The effects of Hatha yoga on self awareness

Darlene E. Walsh-Martin

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THE EFFECTS OF HATHA YOGA
ON SELF AWARENESS

A Thesis
Presented to the
Faculty of
California State College
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
Darlene E. Walsh-Martin

November 1979
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ABSTRACT

The purpose of the present study was to explore the hypotheses that: (1) subjects enrolled in a Hatha yoga training program will become more physically (internally) aware (as measured by a self awareness instrument) over an 8 week period than will a group of control subjects enrolled in a racquetball class and, (2) subjects enrolled in a Hatha yoga training program will become significantly less aware of external, thought-focused experience over an 8 week period than will a group of control subjects enrolled in a racquetball class. The subject pool consisted of 27 students enrolled in Hatha yoga training at California State College at San Bernardino (experimental group) and 24 students enrolled in racquetball classes (control group) at the same school. Each group received 16 one-hour sessions in their respective courses. Through a questionnaire, subjects were asked to rate their attentiveness to internal and external cues at the beginning of their respective courses and again at the conclusion of their 8 week courses. Findings only slightly supported the first prediction while the second prediction was clearly supported. The yoga group showed some increase in internal awareness and a significant decrease in external awareness. The control group showed a significant decrease in internal awareness. The study concludes with a discussion of these findings and their implications for theory in research in growth psychology.
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ACKNOWLEDGEMENTS

At this time I would like to thank Dr. Les Herold, my Chairperson, for his time, literary guidance and personal support throughout this undertaking. I remember many times his help in seeing the light at the end of the tunnel. I would also like to thank Dr. Chuck Hoffman and Rama Kirn Kaur Khalsa for their advice, suggestions and direction, along with Dr. Cheryl Graesser for her statistical guidance. And also to Debra Nelson, for providing the Hatha Yoga training used in this experiment and for her part in introducing me to Hatha Yoga.

Special appreciation to the unique individuals of Practicum 1977-1978, for their continuous support, ideas and caring:

Tony X. Zamudio           Joan Palladino           Donna George
Edward Allen              Susan Haugh              David Allen
Betsy Evans               Keidi Knipe              Killorin Riddell
Michael Dyer              Steve Neat

and

Cathy Morris Allen and Ann Niemeyer

for everything else!

Finally to my husband, Calvin, for his encouragement, energy and patience through my entire California stay.
INTRODUCTION

Self awareness is a process which promotes consciousness of one's own body sensations, thoughts and emotions. This process provides a continuous means for keeping current with oneself and "is available at all times, rather than an exclusive or sporadic illumination, like insight that can only be experienced at special moments or under special conditions" (Polster & Polster, 1974, p. 211). In as much as self awareness enables the individual to monitor both changes and continuities in physiological and psychological functioning, its development should have psychotherapeutic value. This point is corroborated by the importance attached to awareness as a goal in several psychotherapeutic traditions (Rogers, Perls, Reich & Lowen).

Self awareness is also closely identified with the practice of Hatha yoga. Hatha yoga consists of a series of breathing exercises and body postures (asanas) that are employed to prepare the individual to move to progressively more intense forms of meditation and contemplation. Hatha yoga calms the mind to the point that the individual is aware only of the "here and now". This "here and now" includes an awareness of subtle bodily conditions. The present study represents an empirical investigation of the effects of yoga training on self awareness. It was expected that self awareness would increase as a result of yoga training. Confirmation of this hypothesis would indicate the appropriateness of yoga training as a psychotherapeutic tool when the goal of
therapy is increased awareness. In connection with the concept of the therapeutic effects of self awareness, it has hypothesized in this study that self awareness resulting from yoga training has psychotherapeutic value as it increases the frequency of awareness of subtle body conditions and decreases the frequency of awareness of external distractions and irrelevant thoughts.

The remainder of this chapter will consist of a more in-depth explanation of the importance of self awareness as a psychotherapeutic construct, theoretical views of self awareness, the relationship of self awareness to Hatha yoga and Hatha yoga training as a method to expand self awareness. Following this review is a statement of predicted changes as a result of Hatha yoga training and specific predictions concerning the effect of Hatha yoga training of self awareness as measured by the instrument designed in this study.

Theoretical Views of Self Awareness

Self awareness as a psychotherapeutic construct has been considered important by many therapy traditions. Rogers for one, has alluded to the importance of self awareness in the following manner:

Psychological adjustment exists when the concept of self is such that all sensory and visceral experiences of the organism are, or may be, assimilated on a symbolic level into a consistent relationship with the concept of self (Rogers, 1951, p. 513).

Rogers states that experiences can be assimilated into awareness only through accurate symbolization. Once symbolized accurately, individual experiences become organized into a unity or Gestalt of enduring significance for a person. This enduring, coherent set of symbolized
experiences (or awareness of them) is known in Rogers' theory as simply the self. That part of the self of which the person is fully and directly aware is known as the phenomenal self. For Rogers, psychological health increases in direct proportion to expansion of the phenomenal self. In other words, the organism naturally moves in the direction of healthy growth when the individual moves from a narrow to a broad phenomenal self. In more familiar terms, the removal of obstacles to full self awareness (psychological defenses) permits greater and greater awareness of experience. This expanded awareness is inherently therapeutic in that it permits an openness to experience which Rogers has repeatedly found to characterize the healthiest individuals. What Rogers considers an inherent tendency toward psychological growth can become fully expressed in the following way:

When the self-structure is able to accept and take into account in consciousness the organic experiences, when the organizational system is expansive enough to contain them, as clear integration and a sense of direction are achieved, the individual then feels that his strength can be and is directed toward the clear purpose of actualization and enhancement of a unified organism (Rogers, 1951, p. 513).

As indicated in the above quotation, Rogers considers it important to link self awareness and self concept. Some theorists view self awareness as important in its own right, whether or not it affects changes in "self". One such theorist is Perls. Perls (1966) considered the process of growth to be synonymous with expanding self awareness. Conversely, the major factor inhibiting psychological growth is the avoidance of self awareness.

Perls postulated a "continuum of awareness" to conceptualize the nature of ongoing, moment to moment experience. This continuum can be
envisioned as constant awareness of what is being experienced by an individual from second to second. The emphasis of this focus is on nonintellectual awareness, such as sensory data, feelings, emotions, and reactions to experiences from within her/himself and her/his environment, as opposed to thoughts and speculations. Perls suggests that most people continually interrupt their awareness continuum by distracting themselves with thought, memories, expectations of the future, and other associations irrelevant to the experience of the moment. These irrelevant associations often provide a person with a means of avoiding painful or threatening here and now experiences. The potential value of such an experience is lost when it is not assimilated into awareness. Yet this outcome is the inevitable effect of avoidance. The therapeutic task thus becomes one of "deautomatizing" avoidance by bringing to a client's attention the characteristic ways s/he substitutes awareness or irrelevant sensations and thoughts for awareness of painful or threatening experiences of the moment.

Perls' purpose is thus to broaden the individual's awareness initially by looking at the organism as a whole and using a "here and now" emphasis. The individual is then encouraged to maintain an extended continuum of awareness from which both pleasant and unpleasant experiences may be faced, appreciated and experienced. Such expanded awareness results in therapeutic gain: "Awareness per se, by and of itself, can be curative" (Perls, 1969, p. 16).

Another theoretical view incorporating self awareness in the psychotherapeutic process was proposed by Reich (1949). Self awareness for
Reich is focused primarily on the body, the musculature and secondarily on the thoughts that were freed by the therapeutic release of bodily tensions and muscular blocks. The goal of Reichian therapy is to loosen and dissolve this muscular armoring. The ultimate value of such therapy is the transformation of character structure which Reich equated with specific patterns of muscular armoring involved in habitual defenses.

An understanding of orgone energy is essential to interpret Reichian therapy. Orgone energy is Reich's term for universal energy postulated to be present in all things. Reich described orgone energy as functioning in the living organism as biological energy flowing up and down the body parallel to the spine. Orgone energy was considered by Reich to be manifested in the total organism in emotions, as well as purely biophysical organ movements such as sexual arousal and orgasm.

Orgone energy can be blocked by muscular armoring. Muscular armoring is the restriction of free flowing energy and expression of the individual. This armoring is organized into seven major armor segments composed of muscles and organs with related expressive functions. The formations of these armor segments resemble a series of seven roughly horizontal rings at right angles to the spine and torso. These major segments are the eyes, mouth, neck, chest, diaphragm, abdomen and pelvis. Reichian therapy focuses on the dissolving of armor in each segment, starting with the eyes and ending with the pelvis. Each unit is separate and must be worked with as such.

