacking, photography, etc. in the past.

10. Slip Game - the purpose of slip game is to deal with frustrations and anger felt toward any other individual in Freedom House through an appropriate channel. This is to eliminate angry outbursts and leads to a climate of concern and maturity. If at all possible, conflicts should be dealt with immediately by the individuals involved. If this is not possible due to flared tempers, uncooperativeness of one party involved or time, then a slip should be dropped. Always tell the person on whom you dropped a slip what you have written. Removal of a slip by anyone other than a staff member during slip game is a Council Offense. Write on the slip: To- (his or her name); From- (your name); For- (briefly describe the events).
11. Rules Orientation and Housekeeping - this meeting is the time when all rules and jobs are discussed by the house. This is to insure understanding by all patients of all rules.
12. Bitch - this is the time set up for the airing of all complaints concerning Freedom House.

Weekly Status

1. Week I

- a. Must be up by 6:30 a.m., Monday through Friday and by 9:00 a.m. on Saturday and Sunday.

- b. Must clean room and bathroom according to list attached behind bedroom door.
- c. Must perform assigned chores and have them completed before breakfast, except for kitchen chores.
- d. May not leave cottage unless with a staff member.
- e. May not have visitors.
- f. May not use phone. In case of emergency, a staff member will make the call for you.
- g. Must read and report on one book selected from our reading list each week.
- h. No radios, stereos, TV's in your room.
- i. Make tape recording of yourself.
- j. Follow initial dress code (refer to dress code).
- k. Keep a daily diary and show it to your case manager or group leader once a week.

2. Week II

Same as week I, except if promoted by the house on Thursday, you are allowed to use the phone. Read and report on your second book.

Pass rule test.

3. Week III

May go to dance at "A" building on Thursday night. Have your tape played back before Thursday's evaluation meeting. Read and report on third book. Have commitment for self in order to be promoted at the end of this week.

4. Week IV

You are eligible for a 3-hour pass with family. Have pass well planned and present to group on Friday. During the week turn in your last book report. You are now eligible to have visitors from 7:00 p.m. - 11:00 p.m. on Friday evenings and you may have a radio in your room. You must participate on one committee. You must dress according to the advanced dress code.

5. Week V

You are now eligible for concerts, movies, etc. with staff. You may also be in the front yard until 7:00 p.m. with two elders and one senior. You must have one commitment to the house to be promoted at the end of this week. Your status - an elder.

6. Week VI

At this stage you are eligible for a 6-hour pass. Plans must be approved by group on Friday. Keep in mind your commitment to self and house. You must serve on two committees.

7. Week VII

At this point you will assume more responsibility and assert leadership. Complete plans for self and house and serve on two committees.

8. Week VIII

At this time you may request a 9-hour pass. Plans must be approved by group on Friday. You may receive visitors from 9:00 a.m. each Saturday and Sunday and certain holidays.

9. Week IX

Initiate plans for discharge. You may have a stereo in your room. Take active part in leading house activities. You must lead one committee. You may stay up until 1:30 a.m. Sunday through Thursday. Your status - a senior.

10. Week X

You may go off grounds (to Mini-Mart, etc.) with pass. Begin to finalize discharge plans.

11. Week XI

By Thursday of your 11th week all commitments must be fulfilled and plans for discharge must be prepared to present in evaluation meeting. You may take a 12-hour pass with approved plans.

12. Week XII

You are eligible for a weekend pass. This is to complete outside complications pertaining to discharge. If all goes well, you will be discharged by evaluation meeting the following Thursday. Day passes will be allowed for the purpose of working toward job placement, etc.

13. Discharge

After spending a period of time in the 12th week, if you have demonstrated a willingness to make all necessary changes, and if you have clear and realistic plans for your future (i.e. employment, place to live, family relationships, etc.) then you may make a request for discharge. Your request will be discussed during evaluation meeting.

Daily Schedule

Monday

6:00 a.m. - Rookies and Elders up	6:00 p.m. - Gym
7:00 a.m. - Seniors get up	7:00 p.m. - Free time
7:30 a.m. - Meet with staff	8:00 p.m. - Gym
8:00 a.m. - Rules, Orientation, Housekeeping	11:00 p.m. - Bed-rookies
10:00 a.m. - Gym	12:00 mid. - Bed-elders
11:00 a.m. - Concepts	1:30 a.m. - Bed-seniors
12:00 noon - Lunch	
1:30 p.m. - Group	
3:00 p.m. - Quiet time	
4:00 p.m. - House meeting	
5:00 p.m. - Dinner	

Tuesday

6:00 a.m. - Rookies and elders up	7:00 p.m. - Objectives
7:00 a.m. - Seniors get up	8:00 p.m. - Quiet time
7:30 a.m. - Meet with staff	11:00 p.m. - Bed-rookies
8:00 a.m. - Psychodrama	12:00 mid. - Bed-elders
10:00 a.m. - Gym	1:30 a.m. - Bed-seniors
11:30 a.m. - Bitch	
12:00 noon - Lunch	
1:30 p.m. - Group	
3:30 p.m. - Occupational therapy	
5:00 p.m. - Dinner	

Wednesday

6:00 a.m. - Rookies and elders up	8:00 p.m. - Remotivation
7:00 a.m. - Seniors get up	11:00 p.m. - Bed-rookies
7:30 a.m. - Meet with staff	12:00 mid. - Bed-elders
8:00 a.m. - Concepts	1:30 a.m. - Bed-seniors
10:00 a.m. - Gym	
11:30 a.m. - Business group	
12:00 noon - Lunch	
1:30 p.m. - Group	
3:00 p.m. - Quiet time	
4:00 p.m. - Rules test	
5:00 p.m. - Dinner	

Thursday

6:00 a.m. - Rookies and elders up
 7:00 a.m. - Seniors get up
 7:30 a.m. - Meet with staff
 8:00 a.m. - Group
 10:00 a.m. - Gym
 11:00 a.m. - Religious concepts
 12:00 noon - Lunch
 1:30 p.m. - Evaluations
 3:30 p.m. - Occupational therapy
 5:00 p.m. - Dinner

7:00 p.m. - Dance
 8:30 p.m. - Quiet time
 11:00 p.m. - Bed-rookies
 12:00 mid. - Bed-elders
 1:30 a.m. - Bed-seniors

Friday

6:00 a.m. - Rookies and elders up
 7:00 a.m. - Seniors up
 7:30 a.m. - Meet with staff
 8:00 a.m. - Slip game
 10:00 a.m. - Gym
 11:30 a.m. - Concepts
 12:00 noon - Lunch
 1:30 p.m. - Group
 3:00 p.m. - Encounter group
 5:00 p.m. - Dinner

