

THE RELATIONSHIP OF PARTICIPATION IN A GROWTH GROUP PROCESS  
TO THE LEVEL OF SELF-ACTUALIZATION ATTAINED BY NURSES

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We hereby recommend that the THESIS prepared under  
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## CHAPTER I

### INTRODUCTION

The expectations that patients, doctors, other health team members, and society-at-large have of nurses and the expectations that nurses have of themselves, in terms of expanded and extended roles, are many and varied. They require that nurses be independent practitioners, creative thinkers, and responsible leaders. Other requirements are that they be sensitive, perceptive, and flexible in their approach. By definition nurses are to assist the patient to become all that he can become in terms of health.<sup>1</sup>

Nurses in such areas of practice as education, administration, and clinical service are called upon to participate in the growth of others. In short, these expectations require a self-actualizing person to fulfill them. Self-actualizing is a term coined by Maslow to describe a fully-functioning person--one who is utilizing all his potential. The concept of self-actualization as developed by Maslow will be defined more fully in the literature review.

Traditionally, nurses have not been flexible or

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<sup>1</sup>Martha Rogers, An Introduction to the Theoretical Basis of Nursing (Philadelphia: F. A. Davis Company, 1970), p. 86.

creative, nor have they encouraged growth and independent behavior on the part of patients. In a study analyzing a sample of patients' behaviors, findings indicated that nursing personnel more consistently provided positive reinforcement for dependent behaviors than for independent behaviors.<sup>2</sup>

Personal growth seems to be related to the ability to foster growth in others. In the words of Foulds and Guinan, "A person must experience himself fully in order to be creative in his chosen life projects and in his interpersonal relationships."<sup>3</sup> Carkhuff and Berenson have suggested that the ability to foster growth in others may be a function of one's own level of personal growth.<sup>4</sup> Brown supports this idea when she suggests that nursing has suffered because of the hospital system of diploma programs in nursing. She states that it has emphasized conformity (other-directedness) and submissiveness, and as a result has produced "insecurity, dependency, passivity and extreme narrowness of outlook."<sup>5</sup> Dependent people cannot foster

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<sup>2</sup>Mary Ann Mikulic, "Reinforcement of Independent and Dependent Patient Behavior by Nursing Personnel: An Exploratory Study," Nursing Research XX (March-April 1971):164.

<sup>3</sup>Melvin L. Foulds and James F. Guinan, "On Becoming a Growth Center," The Journal of College Student Personnel XI (May 1970):178

<sup>4</sup>R. R. Carkhuff and B. G. Berenson, Beyond Counseling and Therapy (New York: Holt, Rinehart and Winston, 1967).

<sup>5</sup>Esther Lucille Brown, "Preparation for Nursing," American Journal of Nursing LXV (September 1965):72-73.



independent behavior in others.

Steps have been taken to foster independence and personal growth in nursing students. Nursing education is now well established in the university, which has as one of its goals the development of the individual person.<sup>6</sup> Some nursing programs are incorporating opportunities for independent study into their curriculums, and many have included growth toward self-actualization as a stated goal.<sup>7</sup>

Once the graduate nurse leaves the educational environment, however, continued growth toward self-actualization not only becomes her responsibility, but also becomes exceedingly more difficult. Oftentimes, growth toward more autonomy, spontaneity, and flexibility appears in opposition to the needs of the bureaucratic structure within which the nurse works.<sup>8</sup> In addition, the nurse can become so involved in meeting patient and staff needs, that unless a healthy concern for the "self" is nurtured at the same time, she can lose sight of her own needs and her sense of self, her own identity and uniqueness.

The nurse's ability to be self-directing, flexibly

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<sup>6</sup>Ibid.

<sup>7</sup>Marlene Kramer et al., "Self-Actualization and Role Adaptation of Baccalaureate Degree Nurses," Nursing Research XXI (April 1972):112.

<sup>8</sup>Ibid.

oriented to present needs, and reactive according to the needs of the situation is valuable; in fact, essential to adequately filling an expanded role. Experience has shown that this kind of behavior can be fostered and encouraged by providing opportunities for self-growth.