In order to promote free flowing energy throughout the body, Reichian therapists instruct their clients in deep breathing exercise. Deep
breathing is maintained as a way of "charging" the body with energy. Energy builds to the point that it "blows" the muscular blocks out of the body. Reich focused on dissolving muscular armoring so that a widening of the individual's awareness (especially bodily awareness) could take place.

The final theoretical view to be discussed in terms of self awareness is bioenergetics. This approach was derived from Reich's work by one of his students and clients, Alexander Lowen. Bioenergetics is an extension of Reich's breathing techniques to charge the body with free flowing energy to destroy muscular tension. Lowen (1975) uses deep breathing in combination with highly strenuous body positions to dissolve blocks which, when removed, give way in an individual to involuntary trembling, or "vibrating". This vibrating is understood as the hallmark of an alive, well, unblocked organism. To bioenergetic therapists, full bodily awareness is synonymous with health.

**Self Awareness and Yoga**

As Reichian therapy and bioenergetics advocate a therapeutic orientation based on breathing and body movements, yoga relies on a combination of breathing techniques, body postures and additional meditation techniques to increase self awareness and bring about mental and physical health. Yoga encompasses a set of practices (developed initially in India) aimed at calming the mind and focusing consciousness on the internal rather than external environment.

There are different types of yoga: Karma Yoga (yoga of action), Jnana Yoga (yoga of knowledge), Bhakti Yoga (yoga of devotion), Hatha
Yoga (yoga of the body), Kundalini Yoga (yoga of energy release, and Raja Yoga (royal yoga). Common to these branches is the fundamental principle that a person's consciousness needs to be turned away from the activities of the external world and back to inner experience. The focus on inner awareness is especially prominent in Hatha yoga. The present study is concerned only with the psychological effects of regularly practicing Hatha yoga; for that reason, Hatha yoga will be explained here in considerable detail.

Hatha yoga is designed to purify and strengthen the body, preparing the practitioner for higher forms of consciousness. Through the discipline of training, the body becomes more physically supple, healthy and relaxed. These conditions enable the individual to proceed to later aspects of yoga training involving mental work and introspection.

The first step in Hatha yoga training is learning how to physically relax. This goal is achieved by helping the individual to identify specific levels of tension and then move to experiencing relaxation by contracting muscles and releasing the accumulated tension. Once relaxation is accomplished, the focus is directed toward mastering yoga postures. These postures are aimed at stretching and strengthening specific muscles and tendons that may become shortened and contracted due to mental stress, improper diet and faulty posture. Concurrently, muscle groups weakened from disuse are also gradually strengthened. The concept of body balance is also emphasized in Hatha yoga training. An effort is made to counteract the effect of muscles which, having become increasingly tense, hold the body in an out-of-balance position. Muscles used in opposition to keep the body balanced are used less and thus shrink or
become weakened, preventing the body from reassuming the appropriate balanced position. Hatha yoga is used to remedy this imbalance by gradually strengthening muscles necessary to restore balance. Practice of these postures also brings about more bodily calmness, flexibility and efficiency. During the course of executing these semi-rehabilitative postures, awareness is directed toward physical sensations. Emotions that surface while performing these postures are recognized by the individual and left to pass through awareness. Breathing is also important in yoga training as it can be used as an indication of an individual's emotional and mental state (Rama, et al., 1976). When an individual is relaxed her/his breathing reflects an emotional calm and indicates that attention is focused. Irregularities or interruptions of breathing are considered to be indicative of emotional and mental disturbance. An individual becomes "agitated in anger, stopped momentarily in fear, choking in sadness and sighing in relief" (Proskauer, 1969, p. 27). When the mind is distracted and influenced by fleeting thoughts and emotions, a feeling of calmness is not maintained and is reflected in the breathing. The goal, then, is regular, relaxed, calm breathing. (Since meditation was not a component of the training reported in this study, techniques and research related to meditation will not be covered in this literature review.)

Research concerning the effects of yoga training has chiefly investigated the physiological aspects of Kundalini and Hatha yoga (Anand, 1961; Miles, 1964; Hoenig, 1968, Udupa, 1972; Goodman, 1973). To date, only a few studies have been done focusing on psychological correlates of Kundalini yoga (Johnson, 1974; Stone, 1975; Khalsa, 1977). There have been no studies reported to date on psychological effects of Hatha yoga.
To help interpret the result of performing Kundalini yoga, it is necessary to have a basic understanding of this branch of yoga. Kundalini essentially denotes psychic energy which moves up the spine. Kundalini yoga is designed to free the movement of this energy and in so doing speed up the process of expanded self awareness and self actualization. Kundalini yoga has specific types of techniques different from Hatha yoga to accelerate this process.

The first study by Johnson (1974) was concerned with the effects of Kundalini yoga therapy on conflict resolution, self concept and emotional adjustment. Conflict resolution was measured by the Conflict Resolution Inventory, while self concept and emotional adjustment were measured by the Tennessee Self Concept Scale. After 12 weeks of Kundalini yoga therapy sessions, the subjects reported positive changes in terms of resolving conflict, positive change in 7 out of 10 self concept sub-categories and positive change in 6 out of 8 emotional adjustment sub-categories. No comparable gains were registered in the matched control groups.

A second study (Stone, 1975) considered the effects of Kundalini yoga training on state and trait anxiety as measured by the Spielberger State and Trait Anxiety Inventory (STAI) and self concept as measured by the Shostrum Personality Orientation Inventory (POI). After 4 months of training the subjects reported improvement in a self acceptance sub-category as measured by the POI and a decrease in state and trait anxiety scores as measured by the STAI. In addition, a decrease in state anxiety scores was found after a single Kundalini yoga class.

A third study (Khalsa, 1977) was concerned with the effects of Kundalini yoga training and desensitization on speaking anxiety as measured
by the IPAT Anxiety Battery, the Taylor Manifest Anxiety Scale and questionnaires originated in the study. The effects of Kundalini yoga training treatments of the subjects' state of consciousness during the treatment session was measured by a Q sort procedure. After eight, sixty minute group treatment sessions, subjective measures indicated the majority of subjects in both treatments experienced a moderate to great reduction in anxiety at post treatment and follow up assessments. These same measures indicated that Kundalini yoga was more effective for trait anxiety and desensitization, for state anxiety. The Q sort data indicated that the subjects in both experimental groups predominantly experienced a deeply relaxed state similar to the EEG state of alpha. Physiological and psychological test measures, however, did not indicate significant change. There were no comparable changes indicated in the matched control group.

The previous studies provide an indication of what has been done in the area of psychological effects of Kundalini yoga. While these studies are of interest, little work has been done on psychological correlates of Hatha yoga, and specifically the relationship between Hatha yoga training and self awareness.

Expanding Self Awareness Through Hatha Yoga Training

As stated previously, Hatha yoga focuses on internal awareness. Training in Hatha yoga is postulated in this study to increase and broaden the range (scope, domain) of internal awareness. This section of Chapter One is concerned with the description of a typical Hatha yoga training program and its possible benefits. Also reported here are the dimensions of self
awareness considered in this study and the hypotheses guiding the study.

A typical Hatha yoga program is initially concerned with learning to relax. One approach used begins at the tip of the toes, the muscles are brought into focus and relaxed. By concentrating on each muscle group in sequence the whole body is brought to a calm and quiet state. Another approach to bring about this state is:

**Tension Release**
(The instructor gives the following directions to the individual).

Lie down. (Inhale), raise your arms over your head to the floor, make two fists, and bring buttocks off mat. (Hold Breath) stretch and tense your whole body, even your face. (Exhale) lower arms to your sides and buttocks to the mat, let all tension flow from your body, observe this relaxed feeling (Esser, 1976, p. 46).

After a strenuous posture or number of postures, a relaxing, rejuvenating position, called the corpse or sponge, is assumed. The posture entails lying on the back, with the arms a few inches away from the body, palms up and feet about 12 inches apart.

As relaxation is achieved and maintained, postures are performed to stretch and strengthen muscles to reestablish a balance in the body. Body balance is achieved by balanced stretching and strengthening postures. For example, if a position stretches the neck or back in a concave fashion, the next position stretches and strengthens the muscles in the opposite direction. The following three postures, the shoulder stand, plough and fish, portray this reciprocation process.