8:00 p.m. - Gym
 1:30 a.m. - Bedtime

Saturday

8:00 a.m. - Rookies get up
 10:00 a.m. - Elders get up
 11:00 a.m. - Seniors get up
 12:00 noon - Lunch
 1:30 p.m. - Work on psychological tests
 3:00 p.m. - Work on book reports
 5:00 p.m. - Dinner

6:00 p.m. - Tape session
 1:30 a.m. - Bedtime

Sunday

8:00 a.m. - Rookies get up
 10:00 a.m. - Elders get up
 11:00 a.m. - Seniors get up
 12:00 noon - Lunch
 1:30 p.m. - Work on psychological tests
 3:00 p.m. - Work on book reports
 5:00 p.m. - Dinner

7:00 p.m. - Program
 11:00 p.m. - Bed-rookies
 12:00 mid. - Bed-elders
 1:30 a.m. - Bed-seniors

APPENDIX B

EASTERN STATE PSYCHIATRIC HOSPITAL

INTEGRAL HATHA YOGA PROJECT

STATEMENT OF INFORMED

CONSENT

EASTERN STATE PSYCHIATRIC HOSPITAL
INTEGRAL HATHA YOGA PROJECT
STATEMENT OF INFORMED
CONSENT

This project is being conducted by Timothy J. Thorpe by and for Eastern State Psychiatric Hospital. The project is to teach Integral Hatha Yoga, a form of physical conditioning and relaxation training, to patients in "Freedom House."

The results of this study will form the basis for a dissertation in the Department of Educational Psychology and Guidance at The University of Tennessee.

You are being asked to participate in this project, and your decision will have no affect upon your care and treatment while you are a patient at ESPH. If you decide to assist in this project, you will be expected to take three brief psychological tests followed by a yoga class, five times a week for four weeks. Following the last yoga class there will again be brief psychological testing and an interview. The actual nature of the class has been explained and demonstrated by Mr. Thorpe.

I have read this statement and I understand that I am consenting to psychological testing and yoga classes. I am not now, nor have I been subjected to any duress or undue influence in regard to this project. I hereby agree and consent to such psychological testing and yoga classes as may be required to achieve a successful completion of this project though I may choose at any time to terminate my participation.

This instrument constitutes the whole and complete agreement between myself, and the project on Integral Hatha Yoga.

Signature of Volunteer

Date

I hereby state that I have discussed this project with the above signed patient, and he/she fully understands the conditions and requirements of this agreement.

Signature of Witness

Date

APPENDIX C

INTEGRAL HATHA YOGA

INTEGRAL HATHA YOGA

The students are in two rows, sitting and facing one another. The Instructor is at the head of the rows at a ninety degree angle to the students. Each student has one or two folded blankets which serve to cushion ground contact. Each technique is modeled, as well as explained by the the Instructor. Any session lasts about 90 minutes. Following is a transcript of the standardized instruction.

"Sit (on the blanket) with legs crossed comfortably underneath. They do not have to be in any special position. Just have them comfortable. The back, the neck and the head are in a straight line but not stiff and uncomfortable. The eyes are closed and the breathing is through the nose. Take three slow deep inhalations and exhalations through the nose and allow the surface tension of the body to be exhaled with each breath."

"We will begin with three 'OM' chants which we do together. The purpose of these chants is to create a sound vibration and focus awareness within. So, exhale completely through the nose, inhale deeply and —OM. Once again, exhale fully. Inhale deeply—OM. Once again, exhale fully. Inhale deeply and —OM. Be aware of the vibration within."

"Next we will be doing eye exercises. The purpose is to ease tension in the upper face around the eyes and massage the optic nerves which lead from the eyes to the brain. Opening the eyes, bring the gaze to the ceiling. In a straight, vertical line, without moving the head, bring the gaze to the floor. Bring the gaze back up to the ceiling and

down to the floor. Continue at your own pace, moving the eyes in a vertical line. Be sure to keep the head absolutely still and the gaze in focus. Now, close the eyes. Now open the eyes and bring the gaze to the extreme right. In a straight line bring the gaze to the left. Now, bring the gaze to the right again, and, left. Continue at your own pace moving the eyes in a straight horizontal line. Now, close the eyes. Open the eyes and bring the gaze to the extreme upper left hand corner. In a straight diagonal line bring the gaze to the extreme lower right corner. Now, bring the gaze to the upper left, and down right. Continue at your own pace, keeping the head still and the gaze in focus. Now, close the eyes. Open the eyes and bring the gaze to the extreme upper right hand corner. In a diagonal line bring the gaze to the extreme lower left hand corner. Now, up right, and, down left. Close the eyes. We will now do full circles beginning in a clockwise direction, so, open the eyes and imagine you are looking at the face of a clock. Bring the gaze to 12 o'clock, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and back up to 12. Continue moving the eyes in a clockwise direction being sure to touch each number along the periphery of your vision. We are concerned with accuracy rather than speed. Now, close the eyes. Open the eyes and once again imagine you are looking at the face of a clock in preparation for counter-clockwise movements. Bring the gaze to 12 o'clock, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1 and back to 12. Keep moving the eyes in this direction being sure to touch each point along the periphery of your vision. Now, close the eyes. Stretch the arms out in front of you and briskly rub the palms together. When you feel a good deal of heat has

built up, cup the palms over the eyes without actually touching the eyes. Allow the eyes to relax in the warmth and darkness. Feel the heat radiating into the closed eyes. When all the heat has dissipated, bring the index fingers down to the eyes and gently massage them two or three times out toward the sides of the head. Then bring the hands to the lap, keeping the eyes closed and the breathing through the nose. Feel the face beginning to relax and the awareness developing within. Now, stretch the legs out in front of you and if any tension has built up from sitting in a cross-legged position, shake them up and down several times. Now, we will all stand for the 'salutation to the sun' exercise."

"This set of movements is the most complex exercise we will be doing. It all gets easier after this. The purpose of this set of movements is to stretch the body in all directions as a preparation for the 'asanas' or postures to follow. (During the first class this exercise is modeled with the students watching the first round and then participating for three rounds. After the first class three rounds are done with the instructor and class together.) Bring the feet together with the palms together and fingertips below the lips. Lock the thumbs together and stretch the arms out in front, up overhead and back, keeping the gaze on the fingertips. Now, bend forward from the lower back, bringing the head towards the knees. Hold onto the calves with the hands and pull the forehead toward the knees. Now, releasing the hands, bend the legs at the knees bringing the palms flat on the floor on either side of the feet. Extend the left leg in back of you as far as you can with the right knee on the floor and look back toward the ceiling.