The small T Group or encounter group is one such opportunity for self-growth. While its full impact on society remains to be felt, Solomon and Berzon believe the encounter group experience has established itself as a "powerful tool for change and growth."<sup>9</sup> It cannot be argued that all that has gone on in the name of "therapy" and "encounter group experience" has been good. On the contrary, there have been casualties due to poorly run groups and ill-prepared leaders. However, these facts should not occlude the positive aspects with which the literature abounds. It seems appropriate that as an introduction to Solomon and Berzon's comprehensive appraisal of the encounter group movement, Rogers should write:

Those people who are engaged in the group process are reasonably clear that in a climate of freedom, group members move toward becoming more expressive, more spontaneous, more flexible, more closely related to their feelings, more open to their own experience and to that of others. If we value this type of person and this type

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<sup>9</sup>Lawrence N. Solomon and Betty Berzon, New Perspectives on Encounter Groups (San Francisco: Jossey-Bass, Inc., 1972), p. xv.

of behavior, then clearly the group process is a valuable process.<sup>10</sup>

#### Statement of Problem

It was questioned whether growth toward self-actualization in nurses could be increased by an experiential growth group process.

#### Statement of Purpose

The purpose of this study was to investigate whether an experiential growth group process could serve a useful function in the in-service program of a nursing service by helping nurses achieve a greater degree of self-actualization.

#### Hypotheses

The following hypotheses were formulated:

1. Nurses who participate in a growth group consisting of ten weekly sessions will change significantly in the direction of increased self-actualization as measured by the Personal Orientation Inventory while those in the control group will not.
2. Nurses who participate in a growth group consisting of ten weekly sessions will change significantly in the direction of increased observable self-actualizing

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<sup>10</sup> Carl Rogers, Forward to New Perspectives on Encounter Groups by Lawrence N. Solomon and Betty Berzon (San Francisco: Jossey-Bass, Inc., 1972), p. xi.

behavior identified by their subordinates and measured by the Self-Actualizing Behavior Survey while those in the control group will not.

### Assumptions

1. It was assumed that self-actualization is a desirable goal for nurses regardless of their area of practice and that it enhances their nursing performance.<sup>11</sup>

2. It was assumed that nurses have self-actualizing potentialities.<sup>12</sup>

### Definitions

Self-actualizing person--"One who utilizes his talents and capabilities more fully, lives in the present rather than dwelling on the past or the future, functions relatively autonomously, and tends to have a more benevolent outlook on life and on human nature than the average person."<sup>13</sup>

Growth group--A sensitivity, developmental or T

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<sup>11</sup>R. Pittman et al., "A Study of the Relationship Between Staff Attitudes and Dimensions of Supervisory Self-Actualization in Public Health Nursing," Nursing Research IXX (May-June 1970):232.

<sup>12</sup>Richard W. Johnson and Louise C. Leonard, "Psychological Test Characteristics and Performance of Nursing Students," Nursing Research IXX (March-April 1970):150.

<sup>13</sup>Robert R. Knapp, The Measurement of Self-Actualization and Its Theoretical Implications, Report of Research Based on the Personal Orientation Inventory (San Diego: Educational and Industrial Testing Service, 1971), p. 1.

group designed for normal, relatively healthy nurses which meets once a week for two to three hours for a duration of ten weeks. Its leader is a professionally qualified and experienced psychologist. The group's size is limited to ten participants. Techniques used in the group include self-awareness exercises and other human relations exercises that encourage spontaneity, authenticity, flexibility and self-direction. Emphasis is placed on dealing with the "here and now" relationships within the group.

Nurse--One who is registered to practice professional nursing. He/she may have obtained his/her education from:

1. an associate degree program
2. a baccalaureate program
3. a diploma program

Personal Orientation Inventory (P. O. I.)--Self-administered psychological instrument designed to measure levels of self-actualization.<sup>14</sup> It consists of 150 forced choice, paired opposite statements which assess self-actualizing attitudes, values, and behavior. It is scored on twelve scales which are described in the literature review. Scores are interpreted on the basis of norms already established for clinically nominated self-actualizing subjects.

Self-Actualizing Behavior Survey (S. A. B. S.)--An

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<sup>14</sup>Everett L. Shostrom, "An Inventory for the Measurement of Self-Actualization," Educational and Psychological Measurement XXIV (Summer 1964):p. 207.

instrument designed by the investigator to measure self-actualizing behavior as perceived by one's peers or subordinates. It consists of twenty statements of self-actualizing behavior adapted from Shostrom's P. O. I. to be rated on a Likert type scale from 0-10. Zero is the lower limit of the scale and is used to indicate a behavior which never occurs. Ten is the upper limit and is used to indicate a behavior which always occurs.