(The instructor gives the directions to the individual for each posture.)

**Shoulder Stand**

Lie on the floor with the palms flat next to the body. Make sure that the head and body are in alignment. In one slow
continuous motion, raise the legs and buttocks off the floor, support the hips with the hands. The elbows and shoulder blades are close together. Move the hands to the waist and straighten the legs up above the shoulders. Tuck the buttocks in, while projecting the pelvis forward. Move the hands from the waist toward the shoulder blades. Hold for one-half to one minute (Esser, 1976, pp. 51 & 67).

Plough

From shoulder stand, slowly lower legs over head to the floor. The trunk of the body is at a 90° angle with the floor. Lock the chin into the throat area and compress the abdomen. Breathe from the diaphragm. Slowly roll down by lowering back, hips and legs to the floor. Feel each vertebra press into the mat (Esser, 1976, p. 57).

Fish

While lying on your back, slide your hands under your buttocks and thighs. The palms are down, arms are straight and elbows are close together. Pull shoulders away from ears. Raise shoulders off the mat. The weight is on the elbows and buttocks. Expand chest while projecting the sternum upward. Hold for one-half a minute (Esser, 1976, p. 57).

This series of postures portray the vertical and concave spinal stretch of the Shoulder Stand and Plough and the convex spinal stretch of the Fish.

Intermingled in relaxation and postures is inhalation and exhalation of breath. Besides simple inhaling and exhaling, specific breathing techniques are used, during which the individual learns to completely empty the lungs and fill them to capacity. One such exercise is the "Complete Breath" which involves slowly exhaling while simultaneously focusing on the difference part of the lungs. The lower lungs are emptied by using the muscles of the abdomen, then the middle part by pulling the ribs slightly in and finally the chest and shoulder area. This is followed by slow, even, regular inhalation and exhalation concentrating on each part of the lungs as breath comes in and goes out. The exercise benefits the
person as it helps correct shallow breathing, makes the person aware of
the structures that are involved in breathing, and allows for full use
of the lungs.

Expected benefits of such a Hatha yoga program would be in the fol-
lowing areas: 1) increased sensitivity to bodily change; 2) an inner
directed focus; 3) increased "here and now" orientation, instead of fo-
cusing on the past or future; and, 4) decreased social orientation and
increased individual inner reflection.

The present study is concerned with the changes in self awareness
that occur as the result of an 8 week Hatha yoga training course at Cali-
ifornia State College-San Bernardino. The internal/external awareness
instrument is a 30 item inventory with a Likert type scale measuring the
pre- and post-changes which occur in each item. The bodily awareness di-
dimensions in the study are awareness of breathing and heartbeat, number of
thoughts, sensitivity to bodily sensations such as feelings in palms of
hands, soles of feet, clothes on the body, sensations in stomach and
pelvic regions, changes in skin temperature, flushing and sensitivity to
smell and taste. The external thought awareness dimensions are the extent
to which consciousness is dominated by desires, fantasies and daydreams,
distractions by stimulating objects and thoughts concerning the past,
future and self expectations.

The hypotheses of this study are:

1) Subjects enrolled in a Hatha yoga training program will become
significantly more physically (internally) aware (as measured by a
self awareness instrument) over an 8 week period than will a group
of control subjects enrolled in a racquetball class.
2) Subjects enrolled in a Hatha yoga training program will become significantly less aware of external, thought-focused experience (as measured by a self awareness instrument) over an 8 week period than will a group of control subjects enrolled in a racquetball class.
METHOD

Subjects

The subject pool consisted of 37 students enrolled in Hatha yoga training through the Physical Education Department of California State College at San Bernardino, and thirty students enrolled in racquetball courses at the same facility. From this pool, twenty-seven students from the yoga training and twenty-four from the racquetball class participated in the study. (Racquetball students constituted the control group). Numerical differences in initial sample sizes were a result of students' dropping the respective courses. Of the 27 yoga subjects, 17 were females in the 17 to 25 year old age range, five were females in the 26 to 34 age range, and one female was in the 35 to 43 age range. Four male yoga subjects were in the 17 to 25 age range and one was in the 26 to 34 age range. Eleven of the 24 racquetball subjects were females in the 17 to 25 age range and one was a female in the 26 to 34 age range. Eleven males in the racquetball class were in the 17 to 25 age range and one male was in the 16 to 34 age range.

Design

The research design employed in the study was a pretest-posttest design with two independent groups, the treatment group (Hatha yoga
class) and a control group (racquetball class). Each yoga subject participated in 16, 1 hour training sessions. Each racquetball subject participated in 16, 1 hour course sessions. Subjects in both groups were tested with a questionnaire measuring attentiveness to internal and external cues at the beginning of their respective classes, and readministered the questionnaire at the conclusion of their 8 week courses.

**Assessment Measure**

The internal/external questionnaire administered twice to each subject consisted of 30 items. These items were made up of 10 "Internal" items, 10 "External" items, and 10 filler items. The Internal items were statements focused on bodily awareness (e.g., "I find that I am aware of sensations on the palms of my hands," or "I notice the smell and taste of food I eat"). The External items concerned thoughts outside of bodily awareness, having to do with desires, daydreams, fantasies and time oriented self expectation (e.g., "Much of my attention is focused on past experiences", or "Much of my awareness is focused on self expectations or expectations placed on me by others"). Filler items were statements used as spacers in the questionnaire and were not related specifically to either internal or external awareness (e.g., "I feel that everything is going the way I want it to", or "I feel that I am a very useful person to be around"). The placement of these items in the internal/external questionnaire was determined randomly.

Each item was rated (circled according to the frequency with which the subject experienced the situation described in the item. The seven frequency ratings were everyday, 2-3 times per week, once per week, twice
per month, once per month, once every 2 or 3 months, less often than every 3 months (or never). The ratings were numerically coded, beginning with 1 for "everyday" and ending with 7 for "less often than 3 months or never." The lower the item was rated numerically, the more frequent the occurrence of the behavior or experience described in the item. For example, if the total score of internal items for one subject was 29 and 20 for another subject, the latter subject would be considered more internally aware. In the same way, if one subject's total external score was 25 and another subject's score was 35, the first subject would be considered more externally aware than the latter subject. Also requested on the questionnaire were the subject's sex and age, as well as information indicating enrollment in the present yoga training at California State College at San Bernardino and previous yoga experience. The entire questionnaire is reproduced in Appendix A.

Procedure

Each subject received the same internal/external questionnaire at the beginning and conclusion of the respective courses. All subjects were given this questionnaire in the second session of the course. This specific day was deemed appropriate because the instructor (instructor was the same for both courses) used the first session to discuss the administrative aspects of the course. The questionnaire was readministered at the end of the eighth week of both courses. The course instructor introduced the questionnaire as an inventory to be administered on a volunteer basis in a number of Physical Education courses at the College. The subjects were instructed to read the directions carefully, place their
social security number on the front page and to answer the items to the
best of their ability. The questionnaire was administered in the same
manner in both the treatment and control courses at the end of the eighth
week of the academic quarter.

Treatment Differences between Experimental and Control Groups

Both the treatment condition (yoga group) and control condition (rac­
etball) consisted of 16, 1 hour sessions held twice a week for 8 weeks.
The yoga training was administered by a member of the Physical Education
faculty, who also instructed the control course.

Each of the 16 yoga sessions covered the three themes of relaxation,
exercises (physical postures) and breathing. Each session ended with re­
laxation periods, allowing the subject to relax all muscle groups just
stretched and flexed, while continuing to focus on breathing and body sen­
sations. Further details on treatment instructions are included in
Appendix B.

Each of the 16 racquetball sessions covered the basic racquetball
stances and movements and did not cover relaxation, breathing and yogic
exercises covered in the Hatha yoga sessions.
RESULTS

It was predicted in Chapter I that the experimental group's scores on the Internal items would move in a negative direction, making them lower than the control group's scores at the time of retesting (in other words, comparatively more aware over time of internal, bodily cues). Such a change in questionnaire scores would indicate that the subjects were more internally aware after (and probably as a result of) Hatha yoga training. It was also predicted the scores of the experimental group on external items would move in a positive direction, making these scores higher than those of the control group at the time of retesting. Movement in this direction would indicate that the experimental group had become less externally aware (i.e., less aware of cues such as thoughts which are "external" to purely physical sensations) than the control group.