Be sure the right knee is on the floor. Now, bring the right foot back to meet the left, extending the buttocks high in the air. Press the heels gently toward the floor in back of you while looking at the toes. Feel the gentle stretch in the calves, thighs and buttocks. Now, lower the knees, chest and chin to the floor with the buttocks raised. The knees, chest and chin are on the floor with the buttocks raised. Feel the muscles in the lower back contract. Now, lower the buttocks, raising up the head and shoulders and arching the upper back. Stretch the neck back toward the wall in back of you. Now, lower the head and shoulders and apply pressure against the palms, raising the buttocks high up into the air again. Stretch the heels toward the floor in back of you and look at the toes. Now, bring the left foot forward between the outstretched hands with the right knee on the floor. Now, bring the right foot forward to meet the left, straightening at the knees. Hold onto the calves and pull the forehead in toward the knees. Now, lock the thumbs together and stretch the arms out in front, up overhead and back, keeping the gaze at the fingers. Now, tilt forward, returning to the preparatory position with the palms together and fingertips below the lips. Inhale deeply through the nose with the eyes closed. Exhale with control as you bring the arms to the side. Keep the eyes closed and be aware of changes in the heart rate and breathing."

"Now, keeping the eyes closed and moving as slowly as possible so as not to disturb the inner awareness, come to a position lying on the floor on the back. Have the legs spread as wide apart as possible without touching anyone and the arms about a foot from the body with the

palms facing up. The eyes are closed and the breathing is through the nose. This is the relaxation pose which we will return to after every set of movements. So, allow yourself to relax. Let yourself just sink into the floor. During the class, have all the breathing through the nose and have your eyes closed as much as possible. This will keep the awareness directed within and make the class a form of meditation. If at any time you feel pain entering the body, come out of the pose and go into this relaxation pose. We will be thoroughly stretching the body but if you stretch too far and feel pain, the benefits of yoga will be lost. The ideal way to enter a pose is to stretch as far as possible without feeling any pain. Each person's body is at a different point in development and it is not necessary to force yourself into any position to get the benefits. Accept your body as it is and only go into the pose to the point that maintains a sense of stretch and comfort."

"We will now begin with backward bending postures, so, using as little energy as possible, roll over onto the stomach with the legs spread apart as wide as possible and the arms about a foot from the sides with the palms up. The first backward bending pose is the 'cobra pose,' so, bring the legs together and bring the palms to the floor underneath the corresponding shoulders. The elbows are against the sides of the body with the points of the elbows at a forty-five degree angle to the ceiling. The forehead is on the floor. On the signal, which is OM, we will be raising the head and shoulders, arching the neck back toward the wall in back. We will do so without applying any pressure against the hands. Use only the back muscles to raise up. The awareness

will be between the shoulder blades. Also, be sure to keep the breath moving slowly and deeply through the nose. Now, raising up—OM. Be sure to keep the breath moving slowly and deeply through the nose. Awareness is between the shoulder blades. Now, applying pressure against the palms, raise up further. Now, we will be coming down slowly and with control. Coming down - OM. Separate the legs and arms. Bring the cheek to the side and inhale deeply through the nose. Hold the breath for a count of three and then let the air gush out through the mouth. This is the relaxation breath."

"The next backward bending pose is called the 'half-locust' pose, so in preparation, bring the legs together. Slide the arms underneath the body, locking the thumbs together, palms up underneath the pubic bone. You may have to raise the body up to get the arms underneath. It is as if you were trying to get the elbows to touch underneath the body. Bring the forehead to the floor. We will be alternatively raising first the right and then the left leg, keeping the leg straight at the knee and the pelvic area as flat on the floor as possible. The leg does not need to raise very high up as long as the knee is straight and the pelvic area is flat. The awareness is in the lower back where the muscles will be contracting. Now, raising the right leg - OM. Lowering down - OM. Now raising the left leg - OM. Lowering down - OM. Now the right leg once again - OM. Lowering down - OM. Raise the left leg again - OM. Lowering down - OM. Bring the cheek to the side and separate the arms and legs as you go into the relaxation pose. Next do the relaxation breath."

"The next backward bending pose is the 'boat' pose, so, bring the legs together and the forehead to the floor. Clasp the left wrist with the right hand in the small of the back. On the signal we will be raising the upper and lower parts of the body and rest on the abdomen. Be sure to keep the breath moving and the legs straight at the knees. Raising up - OM. Coming down - OM. Bring the cheek to the side, separate the arms and legs and do a relaxation breath."

"Next we will be doing the 'bow' pose, so, in preparation bring the legs together and the forehead to the floor. Bending the legs at the knees, reach around and hold onto the feet or ankles with the corresponding hands. Gently and continuously pull the feet in toward the buttocks. Now, pulling back on the legs, raise up the upper and lower parts of the body and rest on the abdomen. Raising up - OM. Coming down - OM. Release the arms and legs, bring the cheek to the side and have a relaxation breath."

"Next we will be doing a series of forward bending postures, so, bring the legs together and stretch the arms overhead on the floor with the thumbs locked together. Inhale deeply and exhaling, raise to a seated position. If this is difficult, come to a seated position in a normal, comfortable manner. Now swivel around so you are facing front. Bend the left leg at the knee and bring the bottom of the left foot against the side of the right thigh. Raise the arms overhead, straightening the spine with the thumbs locked together. Inhale deeply and lower down over the right leg. Let the hands, wrists and arms go completely limp. Let the head fall against the chest. Do not pull yourself down

into this pose. Keep the breath moving slowly and deeply through the nose. Now, bring the back of the right knee flat on the floor and point the right heel toward the wall in front of you. Stretch the arms out over the leg with the thumbs locked together holding onto the foot, ankle or calf—whichever one is comfortable. Pull the forehead toward the knee and find a comfortable level of stretching. Keep the breath moving slowly and deeply through the nose. Now, raising the arms up - OM. Bring the hands to the lap and reverse the position of the legs so that the bottom of the right foot is against the side of the left thigh. Raise the arms overhead with the thumbs together. Inhale deeply and lower down over the left leg. Let the hands, wrists, arms and shoulders be completely limp. Keep breathing slowly and deeply through the nose. Now, bring the back of the left knee flat on the floor with the heel pressing toward the wall in front of you. Lock the thumbs together and stretch the arms out over the left leg, holding onto the foot, ankle or calf of the left leg - whichever is comfortable. Pull the forehead toward the knee finding a comfortable level of contraction. This is the 'head-to-knee' pose. Now, raising up - OM. Bring the hands to the lap and stretch both legs together out in front of you. Raise the arms up, straightening the spine, and inhale deeply. Now, lower down over both legs - OM. Relax the hands, wrists, arms and shoulders completely so the chin falls against the chest. Breathe slowly and deeply through the nose. Now, bring the backs of both knees flat on the floor with both heels stretching out toward the wall in front of you. Stretch the arms out over the legs with the thumbs locked together and hold onto the feet,

ankles or calves, bringing the forehead toward the knees. Continue to breathe slowly and deeply through the nose. Now, raising up - OM. Inhale deeply and slowly lower the back to the floor - OM. Separate the arms and legs and do a relaxation breath."