#### Limitations

1. There was no control for the effect of taking the psychological test other than both the growth and control groups were under the same effect.

2. Some control over the many extraneous variables, i.e., years of experience, sex, age, area of clinical practice, educational preparation was provided for by random assignment of the volunteers to two groups.

3. The Self-Actualizing Behavior Scale is an instrument developed by the investigator having only face validity. No attempt was made to test-retest the instrument for validity and reliability.

## CHAPTER II

### REVIEW OF LITERATURE

The review of the literature will cover the following areas: (1) the concept of self-actualization as developed by Maslow and related concepts, (2) the development of a measuring tool for self-actualization, (3) studies done of self-actualization since the P. O. I. was developed, and (4) studies of self-actualization specific in the nursing field.

#### The Concept of Self-Actualization and Related Concepts

The term "self-actualization" has been used in personality theory since 1939, when Goldstein introduced it.<sup>1</sup> However, Maslow developed the theory more specifically in 1953.<sup>2</sup> According to Maslow, self-actualization is one of the basic needs of man: "What a man 'can' be, he 'must' be. He must be true to his own nature."<sup>3</sup> Self-actualization

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<sup>1</sup>Kurt Goldstein, The Organism (New York: American Book, 1939).

<sup>2</sup>Abraham Maslow, Motivation and Personality 2nd ed. (New York: Harper and Row, Publishers, 1970).

<sup>3</sup>Ibid., p. 46.

"refers to man's desire for self-fulfillment...to become everything that one is capable of becoming."<sup>4</sup> It is "the full use and exploitation of talents, capacities, potentialities, etc."<sup>5</sup> Closely related to this is Rogers' concept of the fully-functioning person. According to Rogers such a person:

...is able to live fully in and with each and all of his feelings and reactions. He is making use of all his organic equipment to sense, as accurately as possible, the existential situation within and without. He is his own sifter of evidence, but is open to evidence from all sources; he is completely engaged in the process of being and becoming himself...<sup>6</sup>

Maslow described his self-actualizing subjects in depth.<sup>7</sup> He found them more accurately perceptive of reality than are average people. They see human nature as it is, not as they would prefer it to be. They are generally unthreatened and unfrightened of the unknown. Self-actualizing people accept themselves fully with their assets and liabilities. Being able to accept themselves, they are more able to fully accept others as they are. Self-actualizers are generally spontaneous in their behavior--free, and

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<sup>4</sup>Ibid.

<sup>5</sup>Ibid., p. 150.

<sup>6</sup>Carl Rogers, "The Concept of the Fully Functioning Person," Psychotherapy: Theory, Research and Practice I (#1 1963): p. 21.

<sup>7</sup>Maslow, Motivation and Personality, pp. 149-180.



natural, and human. They are relatively autonomous and free of convention, not bound by rigid or inflexible rules or behavior. When they behave in a conventional sense it is because no great issue is at stake or because they know people would be hurt or embarrassed by their behavior. Self-actualizers feel they have a mission in life--some responsibility to a problem outside of themselves, and they work on that problem from a wide frame of reference. Their values are broad--not petty, universal--not local, and are in terms of a century rather than a moment. They are not helpless, weak pawns to be moved by others; on the contrary, they are decisive self-motivators. They are strong and bold; independent of the "good opinion" of others. Self-development and inner growth mean more to them than status and prestige. Without exception, all self-actualizing people are creative. They have the capacity to appreciate again and again the basic good things in life with freshness, awe, a certain naivete, and even ecstasy. Their capacity to love and to identify with others far surpasses what most people would consider possible. Self-actualizers have a deep feeling of identification with, and sympathy and affection for, the human race in general.

The Development of a Measuring Tool  
for Self-Actualization

The Personal Orientation Inventory was developed by Shostrom in 1963, because of a need he felt for a diagnostic

instrument that could give a patient a measure of his current level of positive health or self-actualization.<sup>8</sup> It consists of 150 forced two-choice, comparative value judgments. It is scored on twelve scales:<sup>9</sup>

1. Time ratio--Time Incompetence/Time Competence--measures the degree to which one is oriented to the present and related to the past and future on a meaningful continuum.