The first prediction was only slightly supported while the second prediction was clearly supported. There was an increase in internal awareness for the experimental group. Computing a standard t-test for related samples revealed that this change was not statistically significant. The initial internal average of 36.70 for the yoga group was reduced to 35.48 at the time of retesting, a change of -1.22 ($t = -0.478$, $df = 26$, $p > .05$). Computing the standard t-test for related samples revealed a decrease in external awareness of sufficient magnitude to be statistically significant. The initial yoga group external average of 29.81 increased to 33.62 at the time of retesting, a change of 3.44 ($t = 1.86$, $df = 26$, $p < .05$).
These figures are displayed in Table 1.

The control group recorded a large decrease in internal awareness and a slight increase in external awareness. Computing a standard t test for related samples revealed that the decrease in internal awareness was significant, while the increase in external awareness was not. The initial control group internal average of 33.75 increased to 36.95 at the time of retesting, a change of 3.21 ($t = 2.09$, df = 23, $p < .05$). The initial external average of 32.95 increased to 33.20 at the time of retesting, a change of .25 ($t = .13$, df = 23, $p > .05$). While not predicted, the finding that the control subjects became significantly less internally aware is fully consistent with the view of this study that specific awareness training (in this case, yoga) is crucial in maintaining and increasing awareness of subtle bodily conditions.

The filler items showed only slight changes for both the experimental and control groups. The yoga group's initial average score on filler items of 38.74 increased to 39.44, a change of .70 ($t = .74$, df = 26, $p > .05$). The control group's initial filler item average of 38.96 increased to 39.04 at the time of retesting, a change of .08 ($t = .05$, df = 23, $p > .05$). These nonsignificant changes seem to satisfy the assumption that shifts in questionnaire scores were bound to the content of specific items rather than "across-the-board" changes in subject responses from the first to the second testing.

Concerning differences between the experimental and control groups, a standard t test for independent samples computed on internal change scores revealed that the experimental group's average change of -1.22 and the control group's average change of 3.21, while in the expected direction,
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<td>5.33</td>
<td>.70</td>
<td>.74</td>
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<tr>
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<td>Control</td>
<td>38.96</td>
<td>7.35</td>
<td>39.04</td>
<td>5.74</td>
<td>.08</td>
<td>.05</td>
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*p < .05, One tailed test
was not of sufficient magnitude to be statistically significant ($t = .44$, df = 49, $p > .05$). The same standard $t$ test used to compute external mean changes revealed that the experimental group's average change of 3.44 and the control group's average change of .25 were not significantly different ($t = 1.20$, df = 49, $p > .05$). Using the same standard $t$ test on filler items revealed that the experimental group's change average of .70 and control group's change average of .08 were not significantly different ($t = .345$, df = 49, $p > .05$). These figures are displayed in Table 2.

The foregoing analyses suggest that there is a general difference between the experimental group's and the control group's internal and external awareness as a result of Hatha yoga training. The experimental group seemed to become more internally aware, (focusing more on bodily sensations) and less externally aware (focusing less on distracting thoughts such as desires, fears, daydreams and self expectations) than did the control group. These differences, while not consistently significant in conventional statistical terms, are uniformly in the direction predicted at the outset of the study.
TABLE 2
Comparison of Mean Changes on Internal, External and Filler Questionnaire for Experimental and Control Groups

<table>
<thead>
<tr>
<th>Questionnaire Items</th>
<th>Group</th>
<th>Mean</th>
<th>Change SD</th>
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<tr>
<td>Internal</td>
<td>Yoga</td>
<td>-1.22</td>
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<tr>
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<td>.70</td>
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<td>.345</td>
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Note: None of the comparisons reached conventional levels of statistical significance.
DISCUSSION

Psychotherapists have long recognized the vital importance of self awareness in the growth process. Roger, Perls, Reich, Lowen and others have repeatedly stressed the need for increased self awareness to overcome internal barriers to full psychological development. These noteworthy psychotherapists have all evolved techniques for expanding awareness within the context of psychotherapy. It can be questioned whether increased self awareness might not be achieved in another context, namely that of body conditioning. By assessing the effects of yoga training in both internal and external awareness, the present study has determined that the kind of awareness often achieved through psychotherapy can be brought about through systematic training in an ancient and relatively simple, body awareness training regimen.

Hatha yoga is a discipline which most certainly requires a steady focus on self awareness. The graduated and systematic stretching postures (asanas) demand that attention be drawn to the slight discomfort of gently stretching muscles. This body-focused awareness is needed to consciously relax muscles that have become chronically tense. By contrast, awareness focused on external concerns, such as personal hopes, fears and expectations, distracts a person and mitigates against body awareness. The distraught person, therefore, is often unaware of the physical changes brought on by emotional disturbance. Both psychotherapy and Hatha yoga help such a person become aware of unrealized "blocks"
and bring them into conscious awareness where they can be dealt with. After strenuous physical exercise people often complain about muscles they "never knew they had". Hatha yoga allows people to feel how tense they have become and to gradually "work out" these tensions. All this is accomplished without the soreness and exhaustion that accompanies other forms of exercise.

One hypothesis of this paper was that training in Hatha yoga would result in an increased internal self awareness. The other hypothesis was that Hatha yoga training would also result in a decrease in fantasies, desires and expectations that were termed external awareness in this paper. Both hypotheses were generally supported by the experimental and control groups in the study. However, the corroboration concerning the first hypothesis was not at a level that was significant in conventional statistical terms. Several methodological factors might be implicated in these results. A larger sample population, carried over a longer time span, would hopefully produce greater changes in awareness and further validate the study. Also the questionnaire inventory used in the study may not have been sensitive enough. Furthermore, a sample group drawn from society at large would counter possible criticism of a biased college population. A possible source of bias in the study could have been the timing of the posttest questionnaire. The questionnaire was administered shortly before final examinations. It is not too hard to speculate how internal awareness could be disrupted by the external awareness that finals seem to impose upon one's consciousness. Additional changes would include: (1) employing a 2 x 2 research design, entailing the treatment condition
(Hatha yoga or racquetball course) and previous yoga exposure (previous exposure or no exposure); (2) changing the direction of the questionnaire ratings so that a high number would correspond to more frequent experiences of the awareness phenomenon in question; and, (3) instituting a follow up questionnaire to ascertain the effects of Hatha yoga over a longer period of time.

This study is by no means to be considered a definitive work. The scope of the subject matter is far too vast for the limited time and energy available to one person. For this reason the focus of this study was intentionally narrowed to facilitate examination of the phenomenon at a manageable level.

Of course there is much room for further research in my chosen field of study and many related areas such as:

1. The effect of Hatha yoga on self concept and self image.

2. Research on Hatha yoga and guided imagery as tools in holistic healing.

3. Research on the synergistic possibilities of Hatha yoga and biofeedback as complementary psychotherapeutic techniques.

4. Compilation and translation of Hatha yoga research from foreign universities.

5. Research comparing the different types of yoga (Hatha, Kundalini, Raja, etc.) and their short and long term effects on theta levels, self awareness and self image.

It is hoped that this study has helped to show that Hatha yoga can and should become yet another beneficial technique at the disposal of psychotherapists to break down self imposed barriers toward psychological health.
APPENDIX A

INTERNAL/EXTERNAL AWARENESS

QUESTIONNAIRE INVENTORY

(1) Everyday  (2) 2–3 times per week  (3) Once per week  (4) Twice per month  
(5) Once per month  (6) Once every 2 or 3 months  (7) Less often than every 
three months or never

Please circle the appropriate frequency in which you experience the situa-
tion described in each item.

Example:

I experience the presence of goosebumps. 1 2 3 4 5 6 7

1. I feel a change in my skin temperature, even 1 2 3 4 5 6 7 (I) 
though the environmental temperature has not 
changed.

2. A whole day goes by without my being absorbed 1 2 3 4 5 6 7 (E)(R' 
in fantasies or daydreams.

3. I feel depressed. 1 2 3 4 5 6 7 (F)

4. My attention is captured by entertaining and 1 2 3 4 5 6 7 (E) 
stimulating things, (television, music, radio, 
sporting events, parties).