"The next pose is the 'shoulder-stand,' so, bring the legs together with the arms at the sides with the palms down. Applying pressure to the palms, raise the legs so that the bottoms of the feet face the ceiling. Now, swing the legs up so that the legs are parallel to the floor over the head. Now, bring the palms to the middle of the back for support and straighten the legs. Try to remain as still as possible in this position. If the legs get cramped you can wiggle the toes for relief. Now, coming out of the shoulder stand, lower the legs down till they are over the head. Bring the hands, palms down, to the floor for support and slowly lower the back, vertebrae by vertebrae, until the bottoms of the feet are facing the ceiling. Now, inhale deeply and exhale with control as you bring the legs to the floor. The 'fish' pose is done immediately following the 'shoulder stand.' Bring the legs together and clasp onto the sides of the thighs with the hands. Supporting yourself on the elbows, raise up to a half-seated position and look down at the toes. Now, arching the chest toward the ceiling, bring the crown of the head to the floor so that you are now being supported by the buttocks, elbows and head. As your rib-cage is fully extended in this position, allow yourself to breathe as slowly and deeply as possible. Now, raise the head up and look down at the toes and slowly lower the head to the floor. Separate the arms and legs and have a relaxation breath."

"Next we will do the 'spinal twists,' so, in preparation, come to a seated position and draw the knees into the chest. Pull the heels into the buttocks and straighten the spine. Rest the forehead on the knees. Now, lift the head and extend the right leg out in front of you. Bring the left foot over to the floor on the right side of the right knee. Bring the left palm to the floor in back of the left buttock, keeping the arm stiff at the elbow. Stretch out the right arm in front of you and twist the body to the left, bringing the right arm over the outside of the left thigh and holding onto the underside of the right knee. Be sure to twist the neck out to the left as far as you can and keep the breath moving slowly and deeply through the nose. Releasing, we let go of the arms and legs, drawing the knees into the chest, the heels into the buttocks and the forehead to the knees. Do a relaxation breath. Now extend the left leg out in front of you and bring the right foot to the left side of the left knee. Bring the right hand, palm down, to the floor in back of the right buttock, keeping the arm locked at the elbow. Extend the left arm and turn the body to the right, bringing the arm over the outside of the left thigh and holding onto the underside of the left knee. Twist the neck out far to the left and keep the breath moving slowly and deeply through the nose. Coming out of the pose, we release the arms and legs and bring the knees to the chest, the heels into the buttocks and the forehead to the knees. Do a relaxation breath."

"Next we will do the 'happy' pose, so, stretch both legs out in front of you with the heels together. Now, bring the bottoms of the feet together and lock the fingers of both hands together. Cup the hands

around the feet and pull the feet in as close to the center of the body as you can. Now, straighten the spine and arch the chest out. Inhale deeply and bend down from the lower back, bringing the elbows against the calves—gently pressing the knees toward the floor. Come out of the pose, very slowly straightening the spine."

"Next we will be doing 'yoga-mudra,' so, cross the legs comfortably underneath you and clasp the left wrist with the right hand in the small of the back. Straighten the spine, arch the chest and inhale deeply. Bend forward from the lower back, bringing the forehead toward the floor. Be sure to keep breathing slowly and deeply through the nose. Coming out, raise up slowly."

"We have finished the last of the postures and will be moving into the deep relaxation so, take a position on the back with the arms and legs separated, the eyes closed and the breathing through the nose. The deep relaxation is done by alternately contracting and then relaxing all the different parts of the body. We begin with the right leg, so, stretch the right leg out along the floor and inhale deeply, holding the breath. Tighten the muscles in the foot, calf and thigh as tight as you can and lift the leg off the floor about one foot. Squeeze as absolutely tight as possible and on the signal, release the breath and let the leg fall to the floor in the same motion. Now, release. Stretch the left leg out along the floor and inhale deeply. Squeeze the foot, calf and thigh as tight as you can. Lift it up about one foot. Now, release. Roll the legs about one inch to the left and about one inch to the right and forget about them. Now, stretch the right arm out along the floor

and inhale deeply. Squeeze the hand into a fist, tighten the forearm and upper arm. Raise the arm up about one foot from the floor. Now, release. Stretch the left arm out along the floor and inhale deeply. Squeeze the hand into a fist, tighten the forearm and upper arm. Raise the arm about one foot off the floor. Now, release. Roll the arms about an inch to the left and an inch to the right and forget about them. Bring the awareness into the buttocks and inhale deeply. Squeeze the buttocks together as tight as you can, feeling the pelvic area lift off the ground. Now, release. Bring the awareness into the abdominal region. Inhale deeply, expanding just the abdominal area. Now, take in a little more air. Take in still a little more air. On the signal let all the air gush out through the mouth. Now, release. Now, bring the awareness into the rib-cage. Inhale, expanding just the rib-cage. Now, take in a little more air. Take in a little more air, and release. Now, bring the awareness into the shoulders and inhale deeply. Raise the shoulders off the ground and squeeze them together as if the points were going to meet underneath the chin and going to meet in the middle of the back, and, release. Now, roll the neck very slowly to the left, to the right, and back to center. Now, bring the awareness to the point where the upper lip meets the nose and inhale deeply. Squeeze all the parts of the face toward this point. Squeeze tighter, and, release. Now, bring the awareness back to the point where the upper lip meets the nose, inhale deeply and stretch all the parts of the face away from that point. Open the eyes wide, flare the nostrils, open the mouth wide, stretch the tongue out, and, release."

"We have now finished the muscle contractions and will be bringing the awareness into each part of the body for further relaxation. Try to maintain your awareness in the part of the body I bring it to and if you find any tension present, just consciously relax that part. We begin with the toes, so, bring your awareness into the toes, the balls of the feet, the arches, the heels, the tops of the feet, the ankles, the shins, the calves, the kneecaps, the knees and the thighs. Now, bring the awareness up into the fingers, the palms, the backs of the hands, the wrists, the forearms, the elbows, the upper arms and down into the buttocks, the genitals, the pubic bone, the pelvis, the abdominal area, the ribcage, the lower back, the middle back, the upper back and the neck. Now, bring the awareness into the shoulders, the throat, the jaws, the mouth, the tongue, the teeth, the lips, the cheeks, the eyes, the forehead, the sides of the head, the back of the head and the top of the head."