2. Support ratio--Inner/Other--measures whether reactivity orientation is basically toward self or others.

3. Self-actualizing Value--measures affirmation of a primary value of self-actualizing people.

4. Existentiality--measures ability to situationally or existentially react without rigid adherence to principles.

5. Feeling Reactivity--measures sensitivity of responsiveness to one's own needs and feelings.

6. Spontaneity--measures freedom to react spontaneously or to be oneself.

7. Self-regard--measures affirmation of self because of worth or strength.

8. Self-acceptance--measures affirmation or acceptance of self in spite of weaknesses or deficiencies.

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<sup>8</sup>Everett L. Shostrom, "An Inventory for the Measurement of Self-Actualization," Educational and Psychological Measurement XXIV (Summer 1964):207.

<sup>9</sup>Shostrom, "An Inventory for the Measurement of Self-Actualization," p. 209.

9. Nature of Man--measures degree of the constructive view of the nature of man, masculinity, and femininity.

10. Synergy--measures ability to be synergistic, transcend dichotomies.

11. Acceptance of Aggression--Measures ability to accept one's natural aggressiveness as opposed to defensiveness, denial, and repressions of aggression.

12. Capacity for Intimate Contact--measures ability to develop contactful, intimate relationships with other human beings unencumbered by expectations and obligations.

Shostrom states that, "After reliability coefficients of .91 and .93 were established by test-retest methods, validation studies were initiated."<sup>10</sup> He found they showed a definite trend in discriminating self-actualized, normal, and non-self-actualized groups on the dimensions of the test. Since that time, others have continued to test the validity of this instrument.

Knapp found that the P. O. I. was valid in terms of differentiating between groups nominated by the clinicians as being representative and not representative of the poles of the concepts measured.<sup>11</sup>

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<sup>10</sup>Shostrom, "An Inventory for the Measurement of Self-Actualization," p. 210.

<sup>11</sup>R. R. Knapp, "Relationship of a Measure of Self-Actualization to Neuroticism and Extraversion," Journal of Consulting Psychology XXIX (April 1967):168-72.

After conducting test-retest studies on the P. O. I., Illiardi reported that his findings for the P. O. I. were well within the ranges of somewhat comparable Minnesota Multiphasic Personality Inventory and Edwards Personal Preference Inventory test-retest reliability studies.<sup>12</sup>

Damm validated a theory of Shostrom's that an overall measure of self-actualization can be quickly obtained by scoring only two scales of the P. O. I.--the Time Competence and I/O Support Scales.<sup>13</sup>

In a study done by Klavetter, stability coefficients and intercorrelations indicated that three of the twelve scales--Inner direction, Time competence and Self-actualizing value--accounted for almost all of the variance. Since many of the intercorrelations approximated the scales reliabilities, it was concluded that performance on the P. O. I. could be more accurately expressed in terms of few dimensions.<sup>14</sup>

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<sup>12</sup>R. L. Illiardi and W. T. May, "A Reliability Study of Shostrom's Personal Orientation Inventory," Journal of Humanistic Psychology IX (Spring 1969):66-70.

<sup>13</sup>V. L. Damm, "Overall Measures of Self-Actualization Derived from the Personal Orientation Inventory," Educational and Psychological Measurement XXIX (Winter 1969): 977-81.

<sup>14</sup>R. E. Klavetter and R. E. Mogar, "Stability and Internal Consistency of a Measure of Self-Actualization," Psychological Reports XXI (October 1967):422-24.

Unless the subjects had special information about the P. O. I. and self-actualization, Braun and LaFaro found that the inventory showed an unexpected resistance to faking.<sup>15</sup> Braun and Asta reported that on six of the twelve scales, subjects were able to obtain higher scores when given instructions "to create a good impression." The support ratio scale which is "regarded by Knapp as the single most representative overall measure of self-actualization" was not affected, however, by the different instructions.<sup>16</sup>

#### Studies of Self-Actualization

Gibb, in an exploratory cross-sectional study of first semester juniors attending a large Midwestern state university, found that those students whose scores were higher on the P. O. I. were:

1. From homes whose parents had finished high school and had additional formal education.
2. From families with one to three children.
3. From families whose mothers had worked full-time.