5. There are moments when I feel I am a part of 1 2 3 4 5 6 7 (F) 
everything, and everything is a part of me.

6. I feel that the future looks bright. 1 2 3 4 5 6 7 (F)

7. During meals I am unaware of the sensations 1 2 3 4 5 6 7 (I)(R 
and movements of eating (chewing and swal- 
lowing).

8. I feel that no one really cares much about 1 2 3 4 5 6 7 (F) 
what happens to me.

9. I find that I am aware of sensations on the 1 2 3 4 5 6 7 (I) 
palms of my hands.

27
10. I pay attention to sensations in my stomach and pelvic areas.
11. I am aware of the skin sensations of my clothes on my body.
12. After a pleasant experience, I feel tingling or glowing, in different parts of my body.
13. I don't seem to pay much attention to my heartbeat.
14. I get the feeling that life is not very useful.
15. I don't seem to pay attention to my desires.
16. Much of my awareness is focused on self expectations or expectations placed on me by others.
17. I feel lonesome.
18. I find that I am aware of sensations on the soles of my feet.
19. I become so absorbed in what I am doing, that I find myself not thinking about the future (planning the future).
20. I find my attention focused on my fears.
21. I am very satisfied with my life
22. I am more tuned in to what I am thinking, than what I am feeling.
23. I feel that I am a useful person to be around.
24. I am aware of making strong demands on myself.
25. I feel everything is going just the way I want it to.
26. Much of my attention is focused on past experiences.
27. I get so busy that I don't have time to become aware of my breathing.
28. I think that I am not any good at all.  
29. I notice the smell and the taste of food I eat.  
30. I worry about things that might go wrong.  

Circle one:

<table>
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<tr>
<th>Your sex</th>
<th>Female</th>
<th>Male</th>
</tr>
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</table>

<table>
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<tr>
<th>Your approximate age</th>
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<th>26-34</th>
<th>35-43</th>
<th>44-52</th>
<th>53 or over</th>
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<table>
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<th>Are you presently taking a yoga class?</th>
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<table>
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<th>Have you taken a yoga class before?</th>
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<tr>
<td>When?</td>
<td></td>
<td></td>
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<tr>
<td>(Approximate date)</td>
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(I)- Internal item  
(E)- External item  
(F)- Filler item  
(R)- Reversed item
APPENDIX B

DESCRIPTIVE OUTLINE OF EIGHT WEEK

HATHA YOGA TRAINING

Week 1

Session 1: Attendance and Administrative procedures.

Session 2: (The instructor gives the following directions to the individual).

Breathing: Diaphragmatic Breathing: Relax and lie down on back in Sponge or Corpse position - feet 6 inches apart and arms slightly away from body with palms up. Breathing-Place hand on abdomen and observe movement of diaphragm and observe diaphragm pushing into the lower part of the lungs. Inhale-diaphragm contracts, causing your abdomen to expand slightly. It is like inflating a balloon. Only your abdomen moves, not your chest. Exhale-lower your abdomen toward your spinal column. It is very important to stay relaxed. Repeat several times (Esser, 1976, pp. 29 & 24).

Intercostal Breathing: Sit with legs crossed and spine straight. Place your hands around the sides of your ribs. Hands are not placed around your ribs to squeeze ribs but to indicate movement. This contraction and expansion action is brought about by the use of the intercostal muscles which are between your ribs. Exhale-contract your muscles in the thoracic cavity by compressing your ribs. Observe your hands coming toward each other (Esser, 1976, pp. 27 & 34).

Clavicular Breathing: Sit with spine straight. Place your hands on clavicle bones (collarbone). Exhale-contract your abdomen and keep it pulled in throughout this exercise. Relax your chest. Inhale-raise your chest and sternum (breastbone). Observe the upward movement of your hands. Exhale-lower chest and relax. Repeat several times (Esser, 1976, p. 35).

Complete Breathing: (water glass analogy is explained) Exhale-abdomen descends toward spinal column, pushing
relaxed, dome-shaped diaphragm up against the lower part of your lungs. This abdominal contraction rids your lungs of a considerable amount of air, and creates a vacuum in your lungs. Your lungs, adhering this vacuum, instinctively strives to fill it. For this reason emphasis is placed on the exhalation. Inhale—abdomen balloons out, diaphragm comes away from the bottom of your lungs allowing this lower section of your lungs to expand and fill with air. Next, expand your ribs, filling the middle part of your lungs with air. Last of all, lift your chest and sternum, filling the upper portion of your lungs. Exhale—slowly relaxing your chest and ribs. Contract your abdomen so that the diaphragm pushes up against the bottom of your lungs (Esser, 1976, p. 36).

Relaxation: Jacobsen Relaxation: Assume Corpse position and by starting with the left foot extending to left knee, contract area completely, then relax. Contract one-half as much, relax and contract one-fourth as much, then relax. This exercise proceeds to the right foot to right knee area, with 3 degrees of contraction: total, one-half and one-fourth. This contraction and relaxation moves from left to right sides through the following areas: upper leg, buttocks, hand to elbow, upper arm, abdomen, chest, back, shoulders, neck, face and scalp and ends with 3 degrees of contraction and relaxation in the entire body (Modification of Jacobson, 1942, pp. 65-111).

Exercises: Eye Exercises: Sit with spine straight. Look up toward ceiling, then down to mat. Repeat 8 times. Move eyes as far as possible to the right and then the left. Repeat 8 times. Look down toward the left corner, then diagonally up toward the right corner. Repeat 8 times. Pretend you are looking at the face of a clock. Look at each number of the imaginary clock. Then go counterclockwise. Repeat at a slower speed. Palming — Rub hands together very fast, creating friction and heat. When hands are warm, cup hands over eyes (Modification from Esser, 1976, pp.26-27).

Head Rolls: Sit with spine straight. Imagine a pen on top of your head with which you are drawing circles on the ceiling. Start the imaginary pencil moving with your head toward the left, then circularly toward the right, gradually making circles larger and larger. Continue until the circle fills the entire room. Then repeat moving the pencil to the right.

Sun Salutation: Stand with weight evenly distributed on your feet. (1) Exhale — place palms of hands together in
front of your chest. Inhale-stretch arms straight over head, arch back, tightening buttocks. (2) Exhale-bend forward from hip joints, back straight and arms next to ears reaching toward wall in front of you. (3) Bring ribs to thighs, abdomen pulled in, bending head to knees. Place hands on either side of your feet. (4) Inhale-stretch right leg back with knee to mat and toes curled under. Left is directly above left heel. Head is up. (5) Hold breath, stretch left leg back, head is up. Body is in a straight diagonal line from heels to shoulders. (6) Exhale-drop knees to mat and lower shoulders between hands. Back is swayed concavely; pelvis is off the mat. (7) Inhale-push forward, lowering abdomen to mat. Don't move feet or hands. Hands are now close to waist. Proceed up into Cobra. Place palms under shoulders, feet together, forehead on mat, elbows close to ribs. Elongate spine, raise head slightly, bringing nose, then chin to mat. Bring chin, shoulders and chest off mat. Roll each vertebrae one by one slowly back in a snakelike motion, contracting back muscles. Roll the middle vertebrae back by pushing hands into the mat. The shoulders are not raised as high as the ears, but kept down with shoulder blades squeezed together and elbows close to ribs. Arms bent slightly; contract buttocks. Keep lower half of body, from pubis down, on the mat. Hold for a few seconds then slowly roll down, bringing one vertebrae at a time toward the mat. Keep the chin jutting forward until the chin is to the mat, then bring nose and forehead to mat. (8) Exhale-jackknife hips up, heels on mat and head between arms. (9) Inhale-swing left foot between hands. Right knee is on the mat; look up, (10) Exhale-bring right foot next to left foot and straighten legs. Ribs are close to thighs and head to knees. (11) Inhale-reach out to wall, keep back straight and arms on either side of ears. Continue coming up slowly; arch back and tighten buttocks. (12) Exhale-lower arms down and place palms together in front of chest. Relax (Esser, 1976, pp. 76 & 90).

Relaxation: Corpse

Exercises: Locust (half): Lie on stomach with chin on mat, arms next to body. Inhale-exhale-inhale-raise one leg up, try to keep it straight. Hold breath-hold pose. Exhale-lower leg to floor. Repeat one time and twice with other leg (Esser, 1976, p. 77).

Alternate Leg Stretch: Sit with one foot high against inside of thigh, not under thigh. Inhale-reach up with arms next to ears: back is straight; chest is expanded. Exhale-
bend toward from the hip joints. Project ribs toward thigh, pull in abdomen. Take hold of your leg or foot. Bring elbows toward mat and head close to knees. Breathe rhythmically—hold posture. Repeat once again and twice on the other side (Esser, 1976, p. 45).