"Now, focus your attention of the spontaneous flow of the breath as it moves through the nose. Don't try to control the breath in any way but just let it flow naturally. Each time the mind wanders from passively observing the breath, just bring the awareness back to the task at hand. Now, bring the awareness to the thoughts and feelings as they move through awareness. Just observe them without being moved along by them. Each time the mind wanders, just bring it back to the position of the observer, passively registering the thoughts without identifying with them. Now, let go of even the thoughts and move deeply within yourself, experiencing the peace that is your true nature. Now, we will begin to wake the body up slowly, one part at a time. So,

gently roll and stretch the right foot, calf and thigh, the left foot, calf and thigh, the buttocks, the back, the abdomen, the rib-cage, the shoulders, the neck and the face. At your own pace, without disturbing the feelings within, gently come to a seated position facing the center."

"We will next do the yogic breathing exercises called 'pranayama,' so, have the back, neck and head in a straight line with the hands folded on the knees or lap. The first pranayama technique we will be doing is called 'three part breathing.' I will explain and demonstrate. We begin by exhaling completely, all the air from our lungs, feeling the abdominal area contract. We then inhale through the nose. 'One' is as the air fills the lungs and expands the abdomen, 'two' is when the air fills and expands the chest and 'three' is when the air fills and expands the upper chest. We exhale 'three' from the upper chest, 'two' from the chest and 'one' from the abdomen. We will now do five rounds together, so, in preparation, exhale completely and 'one,' inhale expanding the abdomen, 'two' the chest and 'three' the upper chest. Exhale 'three,' the upper chest, 'two,' the chest and 'one,' the abdomen. Keep on at your own pace until you have completed five rounds of inhalation and exhalation. If at any time you feel hunger for air, just let your breath come back to a normal movement and start in again when you are comfortable."

"The next pranayama technique is called the 'bellows breath.' It combines a rapid expulsion of air through contraction of the abdominal muscles with the three-part breathing. I will explain and demonstrate. The air is completely exhaled from the lungs and then there is an

inhalation, expanding just the abdominal area. Then we rapidly contract the abdominal muscles, forcing the air out through the nose. Following these ten rapid exhalations, we exhale completely in three parts, inhale in three parts, exhale in three parts and then rest. We will do three rounds together, so, exhale completely, inhale, expanding just the abdominal area and out, out, out, out, out, out, out, out, out, out and exhale fully, inhale fully, exhale in three parts and relax. (This technique is repeated two more times.)"

"We will now do the 'alternate nostril' breathing which also combines the three-part breathing. Extend the right arm from the body and make a fist. From the fist extend the thumb, pinky and ring finger. Bring the hand toward the face letting the elbow rest on the chest. Close the right nostril with the thumb and exhale through the left nostril. Now, inhale in three parts through the left nostril. Now, close off the left nostril with the extended fingers and exhale in three parts through the right nostril. Inhale through the right nostril and, closing it off, exhale left. Continue at your own pace; first exhaling and then inhaling through each nostril. Do five more rounds on your own. If any air hunger develops, just let the breath come back to a normal, uncontrolled state and then begin and complete the five rounds when you feel comfortable."

"The final pranayama technique we will be doing is called the 'humming breath' and we will go directly into meditation following it. I will explain and demonstrate. Exhaling completely, the breath is then inhaled in three parts and exhaled making a humming sound through the

roof of the mouth. We will do ten rounds together and then sit still for about ten minutes in silent meditation. During the meditation allow yourself to be aware of the subtle mental vibrations produced by the humming breath. We try to sit as still as possible during the meditation so if you need to stretch your legs please do so now. Now, exhale completely, inhale in three parts and begin. (After this breathing technique has been done and the ten minute period of silent meditation completed the class ends.) If there are any questions or comments regarding any part of the class, I would be glad to answer them."

APPENDIX D

LECTURE AND DEMONSTRATION OF INTEGRAL HATHA YOGA
GIVEN TO PATIENTS AT "FREEDOM HOUSE"

LECTURE AND DEMONSTRATION OF INTEGRAL HATHA YOGA
GIVEN TO PATIENTS AT "FREEDOM HOUSE"

Explaining what yoga is, is like trying to explain what life is. It cannot be explained in just a few, or even many words and it must be experienced to be known. However, I will try to present the basic philosophy of yoga as well as explain my purposes for wishing to teach yoga to you here at Freedom House.

If we look at ourselves and try to find out, "Who am I?," we might look at the most obvious part of ourselves which is the body. We all seem to have muscles, skin, hair, arms, legs, nerves, lungs, heart and so on. "Who am I?," can, on our own personal inspection reveal us to be a physical being. Integral Hatha Yoga, which I have been teaching for over a year, believes that to understand ourselves, to gain happiness in our lives, we must pay attention to our bodies and try to make them as healthy and relaxed as we can. The key to well-being, no matter if you are a teacher, soldier, machinist, physician or street junkie, comes from a relaxed, healthy body. Integral Hatha Yoga consists of various exercises or "asanas" which tone up all parts of the body—even the inner organs. You do not need to be an athlete or even in good shape to benefit from yoga. Anyone, even if they haven't exercised for years can gain from yoga because it is a gentle form of body conditioning and between each asana there is a period where the breath, heart rate and muscles are allowed to rest before doing anymore movement or exercise. The class which I will be offering takes about 90 minutes per session

and about the first 60 minutes are taken in doing these asanas. A little bit later I will demonstrate some poses and you may join in if you wish.

Now, we have looked at ourselves and have seen that we are most obviously a body, but, what about the mind? We all know that we think and have feelings. Sometimes when we close our eyes we also see images and when we sleep we sometimes have dreams. All these things take place in the mind. Integral Hatha Yoga also consists of exercises that seek to make the mind more clear and capable of happiness. Following the asanas we do what is called deep relaxation. During the deep relaxation we learn to relax the body so that we are hardly aware that it is there. At this time we become very aware of the thoughts that move through the mind and we learn how to turn them off. That is, we gain control over the mind so that we are its master, instead of it telling us what to do. When the mind is relaxed like this, worries are often reduced and we can learn that there is a source of joy in ourselves that we can experience anytime we wish—anytime we enter the yogic state. By learning how to find happiness within ourselves that is independent of who we are with, or what we are doing, we gain greater power over the mind. Many, many people who are not practicing yoga do become involved in it after using drugs a lot. They needed to high to be happy. There is nothing wrong with wanting to feel good. However, when you depend on drugs to get high, you always crash and I think you know what I mean.