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<sup>15</sup>J. R. Braun and Delores LaFaro, "A Further Study of the Fakability of the Personal Orientation Inventory," Journal of Clinical Psychology XXV (July 1969):296-99.

<sup>16</sup>J. R. Braun and Patricia Asta, "A Comparison of Real Vs. 'Ideal' Self with Self-Actualization Inventory," Journal of Psychology LXXII (July 1969):159-64.

4. From families providing little or no formal religious education. Additionally, he found that those scoring higher on the P. O. I. were not involved in active religious participation.

Those variables which did not show significant difference included:

1. Students coming from a broken or intact home.
2. Students coming from a nuclear or extended home.
3. Amount of time the father traveled away from home.
4. Religious affiliation.<sup>17</sup>

In another exploratory study, Mulford using a ten per cent random sample of the 100 students he interviewed at a small midwest college found that:

1. There is a small but consistent trend for self-actualization scores to increase as students move from early to later stages of their college careers.
2. Students from smaller high schools tended to have higher self-actualization scores.
3. Students on academic scholarship also tended to have higher self-actualization scores than those not on scholarship.<sup>18</sup>

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<sup>17</sup>Leonard L. Gibb, "Home Background and Self-Actualization Attainment," The Journal of College Student Personnel IX (January 1968):49-53.

<sup>18</sup>Charles L. Mulford, "Self-Actualization in a Small College Environment," The Journal of College Student Personnel VIII (March 1967):100-104.

Foulds and Wareheime observed significant sex differences in scores on ten P. O. I. scales, suggesting that college females may be more self-actualizing than college males.<sup>19</sup> Ohlbaum found that professional women had more positive self concepts, a greater degree of personal autonomy and self esteem. They were also more liberal and achievement oriented and attained a higher degree of self-actualization than non-professional women.<sup>20</sup>

Whitsett came to no statistical conclusions, but noted some interesting trends when testing 115 accounting and clerical employees of a large manufacturing firm. Those that were judged by the organization as better adjusted were less growth oriented than those judged less well adjusted. Those judged better adjusted were less mentally healthy.<sup>21</sup>

Studying top and middle management groups, Lademberger found that they differed significantly in intellectual curiosity, basic security, self-confidence, and

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<sup>19</sup>Melvin L. Foulds and R. G. Wareheime, "Relationship Between Repression-Sensitization and a Measure of Self-Actualization," Journal of Consulting and Clinical Psychology XXXVI (April 1971):258.

<sup>20</sup>Judy Sue Ohlbaum, "Self Concepts, Value Characteristics and Self-Actualization of Professional and Non-Professional Women," (Ph.D. dissertation, United States International University, 1971).

<sup>21</sup>David A. Whitsett, "Self-Actualization and the Modern Formal Organization," (Ph.D. dissertation, Western Reserve University, 1967).

insight into self and realistic plans for continual growth and development. Top management groups received more stimulation from their parents toward achievement of maximum contribution and continuous development when they were children than did the middle management groups.<sup>22</sup>

Foulds reported that a group of counselors offering higher levels of facilitative conditions: empathic understanding (E), unconditional positive regard (R), and genuineness or congruence (G) in the therapeutic relationship, also scored higher on the P.O.I. as compared to a group of counselors offering lower levels of (E), (R), and (G).<sup>23</sup>

Dandes, in studying a group of teachers, determined that a large part of what makes an effective teacher was the degree to which he was psychologically healthy or self-actualized. He further suggested the application of group counseling procedures such as T groups and other Human Relations Laboratory techniques as part of the regular curriculum in teacher education.<sup>24</sup>

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<sup>22</sup>Margaret Echols Ladenberger, "An Analysis of Self-Actualizing Dimensions of Top and Middle Management Personnel," (Ph.D. dissertation, University of California at Berkeley, 1970).

<sup>23</sup>Melvin L. Foulds, "Self-Actualization and Level of Counselor Interpersonal Functioning," Journal of Humanistic Psychology IX (Spring 1969): 87-92.

<sup>24</sup>R. Dandes, "Psychological Health and Teaching Effectiveness," The Journal of Teacher Education XVII (Fall 1966): 305.