Forward Bend: Sit up with legs stretched out; arms are parallel to legs and thumbs locked together. Exhale—stretch forward, bending at hip joints. Back is straight and ribs projected to thighs. Inhale—sit up and lean back slightly with arms parallel to legs. Repeat (Esser, 1976, p. 46).

Leg Raise: Lie down on back, hands at sides. Don't let back sway up from mat while raising leg. Inhale—raise one leg straight up, keep other leg flat on floor. Breathe rhythmically and hold pose. Exhale—lower leg to floor. Repeat again and then twice on other leg (Esser, 1976, p. 45).

Shoulderstand (half): Lie down with palms flat to floor, next to body. Head and body are in alignment. Using one slow continuous motion, raise legs and buttocks off mat. Support hips with hands. Elbows and shoulder blades are close together. Hold for 30 seconds, observe changes this reverse posture produces in the body. When coming down, bend both knees toward your face, palms flat on the mat. Roll down slowly, one vertebra at a time, keeping your head pressed into the mat. It is very important to come down with control. Don't collapse or you will lose the posture's or asana's soothing effect on your nervous system (Esser, 1976, p. 51).

Fish: While lying on your back, slide your hands under your buttocks and thighs. The palms are down, arms are straight and elbows are close together. Pull shoulders away from ears. Raise shoulders off the mat. The weight is on the elbows and buttocks. Expand chest while projecting the sternum upward. Hold for one-half minute (Esser, 1976, p. 57).

Relaxation: Corpse

Week 2

Session 3 & 4:

Relaxation: Corpse

Exercises: Eye Exercises
Neck Exercises: Sit up with the spine straight. Only your head and neck moves, not your shoulders. Exhale—slowly drop head forward, pushing your chin into your throat. Relax your neck. Inhale—slowly raise your head up and back, push your chin up, lower lip is over upper lip. Hold for about 10 seconds breathing rhythmically. Repeat procedure three times. Turn your head slowly from side to side as though saying "no." Spend about one-half minute doing this conditioner. Inhale—roll your head over to your shoulder, don't raise your shoulder to your ear. Continue rolling your head back. Exhale—smoothly continue the full circle to your other shoulder and forward. Rotate your head around in a circle several times moving with your breath. Repeat in the opposite direction several times (Esser, 1976, p. 22).

Spinal Rock I: Sit down. Lock fingers behind thighs. Spine is rounded. Rock back and forth. Your feet are positioned behind your head, with legs straight, during the full backward extension of this posture. Repeat (Esser, 1976, p. 55).

Sun Salutation: (four times)

Shoulderstand (half): Hold for 30 seconds.

Shoulderstand (full): From half shoulderstand, with hands at waist, stretch legs straight up above shoulders. Tuck in buttocks; project pelvis forward. Move hands from waist toward shoulder blades. Keep elbows together. Chin is locked into throat. Slowly come down as done in half shoulderstand (Esser, 1976, p. 67).

Plough: After lying in the corpse, slowly extend your legs up into shoulderstand, then lower them down to floor, close to head. The trunk of your body is at a 90° angle with the floor. Your chin is locked into your throat. Your abdomen is compressed; breathe from the diaphragm. Hold posture for a few seconds. Roll down slowly lowering your hips and bending your knees to your face. As your body descends, feel each vertebra press into the mat (Esser, 1976, p. 57).

Fish: Hold for 30 seconds.

Relaxation: Corpse

Exercises: Cobra: Repeat two times.

Locust: (half): Lie on stomach with chin on the mat, arms next to your body. Inhale—raise one, let up, try
Relaxation and Breathing:

Bow: Lie on stomach, bend legs and grasp ankles; knees are slightly apart. Inhale—raise thighs and chest off mat by pushing ankles against hands; head is up. Hold breath—weight is on abdomen. Exhale—slowly lower thighs, chest and face to mat with control. Relax in corpse and then repeat (Esser, 1976, p. 97).

Alternate Leg Stretch:

Spinal Twist I: In sitting position place right foot next to left hip. Left foot goes next to right knee. Right hand takes hold of left ankle. Left hand is placed back on mat next to spinal column. Turn head and look as far back as possible over the left shoulder. Sit firmly on both buttocks. Keep spine upright, not bowed over to one side. Hold for 30 seconds. Untwist and repeat on opposite side (Esser, 1976, p. 64).

Cradle: In sitting position keeping spine straight, bend left knee and place left foot in fold of right elbow. Gently rock from left to right sides. Release left foot from elbow fold and repeat exercises with right foot and left elbow (Leg Rock—Esser, 1976, p. 49).

Lotus (half) with 1-4-2 Breathing: Sit with legs outstretched. Bend left leg and place foot next to inside of right thigh. Bend left leg and slowly place right foot on top of left thigh. Hold posture and inhale 4 seconds. Hold 16 seconds, exhale 8 seconds. Repeat breathing sequence four times and repeat posture with left foot on top of right thigh. Hold posture and repeat breathing sequence (Esser, 1967, pp. 28 & 37).

Complete Breath: Lying on back.

Tension Reliever: Lie down. Inhale—raise arms over head to floor, make two fists, and bring buttocks off mat. Hold breath—stretch and tense whole body, even face. Exhale—lower arms to sides and buttocks to mat, let all tension flow from the body, observe relaxed feeling. Repeat four times (Esser, 1976, p. 46).

Corpse: With breathing, inhale to the count of two and with each exhale relax increasingly. Continue sequence for five minutes.
Week 3

Sessions 5 & 6:

Relaxation: Corpse

Exercises: Neck Exercise with Breathing

Spinal Rock II: Sit cross-legged. Take hold of foot with thumbs on insteps and fingers on feet. Exhale-bend forward, forehead toward mat in front of you. Keep buttocks on mat. Inhale-sit up. Exhale-keep spine rounded, chin locked into throat. Roll all the way back with feet to mat behind head and legs straight. Inhale-roll forward. Repeat three times (Esser, 1976, p. 65).

Leg Cross Over: While lying on back, bring both knees to chest, arms out to sides at shoulder level, palms down. Raise legs straight up. Exhale-lower legs over toward left hand. Relax, breathe rhythmically-look over right shoulder, trying to keep shoulders on mat. Hold for 30 seconds. Inhale-raise legs straight up. Exhale-lower legs down to mat. Repeat on right side (Esser, 1976, p. 61).

Sun Salutation: Repeat four times.

Triangle: Stand with feet about 3 feet apart. Pull knee caps up. Raise left arm next to left ear, stretching arm up toward ceiling. Feel ribs expand, whole torso is stretching upward. Take several deep breaths while holding stretch. Slide right hand down to outside of knee. Keep left arm next to left ear. Observe stretch. Breathe deeply. Right hand is on knee. Stretch left arm straight up, as though someone were pulling arm up toward the ceiling. Look at left hand. Slide right hand down side of right leg toward ankle. Continue gazing at raised hand. Attain maximum stretch by elongating left arm upward and shoulder back toward imaginary wall directly behind you. Try to keep arms and shoulders parallel to imaginary wall. Hold for 15 seconds. Come up very slowly. Repeat on left side (Esser, 1976, p. 84).

Extended Angle or Side Angle: Stand with feet 3 to 4 feet apart. Inhale-arms out to sides at shoulder level; palms are up. Exhale-turn right foot to a 90° angle to side; other foot is bent in slightly. Bend left leg, thigh and calf from a right angle. Right leg is straight, knee is locked; right foot is flat on mat. Lower left
hand to outside of left foot, with armpit on outer side to thigh. Right arm is extended over right ear. Look at arm. Chest, hips and legs form a line, which is achieved by rotating left shoulder and upper ribs toward imaginary wall directly behind you. Breathe rhythmically—hold about 15 seconds, observing entire body stretch. Inhale—come up with control. Repeat on other side (Esser, 1976, p. 85).

Relaxation: Corpse

Exercises: Cobra

Shoulderstand (half to full)

Plough - roll down - Fish

Locust (fully): Lie on stomach with chin on mat. Tuck arms under you, elbows close together, forearms under groin and thighs. Keep entire length of arms from shoulders to fists on mat. Execute half locust on each side. Inhale—raise both legs by pushing arms into the mat and strongly contracting muscles in lower back and abdomen. Raise thighs and groin off lower arms. Keep legs straight and close together. Hold breath and posture. Exhale—lower legs to mat. Repeat (Esser, 1976, p. 88).