It is very important to understand and believe that you have within you, right at this moment, a great wealth of joy that is asleep. It is within everyone. It only takes knowing how to get at it. The philosophy

of yoga is over 2,000 years old and the exercises we will be doing are over 1,100 years old. I can't really say why they are still around but it has been my experience in life that the best things are those which last the longest—like art, religion, philosophy and love.

Anyway, yoga teaches us how to relax the mind and get away from the thoughts that bring us down. When we turn off those thoughts we find that our true nature is something that is there whether we know it or not. Some people have said that when you quiet the mind through yoga it is like calming a restless ocean and at the bottom of the ocean is a beautiful diamond that was hidden by the sand that the waves tossed around. The diamond is like joy and power that is already within you. Calm the mind through yoga and you will know that crystal feeling inside you.

After the mind has been relaxed through deep relaxation, we work on it even more. We do this through two techniques. One is called "pranayama" and the other is called "meditation." Pranayama are breathing exercises. What we do is learn to purify the nervous system through breathing very slowly and deeply. At the same time that this helps to burn impurities in the body, the thoughts of the mind become slower and less frequent. There seems to be a connection between the way we breathe and the kind of thoughts we have. The slower we breathe, the less we think, and the less we think while still being awake and alert, the more joy we feel rising up from our deeper nature. The yoga class will consist of about 15 minutes of these breathing techniques.

The last 15 minutes or so of the class are used for silent meditation. During the meditation we sit still and try to concentrate the mind on a sound which is called a "mantra." What we do is to keep saying, or creating, a sound silently to ourselves. The mantra we use is the sound "OM." You see, by the time we have reached this point in the class we have stretched and relaxed the body and are beginning to calm the mind. Now, according to yoga, when you get really deep inside, when you get deeper than pot, or smack or acid can get you, you hear a sound and when you hear this sound you have tapped that source of happiness and intelligence within you. The yogis say that when the universe began there was nothing, not even the planets or the stars. All there was, was a sound and the sound was "OM." They say that to really get to who you are—to get to that part of you that is beyond suffering you must enter into that sound vibration. Now, I can't say that I know this from my own experience because I'm really only a beginner in yoga, but I do know from my own experience that my highest moments have been when I was sitting and meditating on "OM." I keep doing it and when my mind gets distracted I bring it back to the vibration. When it works, and it doesn't always because sometimes I'm too distracted with something else, it's like a gentle song that is being sung by some deep part of me but I'm not usually there because my mind is too agitated about what I'm getting that I don't want or not getting that I want. Meditation has been around longer than man has been writing books and it is one of the few things that can make you feel good even while you're sitting quiet all by yourself.

I think that pretty much covers the basic ideas of yoga and I would like to demonstrate some of the exercises and if you would like to join in with me you can. It is up to you to make the choice. (The cobra, boat, bow, head-to-knee, shoulder-stand and yoga-mudra poses are done. The deep relaxation, three-part breathing and five minutes of meditation complete the demonstration. See Appendix C for a precise description of the above components of Integral Hatha Yoga.)

Now that you have an idea of what yoga means and what a little bit of it feels like, I'm going to tell you about the class that I would like to do here.* I am going to offer to teach a class here five times a week for four weeks. Each class lasts about 90 minutes, and we will probably do it in the morning. I am going to ask you to take some paper-and-pencil tests before and after the four weeks of yoga to help me find out what effects yoga has on people. Also, I will ask you, after the five weeks are over, to let me ask you some questions about how the yoga affected you. After I score all the tests, which are confidential, I will also explain what the tests indicate concerning you. If you are interested in doing the class with me, I will just ask you to sign a paper saying you understand what the experiment is about and that you are taking the responsibility for participating on yourselves.

*The control group was given the same lecture and demonstration. The only difference was that they were told that the yoga would not be available until after they took the pre and posttests. This involved a delay of four weeks.

APPENDIX E

POSTTREATMENT INTERVIEW

POSTTREATMENT INTERVIEW

1. What is the main change you notice about yourself since starting yoga?
2. What, if anything, do you value about yoga?
3. Compared to other ways you relax, how does yoga affect you?
4. Has yoga affected your health in any way?
5. Do you notice any differences in your body since you started yoga?
6. What ways does yoga affect you emotionally?
7. What ways does yoga affect the way you think?
8. Do you notice any differences in the way you act toward other people since starting yoga?
9. What really happens to you while you do yoga?
10. Is yoga something you might keep doing on your own?

APPENDIX F

PERSONAL ORIENTATION INVENTORY

PERSONAL ORIENTATION INVENTORY

The Personal Orientation Inventory is a copyrighted test. It may be obtained from Educational and Industrial Testing Service, San Diego, California, 92107.

APPENDIX G

IPAT ANXIETY SCALE QUESTIONNAIRE

IPAT ANXIETY SCALE QUESTIONNAIRE

The IPAT Anxiety Scale Questionnaire is a copyrighted test. It may be obtained from the Institute for Personality and Ability Testing, 1602 Coronado Drive, Champaign, Illinois.

APPENDIX H

BODY-CATHEXIS SCALE

BODY-CATHEXIS SCALE

On this page are listed a number of things characteristic of yourself or related to you. You are asked to indicate which things you are satisfied with exactly as they are, which things you worry about and would like to change if possible, and which things you have no feelings about one way or another.

Consider each item listed below and indicate in front of each item the number which best represents your feelings according to the following scale.

- +3 Have strong positive feelings.
- +2 Have moderate positive feelings.
- +1 Have slight positive feelings.
- 0 No feelings one way or another.
- 1 Have slight negative feelings.
- 2 Have moderate negative feelings.
- 3 Have strong negative feelings.

_____hair	_____buttocks	_____lips
_____facial complexion	_____ankles	_____legs
_____hands	_____neck	_____teeth
_____body hair	_____shape of head	_____forehead
_____nose	_____body build	_____feet
_____fingers	_____profile	_____knees
_____wrists	_____height	_____posture
_____sex organs	_____thighs	_____face
_____waist	_____shoulder width	_____weight
_____back view of head	_____arms	_____trunk
_____back	_____chest or breasts	_____mouth
_____ears	_____eyes	_____midriff
_____chin	_____hips	_____calves
_____skin texture	_____OVERALL PHYSICAL APPEARANCE	

APPENDIX I

TRANSCRIPTS OF STRUCTURED INTERVIEWS

TRANSCRIPTS OF STRUCTURED INTERVIEWS

Participant #1

Q. What is the main change you have noticed about yourself since starting yoga?

A. I feel better about myself—the things I do.

Q. What, if anything, do you value about the yoga?

A. I like the way it makes me feel. I don't know, the way it makes me feel. I like the exercises. I like the control, you know, you have to have when doing it.