In another study of teachers, Coble determined that a large number of those students who gained the most in critical thinking ability had teachers who scored significantly higher on two scales of the P.O.I. -- the Existentiality and Capacity for Intimate Contact Scales.<sup>25</sup> Maul, in another study, found a positive correlation between self-actualization and creative thinking.<sup>26</sup>

Using college students, Wesch validated the existential assumption that there is an inverse relationship between self-actualization and death anxiety. He found students scoring high on the P.O.I. had less anxiety about death than did those who scored low.

In a study done on twenty-eight underachieving college students, Leib and Snyder found the students increased their self-actualization scores and achieved higher grade point averages after participating in either a lecture or discussion type of small group experience. It was felt that the special attention they received as part of a small group fulfilled their lower basic needs and released them for

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<sup>25</sup>Charles Ray Coble, "An Analysis of the Relationship Between the Biology Teacher's Level of Self-Actualization and Student Progress," (Ph.D. dissertation, University of North Carolina, 1971).

<sup>26</sup>Terry Lee Maul, "An Investigation of the Relationships Between Self-Actualization and Creative Thinking Processes," (Ph.D. dissertation, University of California at Berkley, 1970).

<sup>27</sup>Jerry Edward Wesch, "Self-Actualization and the Fear of Death," (Ph.D. dissertation, University of Tennessee, 1970).

self-actualization.<sup>28</sup>

In another study by the same authors, it was found that self-actualization and achievement were not directly related, but were related secondarily through separate relationships with other variables.<sup>29</sup> A separate study done by LeMay supports their findings.<sup>30</sup>

Culbert and his associates did a study using two groups of seniors and graduate students from UCLA who were undergoing sensitivity training. Self-actualization scores increased for one group, while for another group they did not. It was hypothesized that since the one group already was at the self-actualization level, the group experience would do nothing to the scores.<sup>31</sup>

Foulds and his associates have done numerous studies of sensitivity training and marathon groups and their effects on self-actualization.<sup>32</sup> Their results have all been positive.

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<sup>28</sup>J. W. Leib and W. U. Snyder, "Effects of Group Discussions on Underachievement and Self-Actualization," Journal of Counseling Psychology XIV (May 1967): 282-85.

<sup>29</sup>J. W. Leib and W. U. Snyder, "Achievement and Positive Mental Health," Journal of Counseling Psychology XV (July 1968): 388-89.

<sup>30</sup>M. L. LeMay, "Self-Actualization and College Achievement at Three Ability Levels," Journal of Counseling Psychology XVI (November 1969): 582-83.

<sup>31</sup>S. A. Culbert et al., "Measures of Change Toward Self-Actualization in Two Sensitivity Training Groups," Journal of Counseling Psychology XV (January 1968): 53-57.

<sup>32</sup>Melvin L. Foulds, "Measured Changes in Self-Actualization as a Result of a Growth Group Experience," Psychotherapy: Theory, Research and Practice VII (Winter 1971): 338-41.

In some instances, self-actualization scores have increased on all twelve scales. In others, a rise was seen on at least ten of the scales, including the most crucial -- Time Competence and Inner-Other Support.

Smith, in a study with student teachers as subjects, reported that those undergoing sensitivity training showed a higher self-concept. He also found they were better able to predict accurately how others perceived themselves.<sup>33</sup>

Flanders reported significant change toward self-actualization among a group of ninety teachers involved in a year-long sensitivity training program. Results on the P.O.I. for eight of the twelve scales were statistically significant.<sup>34</sup>

Rueveni and his associates studied the effects of sensitivity training on mental health workers. They reported increases in P.O.I. scores as the result of the nine-week sensitivity training program.<sup>35</sup>

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<sup>33</sup>William Davis Smith, "A Study of the Effects of Sensitivity Training on the Self Concept of Student Teachers," (Ed.D. dissertation, University of New Mexico, 1970).

<sup>34</sup>J. N. Flanders, A Humanistic Approach to Inservice Education, Report of the Overton County Board of Education (Livingston, Tennessee: 1969), cited by Robert R. Knapp, The Measurement of Self-Actualization and Its Theoretical Implications (San Diego, California: Educational and Industrial Testing Service, 1971), p.7.

<sup>35</sup>U. Rueveni et al., "Sensitivity Training: Its Impact on Mental Workers," Applied Behavioral Science V (1969):600-601.