Relaxation: Corpse

Exercises: Bow: Repeat three times, add rocking movement to posture.

Pose of a Child or Folded Leaf: Sit on heels, knees together, bend forward, with forehead to mat. Drop shoulders and arms toward mat with palms up. Relax (Esser, 1976, p. 59).

Hommage to the Sun: Steps 1, 2, 3, 11, and 12 of Sun Salutation.

Relaxation: Corpse

Exercises: Spinal Twist II: Proceed in same manner as Spinal Twist I, except right arm is on the outside of raised left leg.

Cradle

Breathing: Lotus (full with Alternate Nostril Breathing): Half lotus is assumed. Foot that is under leg in fold between calf and thigh is brought away from you, then up and over leg that is on thigh. Begin alternate sequence. Fold
first two fingers into the palm of hand. Little finger, ring finger and thumb are stretched out. Place thumb next to one nostril and ring finger next to other nostril. Exhale-through left nostril, closing right nostril. Inhale-smoothly through left nostril to count of four. Hold breath to count of four, pinching both nostrils closed. Exhale-slowly through right nostril to count of 8. Inhale-through right nostril to count of four. Hold breath to count of 4 pinching both nostrils closed. Exhale-through your left nostril to the count of 8. This completes one round of breathing. Repeat four times. Switch lotus posture to other leg and repeat breathing sequence 5 times (Esser, 1976, pp. 28 & 37).

Relaxation: Corpse: Attention focused to relaxing all muscles of the body beginning at the toes and ending at the top of the head.

Week 4

Sessions 7 & 8:

Exercises: Sun Salutation: Repeat twice.

Tree: Stand with hand to sides. Balance on one foot. Lift one foot slowly off the floor and place it on the inside of your ankle. Hold for one-half minutes, breathing rhythmically. (If you lose your balance, simply place foot back on floor and proceed again. Bent knee should be held well back throughout the asana so you feel a stretch on the inside of your thigh.) Raise your foot up to inside of knee. Hold for one-half minute. Take hold of foot and raise it up to the inside of your thigh. Keep the bent knee well back, with your hip joint rotated outward. Slowly bring your arms straight up next to your ears, palms together. Stretch upward. (If difficulty is encountered in performing either of the two stages, do not proceed to the last stage until balance is mastered.) Hold for one-half minute. Repeat with other foot (Esser, 1976, P. 94).

Triangle with Partner: Partner grasps person's hand on non-stretched side, partner places foot on person's waist on same side and pulls person's hand out to the side. Once person is stretched as far as desired, partner releases hand and drops foot from waist while person continues with triangle procedure. Repeat on opposite side.

Fencer's Pose: (1) Starting in basic standing pose. (2) Take a deep inhalation, and with a jump, spread the
legs apart sideways in line with the shoulders, palms facing down. (3) Turn the right foot sideways 90° to the right and the left foot slightly to the right, keeping the left leg stretched and tightened at the knee. Stretch hamstring muscles of the left leg. (4) Exhale and bend the right knee till the right thigh is parallel to the floor, keeping the right shin perpendicular to the floor, thus forming a right angle between the right thigh and the right calf. The bent knee should not extend beyond the ankle, but should be in line with the heel. (5) Stretch out the hands sideways as though two persons are pulling your from opposite ends. (6) Turn the face to the right and gaze at the right palm. Stretch the back muscles of the left leg fully. The back of the legs, the dorsal region and the hips should be in one line. (7) Stay in the pose for 20 seconds with deep breathing. Inhale and return to position 2. (8) Turn the left foot sideways 90° to the left and the right foot slightly to the left, flex the left knee and continue from positions #3 to #6 on the left side reversing the process. (9) Inhale, again come back to position #2. Exhale and jump back to standing position (Iyengar, 1977, pp. 72-73).

Extended Angle

Relaxation: Corpse

Exercises and Breathing: Camel: Come up into a kneeling position, with knees slightly apart. Lean back and take hold of your heels one at a time. Dangle head back. Project your sternum up and pelvis forward, thighs perpendicular to the mat. Contract buttocks. (If less of a stretch is desired, don't point your toes away from you, but curl your toes in toward you and proceed in the above manner. Or, just take hold of one heel and stretch.) Hold posture-breath rhythmically for 20 seconds. Come out very slowly and go directly into pose of a child (Esser, 1976, p. 82).

Bow: Repeat twice.

Inclined Plane: Sit with legs outstretched and hands about six inches behind your buttocks, fingers pointing straight back. Head is back, kneecaps pulled up, and shoulder blades squeezed together. Inhale-raise hips up from mat, arms perpendicular to the floor. Cervical and thoracic vertabrae are parallel to the floor. Sternum is up. Hold breath for 5 seconds. Exhale-come down. Repeat one time (Esser, 1976, p. 65).
Forward Bend

Angular Posture: (1) Sit on the floor. Stretch the legs out in front and keep them straight. (2) Interlock the fingers and place them on the back of the head just above the neck. (3) Exhale-recline the trunk back and simultaneously raise the legs from the floor, keeping the knees tight and the toes pointed. The balance of the body rests on the buttocks and no part of the spine should be allowed to touch the floor. One feels the grip on the muscles of the abdomen and the lower back. (4) Keep the legs at an angle 30° to 35° from the floor and the crown of the head in line with the toes. (5) Hold this pose for 20 seconds with normal breathing (Iyengar, 1977, pp. 113-114).

Shoulderstand (full)

Plough - roll down-Fish

Bridge: While lying on your back, bring heels up to your buttocks. Press the small of your back into the mat by tilting your pelvis. Inhale-slowly raise the lower, middle, then upper back from the mat: arch up, pulling shoulder blades together. Lock your chin into your throat. Hands are around ankles. Breathe rhythmically, holding the posture for about one-half minute. Exhale-lower your upper, then middle, and lastly your lower back to the mat (Esser, 1976, p. 81).

Relaxation: Corpse with Alternate Nostril Breathing

Exercises: Spinal Twist I

Relaxation: Corpse: Relax entire body by imagining that a stream of warm air is flowing underneath you and you are becoming increasingly relaxed as you sink into the flow.

Week 5

Session 9 & 10:

Exercises and Breathing: Sun Salutation Triangle Fencer's Pose
Tree

Big Toe: Stand with hands to sides. Balance on right foot. Lift left foot slowly off floor and bring foot straight in front of you. Keep back straight. Don't round shoulders. Hold for 30 seconds. Repeat on other foot.

Relaxation: Corpse

Exercises and Breathing: Wheelbarrow: Assume bridge posture. Place hand under buttocks to hold weight. Inhale-lift one leg up, keep leg straight. Hold posture. Exhale-lower leg and repeat with other leg.

Boat: Lie down on your stomach and lock fingers together behind your back; arms are straight and shoulder blades pulled together. Inhale-look up and raise chest up from mat. Hold breath, hold posture. Exhale-lower chest to mat. Repeat one (Esser, 1976, p. 76).

Bow

Spinal Twist I

Shoulderstand (full)

Relaxation and Breathing: Corpse with Deep Complete Breathing

Exercises: Canoe: Hold the feet and head 6 inches off the ground with normal breathing. The eyes are fixed on the toes. Balance in this position and hold it for up to 7 minutes. Inhale deeply, exhale, hold breath out as long as possible. Then relax down (Khalsa, 1978, P. 70).

Angular Posture

Relaxation: Tension Reliever

Exercise and Breathing: Lotus with Deep Breathing

Relaxation: Corpse: Allow all tension to flow out of the body through the head.
Exercises and Breathing: 
Eye Exercises

Neck Rolls

Spinal Rock II

Sun Salutation

Triangle

Tree

Fencer's Pose

Relaxation: Corpse with Deep Breathing

Exercises and Breathing: Alternate Leg Stretch

Leg Straddle (with partner): Sit on mat with back straight and legs in a straddle position. Your partner sits directly facing you in the same straddle position, close enough so that your feet are flush with your partner's. Both persons grasp each others hands and the partner pulls the person toward self. The person being pulled tries to keep his/her back as straight as possible. Hold position. Breathe rhythmically. Slowly sit up. Repeat-pulling other person.