Q. Compared to other ways you relax, how does yoga affect you?

A. There is really nothing you can compare it to. I've never been so relaxed in my life as when I'm in deep relaxation.

Q. Has yoga affected your health in any way?

A. I feel better. I don't worry so much about myself. I used to be a worrier. Like I got sick last night and I didn't want to even see the doctor. They made me, but even so, I didn't worry about it.

Q. Do you notice any differences in your body?

A. In my legs especially. Besides that I used to have pads of fat right there on my thighs. And it's gone down a lot. I can notice it in my clothes. And my back feels 100% better. I used to have a weak back but it feels a lot better. And it's tight around my face while it used to be flabby. I hold myself taller when I walk. It's not a conscious effort.

Q. What ways does yoga affect you emotionally?

A. Things don't upset me as much as they did. I'm calmer about things. Like one day I had a slip dropped on me. About 17 people jumped on me at once and I was pretty nervous about it beforehand but once I got in there I handled it real well. I mean I wasn't real—I mean I wasn't shaking like I usually do. I handled myself a real lot better.

Q. What ways does yoga affect the way you think?

A. I can look at something and not get upset about it. I've got something right now that's pretty heavy on my mind and it doesn't upset me like it should. I don't know whether or not it should but, you know.

Q. Do you notice any differences in the way you act toward other people?

A. When on housekeeping I tend to get aggravated with people a lot. When I think they're trying to get over on me. I don't jump on them. I usually pretty easily get hurt, you know, and I'm not quite as sensitive. Or I don't show it so much, maybe that's it.

Q. What really happens to you while you do yoga?

A. Outwardly I get a big smile on my face. I come in and other people say I look stoned. But I don't feel stoned—I just feel good—lightheaded in a way too. I just feel relaxed and it's fine—good.

Q. Is yoga something you might keep doing on your own?

A. Definitely. I mean I've started doing it on weekends by myself, and I like doing it by myself. I enjoy it. Over the weekend everybody had gone back to Elizabethton except me and I got bored. It really helped.

Participant #2

Q. What is the main change you have noticed about yourself since starting yoga?

A. I think I have reached with the In alcoholism we have a serenity prayer. And it's the first time I think I have known what the word serenity means. Because I have really felt serene afterwards. More in the last week I think I have accomplished that. I didn't really know what the change was but that's it.

Q. What, if anything, do you value about yoga?

A. The power of meditation. This is a tremendous aspect. Something really happened.

Q. Compared to other ways you relax, how does yoga affect you?

A. It's the only thing to relax me. Well I did not know I did not know how to use my mind in the relaxation and breathing part. When I'm uptight when I start it, I get cool. Sometimes I feel like a cool calm lake.

Q. Has yoga affected your health in any way?

A. I think so. My appetite may be better.

Q. Do you notice any differences in your body?

A. I'm more loose. Not as much as I'd like.

Q. In what ways does yoga affect you emotionally?

A. Oh, in the same way I was talking about. It's all tied in with emotion. I know I'm not as nervous as I was. Whether or not this has . . . it has a lot to do with yoga. I can't say it's 100% yoga, because some of my self-confidence has come back. When I find myself

walking in a room I used to walk out. So that part is self-confidence. I didn't want people to laugh at me for taking yoga. I knew this was going to happen. So I thought, what the hell, this is me. I didn't worry about it.

Q. What ways does yoga affect the way you think?

A. Well, mentally, I think I learned that I can control my thoughts. I did not think I could. I was like some sink of muddy water, all going around in a circle.

Q. Do you notice any differences in the way you act toward other people?

A. Oh, I don't know. There is a difference in the way I act toward other people but what it is I don't know. But I don't know what I associate with yoga or the program overall . . . the therapy, and I think I would have to include that in the 60 day program. It was good.

Q. What really happens to you while you do yoga?

A. Relaxation.

Q. Is yoga something you might keep doing on your own?

A. Oh yes. I find I use it for The word nervous I hate but that is a good word for me. It's had a tremendous effect on my emotions, well, and mind. I didn't think I could do this. I hope this is what you wanted from the program. I haven't been too sure what you wanted.

Participant #3

Q. What is the main change you have noticed about yourself since starting yoga?

A. I found out a lot of different things about myself. I found out I like to be alone. I feel I get a lot out of being alone now and stuff.

Q. What, if anything, do you value about the yoga?

A. I like the feeling I get out of it. I don't feel like I'll ever go back to hard drugs if I keep this feeling. I think it may be a substitute for the other things I was doing—all the other drugs. Maybe put as a substitute as something else to do. I really don't want to feel down anymore. I want to feel high. I could switch to yoga instead of, you know, going out and finding some drugs. I have damaged myself pretty well.

Q. Compared to other ways you relax, how does yoga affect you?

A. Well, other times I was relaxed I would become paranoid about something usually and now when I do yoga I don't feel tension or anything. I'm just completely relaxed. My whole body is relaxed, which before it wasn't. You know I was always tense about something Something was on my mind. When I do yoga, I clear everything out. When I do it in my free time, I do it when there isn't anything on my mind. I can relax more then.

Q. Has yoga affected your health in any way?

A. Yeah, I feel that it has. I feel in a lot better shape than I was. I'm getting into a lot of sports now. I've been getting into tennis.

I play it two or three times a day. I've been jogging a little bit and swimming every day. I'm pretty active lately since I've been taking it. Play tennis three times a day and usually When I came down here I wouldn't have been able to do it I would have been too tired but now I'm able to do it two or three times a day and not get tired. When I swim I can hold my breath a lot longer.

Q. Do you notice any differences in your body?

A. My posture is I feel like it's a lot better. I used to sit in a slump but now it's a lot straighter. It makes me feel good doing the postures like that. I'm a lot more flexible now than I was. I'd like to be a lot more flexible than I am.

Q. What ways does yoga affect you emotionally?

A. I don't think that much, as far as I know.

Q. What ways does yoga affect the way you think?

A. I think more positively about what I'm doing now. I feel like I can accomplish something now. I have a more positive attitude toward myself and what I do, now that I've started with yoga. I think I'll stick with it, you know. I feel like I've completed something I wanted to do. That gives me a more positive attitude about other things I do and what I'm going to do when I get out. I feel like I can make it, and I'll stick with it too.

Q. Do you notice any differences in the way you act toward other people?

A. I don't feel that I am as bitchy as I used to be. That's about the biggest thing I'd say. I used to be grouchy sometimes, you know.

I'm pretty well happy now most of the time. I feel real good. After I come in every day there is really nothing that big on my mind. I just feel really great when I come in. Act cool too and other people have noticed that too. That's cool too.

Q. Is yoga something you might keep doing on your own?

A. Yeah, I feel that it is. I feel that it is going to take a big place in what I do on the outside pertaining to drugs. I feel that if I can get high on my own I won't have to turn to drugs if I ever want that feeling again.

Participant #4

Q. What is the main change you notice about yourself since starting yoga?

A. Well, I'm a whole lot limberer and I don't get as tense as I used to. Like everything. Like when I'm playing tennis I used to get real mad if I messed up. But now I just mostly, you know I'll get a little mad in my mind but I won't slam my racket or anything. Everything seems to go easier. It just glides along.

Q. What, if anything, do you value about yoga?

A. Well, it got me limbered up. I really like to do it. I like the feeling. It's sort of like a high—a natural high. I hope that maybe, you know, if I get where If I get back on the streets and get real depressed I hope that I can do yoga, and get the feeling I want rather than resorting back to drugs. I don't know if I can. Maybe it will help a whole lot.

Q. Compared to other ways you relax, how does yoga affect you?

A. It just It relaxes your mind. It relaxes you all over. I mean, you know, you can lay down and relax. But when you're doing yoga your whole body, you know, you can just lay there without moving. You know, but when you lay down you just twitch and turn down. But after you do the exercises it just You're so relaxed you can lay there and not even move.

Q. Has yoga affected your health in any way?

A. I don't go around dragging all the time. I'll get up of the morning and go out and do it and I'm just jumping all day. I feel really good.

Q. How does yoga affect you emotionally?

A. It lets me take them easier. I don't really know how to explain this. Like if somebody says something to me, instead of jumping at them, I can just tell them what I feel. And, you know, I can accept better what they tell me. Instead of going on about it for a long time you can just accept each other's opinions.

Q. What ways does yoga affect the way you think?

A. I don't know. I don't know if it's really done anything for that. It may have, but if it has, I haven't really noticed.

Q. Do you notice any differences in the way you act toward other people?

A. Yeah, a lot of the times, people, you know, they do something that maybe I didn't like. And it's God damn you then and walk off and leave it at that and still have the tension built up inside. But it's got me where I can relax without it I just, you know, if somebody makes me mad I can just, you know, not jump into the shit. I'll just tell them the way I feel—that I don't like it. And just get it out there instead of going back and let it build up over a couple of days. I just feel more confident in myself.

Q. What really happens to you while you're doing yoga?

A. First I felt kind of silly, you know. But it just, I don't know, you just get a real good feeling. I don't know what it is. It's just there after you start doing it. I think that Well,

I've been doing some on my own. Me and R_____ did some together back in the room yesterday and I get a better feeling when I'm by myself than just me and somebody else—than when I'm with a bunch of other people. I just get real relaxed, you know, just calm as everything.

Q. Is yoga something you might keep doing on your own?

A. Yes, most definitely. I'd like to, you know, get it another class when I get out of here.

Participant #5

Q. What is the main change you have noticed about yourself since starting yoga?

A. Well, I'm more aware of my body physically. I'm more aware of what I'm thinking. I think more definitely. I don't get as confused as I used to. I can think more about one thing and get all the trash out of my head.

Q. What, if anything, do you value about the yoga?

A. I value the gracefulness and limberness and the feeling I get from it.

Q. Compared to other ways you relax, how does yoga affect you?

A. Well, it's more like—it's more like a total relaxation to me than I've ever known before. It's just more total relaxation. In other words, I find myself thinking about something or wrapped up in something but yoga just—I'm more involved in it and nothing is involved but me and what I'm doing and everything else is almost obsolete.

Q. Has yoga affected your health in any way?

A. Yeah, it's helped me a lot because I smoke and I can breathe better. I don't get as much trouble from my lungs. I feel better physically and I don't seem to gain weight as fast as I used to and I'm not as creaky in my joints as I used to be. I'm a lot more I'm a lot more smoother in my ligaments and sometimes I think I'm a lot more graceful. That might be in my head. I don't know.

Q. Do you notice any differences in your body?

- A. Not real physical differences unless it was just more of the smoothness, more of a working with it instead of My mind and body working together—more of a unity.
- Q. How does yoga affect you emotionally?
- A. Well I feel like I usually feel peaceful when I think about it and when I do it and it just I've got different emotions about it. It makes me feel peaceful yet I think there's more to it—something different that I haven't seen or that I might never see if I don't pursue it. Altogether I have a respect for it.
- Q. What ways does yoga affect the way you think?
- A. Well, it makes me—I seem to be more rational, more calmer about the way I'm thinking, and it seems like if I sit and concentrate for a minute I can come up with better solutions, and a lot better ideas. It just makes me more peaceful in my thinking. I don't get as upset as I used to. Everything doesn't hit me at once and instead of fights I can keep them away.
- Q. Do you notice any differences in the way you act toward other people?
- A. Yeah, that would be hard to pinpoint. I seem to go into conversations more at ease and I've cut out a lot of bullshit. When I talk to somebody I try to get into something that's—some feelings, you know.
- Q. What really happens to you while you do yoga?
- A. Well, usually I just kind of get lost in me and I've had some nice sensations. Usually I get a peaceful, calm feeling and a little excited anticipating the feeling, and I've got lightheaded before.

Really, really feeling good but I don't know how to explain it. It just makes me feel alive and healthy. It's hard to put into words, but I like it.

Q. Is yoga something you might keep doing on your own?

A. Yeah, I think if I don't do it regular every day I'll probably do it often. You know, I don't think I'll forget about it. If I can find the time I'll probably do it, especially when I get upset or something.

VITA

Timothy Joseph Thorpe was born on February 16, 1949, in Newark, New Jersey. He grew up in the nearby town of Nutley with his maternal grandparents, mother and brother. Enjoying athletics and music, he was graduated from Nutley High School in 1967. He attended Fairleigh Dickinson University in Rutherford, New Jersey, and was graduated cum laude from the University Honors Program in 1971 with a major in psychology.

In March of 1975 he received the M.A. degree in clinical psychology and in June of 1976 received the Ed.D. degree in counseling psychology, both degrees from the University of Tennessee at Knoxville. He will be commencing a postdoctoral psychology internship in the Counseling Center of Texas Tech University at Lubbock, in August of 1976.