Spinal Rock II

Wheelbarrow

Bow

Pose of a Child

Shoulderstand

Plough-Fish

Cradle

Lotus with Complete Breathing

Spinal Twist I
Relaxation: **Corpse**

Exercises and Breathing: **Neck Rolls**

**Spinal Rock II**

**Half Headstand (position 1):** Sit on heels with spine straight; head is level. Place your hand on top of your head—this is the area of your head which will be placed on the mat while up in the headstand. It is important to center your head properly on the mat because your arms and head will be supporting the weight of your body. If your head is not in proper alignment with your spine, undue pressure will be felt in your neck. Wrap hands around upper arms. Place forearms on mat; your elbows are about a foot apart. Release hand from upper arms. Stretch forearms pressed into mat; rotate palms of hands toward each other and lock fingers together. By following this last procedure the fleshy part of your forearms is to the inside, preventing your arms from sliding apart. Place top of head on your mat. Hands are cupped around the back of your head. Don't let your elbows slide apart. Raise your knees off the mat and start to walk forward until hips are over elbows. Legs and back are straight. Shoulders pulled away from your ears. Hold posture for about five seconds. Come out of posture by bending your legs and bringing your chest to thighs. Place one fist on top of the other with your forehead placed on your top fist. Keep head down until your face no longer feels flushed. Slowly bring head up and turn it from side to side, enabling the blood to drain slowly from your head. Always do this after a headstand (Esser, 1976, p. 78).

Relaxation: **Corpse**

Exercises and Breathing: **Locust**

**Bow**

**Alternate Leg Stretch**

**Shoulderstand**

**Plough**
Fish

Pumping Breath: Lie flat on back, the arms by the sides with the palms of the hands turned up, the legs fully extended together. Relax fully, and concentrate all your attention on the abdomen, neck, shoulders, arms and legs, until they all become fully relaxed. The back should be flat against the floor along its full length. Take a rapid deep breath through the nostrils, so that the abdominal wall swells out; then immediately pull the abdomen back towards the spine with a sharp instroke and expel air from the nose in an inhalation as rapid as the preceding inhalation. It is important that the shoulder, the upper and lower back, and pelvis stay in firm contact with the floor. Each in and out movement of the abdomen should take one second and ten successive out and in movements should be performed, breathing normally. Relax for about 20 seconds, then perform another round of pumping breath (Hewitt, 1978, p. 88).

Cleansing Breath: Breathe in and out rapidly, contracting the stomach muscles and pulling them back towards the spine on each sharp expulsion of air and immediately letting go from the contraction so that the natural recoil of the abdominal wall brings an automatic inspiration. Use diaphragmatic breathing, swelling out and drawing in the abdomen, and concentrating on the exhalations, which should be one second. Begin with round of ten exhalations. Perform 3 rounds with rest pauses between first and second and second and third (Hewitt, 1978, pp. 92-93).

Maltese Cross: While lying on back extend arms straight out from sides. Inhale, lift legs up to the center. Exhale as both legs drop over to the right hand. Don't let legs touch the floor. Inhale, bring legs back to the center. Exhale, drop legs over to left hand while not touching the floor. Inhale, bring legs back to the center. Exhale as both legs extend straight out and down to approximately one inch off the floor. Move into a double leg circle to the right, then when you have reached the original position, go into a double leg circle to the left. After double leg circle to the left, move back to original position without legs touching the floor. Next lift into a half shoulderstand for 10 seconds. Then extend arms to the floor, exhale and slowly roll out back and extend legs, and lower legs to original floor position as arms slide up to your sides.

Spinal Twist I
Camel

Pose of a Child

Crow: Balance on the palms, and wrap both legs over the upper arms, the left leg over the left arm and the right leg over the right arm. This is best approached from a standing position, hunching and placing the palms on the floor between the knees. Stay in the pose for 10 to 20 seconds, breathing freely (Hewitt, 1978, p. 354).

Dog. Assume a table position. Thighs and arms perpendicular to the floor. Knees and feet about six inches apart; wrists are directly under your shoulders, toes curled in toward you. Inhale—jack-knife your hips up, lifting yourself high onto your toes. Head is between your arms. Abdomen is pulled in. Exhale—after maximum stretch upward is reached, pull your kneecaps up and drop your heels down toward your mat while pushing the palms of your hands into your mat. Hold for about a minute. With each inhalation stretch your legs and hips upward. As you exhale, press the palms of your hands into the mat, furthering a concave stretch of your spine. Shoulder blades are squeezed together. Relax in pose of a child (Esser, 1976, p. 89).

Woodchopper; While standing, lock fingers together as if you were holding a heavy axe; legs are apart. Inhale—raise arms up over your head, arching back slightly. Exhale—forcefully through your mouth. Swing swiftly forward and down until hands are between your legs. Abdomen is pulled in. Relax. Inhale—come up and repeat several times (Esser, 1976, p. 80).

Fencer's Pose

Relaxation: Corpse: Imagine yourself inhaling through your feet and hands. As you inhale imagine a flow of energy going through your body and out the top of your head.

Week 8

Sessions 15 & 16:

Exercises and Breathing: Sun Salutation

Tree
**Triangle with Half Moon:** Assume triangle. Lower left arm next to left ear. Reach straight out away from you. Bend right knee and shift weight to left knee. Lift right leg up and straighten left leg. Hold for 20 seconds. Come out slowly. Repeat on right side.

**Revolving Triangle:** Assume triangle. Lower left arm next to left ear. Reach straight out away from you. Keep left arm next to left ear and twist torso to right. Left arm takes hold of right ankle and right hand raises above head. Head is turned to right. Come out slowly. Repeat on opposite side (Esser, 1976, p. 84).

**Fencer's Pose with Extended Leg:** Assume fencer's pose. (3) Come to final pose of fencer's pose on right side. (4) Exhale, bend the trunk forward and rest the chest on the right thigh. Keep the arms straight and the palms together. Rest in this position, taking two breaths. (5) Now exhale and simultaneously lift the left leg from the floor by swinging the body slightly forward and also straighten the right leg, making it stiff as a poker. Turn the left leg inwards so that the front is parallel to the floor. (6) Hold in this pose from 20 to 30 seconds, with deep breathing. (7) While balancing, the whole body (except the right leg) is to be parallel to the floor. The right leg, which should be fully stretched and stiff, should be kept perpendicular to the floor. Pull the back of the right thigh and stretch the arms and the left leg as if two persons are pulling you from either end. (8) Exhale and come back to fencer's pose. (9) Repeat pose on the left side (Iyengar, 1977, pp. 73-74).

**Extended Leg Stretch:** In sitting position, with legs about 2-1/2 feet apart, bend forward holding onto legs. Keep back straight. Don't round shoulders. Hold for 30 seconds. Come up slowly. Repeat.

**Relaxation:** Corpse with 1-4-2 Breathing Sequence

**Exercises:** Maltese Cross: Repeat two times.

**Relaxation:** Corpse with Pumping and Cleansing Breath

**Exercises and Breathing:** Bridge-Wheel: Assume bridge. Place hands, palms down, in back of head. Fingers are pointing toward head, elbows pointing toward ceiling. Slowly raise lower and middle back; arch back. Head comes off floor. Dangle head and breathe rhythmically. Hold for about 20 to 30 seconds, come out slowly. Relax in corpse.
Shoulderstand-Plough-Bridge or Fish

Spinal Twist I

Star: Sit with hands clasped over your toes, feet together and heels about a foot away from your body. Pull in abdomen; bring forehead toward toes and elbows toward mat (Esser, 1976, p. 55).

Cradle

Lotus with Alternate Nostril Breathing and Neck Rolls

Headstand (position 2): Assume half headstand keeping elbows close together. Walk forward, bending knees and bringing your thighs to your chest. Hips are directly over your arms. Shoulders are pulled up from ears. Hold about ten seconds. Relax—sit back on heels with head down (Esser, 1976, p. 83).

Headstand (position 3): Walk forward from half headstand and bring your thighs to your chest. Check position of head. Your elbows must be kept about a foot apart to make the platform which supports the weight of your body. The fingers are cupped around the back of your head—not under your head. Lift one foot at a time off the mat, keeping the thighs close to your chest and resisting the temptation of quickly straightening your legs up. Back should be straight and hips held directly over your forearms. Create space in your neck by pulling shoulders away from ears. Hold for about 15 seconds. Then come down with control. Relax with head down until the excess blood has drained from your head (Esser, 1976, p. 89).

Relaxation: Corpse: Let all tension flow out of body. Imagine yourself floating off the mat, out the door, away from the building, California, U.S., Earth. You are floating in the stars, past planets, etc. Focus on feeling of lightness and relaxation.
References