Trueblood and McHolland found that the "human potential" group process was successful in helping students in the junior college setting become more self-actualizing. Using experimental and control groups, they reported significant changes on P.O.I. scores for those in the experimental group while the control group remained stable.<sup>36</sup>

According to Offenstein, low self-actualizers unable to solve an experimental problem were significantly more fatigued, depressed, angry, and confused than the high self-actualizers who were also unable to solve the problem. Additionally, he found that the high self-actualizers who were unable to solve the problem did not differ significantly from those high self-actualizers who were able to solve the problem. His subjects were college students, college faculty, and civil service workers.<sup>37</sup>

Reddy found that sensitivity training outcomes can be enhanced or diminished by manipulating group composition. Using two experimental groups, he discovered that when there was partial incompatibility in affectional behavior among

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<sup>36</sup>R. W. Trueblood and J. D. McHolland, "Measure of Change Toward Self-Actualization Through the Human Potential Group Process," 1971, cited by Robert R. Knapp, The Measurement of Self-Actualization and Its Theoretical Implications (San Diego: Educational and Industrial Testing Service, 1971), p.8.

<sup>37</sup>Ronald E. Offenstein, "Self-Actualization: A Construct Validation Study?" (Ph.D. dissertation, Claremont Graduate School, 1973).

the group members, increases in self-actualization occurred; but when there was total compatibility, no increases in self-actualization were found.<sup>38</sup> Reddy's findings supported the views of Harrison and Lubin, that homogenous groupings may inhibit learning.

Amount of positive change as a result of a group experience seems to be directly correlated with amount of initial participation, according to a study done by Henderson. Using the MMPI as the instrument to measure positive change toward health, he found that those patients who participated the most initially, showed the most significant change in a positive direction when contrasted with those who participated least. An important supposition in this study was that initial measures of participation are more accurately indicative of the amount of participation in groups outside a treatment setting than are later measures.<sup>40</sup>

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<sup>38</sup>W. B. Reddy, "On Affection, Group Composition, and Self-Actualization in Sensitivity Training," Journal of Consulting and Clinical Psychology XXXVII (April 1972):211-14.

<sup>39</sup>A. R. Harrison and B. Lubin, "Personal Style, Group Composition and Learning," Journal of Applied Behavioral Science I (#3 1965): 286-94.

<sup>40</sup>James L. Henderson, "The Relationship Between Amount of Participation in a Development Group and Change," (Master's Thesis, University of Houston, 1963).

Mase noted no difference between two different types of encounter group treatment, but found that both groups increased self-actualization as a result of encounter group methods and that the effect lasted at least two months later.<sup>41</sup>

Since lack of a lasting effect is a point often raised by skeptics of the encounter group movement, the investigator was interested to find other studies which validated a lasting change. Significant increases on Inner Support scale scores were maintained three months following a one-week counselors workshop in a study done by Aubry.<sup>42</sup> Foulds and his associates determined that a marathon group had lasting effects on P.O.I. scores at least six months after the group experience.<sup>43</sup>

Encounter groups for women have become popular in providing opportunities for personal change in this dramatic time of cultural change and role confusion. Women can look at some of the cultural expectations they have assimilated

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<sup>41</sup>Bruce Franklin Mase, "Changes in Self-Actualization as a Result of Two Types of Residential Group Experience," (Ph.D. dissertation, Northwestern University, 1971).

<sup>42</sup>W. E. Aubry, "An Analysis of a One-Week Workshop for Developing Self-Actualization and Effective Interpersonal Behavior," (Ph.D. dissertation, University of Arizona, 1970).

<sup>43</sup>Melvin L. Foulds et al., "Marathon Group: A Six Month Follow-Up," The Journal of College Student Personnel XI (November 1970): 456-61.

and with increased self-understanding begin to make intentional choices instead of conditioned responses. Meador and her associates, as leaders of encounter groups for women only, report the following insight gained from their experience:

To be sexual or, better, sexy is a role constantly reinforced in the woman's socialization process. Women are very aware, particularly in the presence of men, how others are successfully or unsuccessfully playing that part. They compare themselves with one another and develop a sense of competitiveness. . Often in a mixed encounter group, so much energy is spent in comparison and competition that it is difficult for women to listen to each other and to be aware of each other as whole persons. In the absence of males, women are more available to be sensitive to each other as human beings, not only because they are not busy being seductive and pleasing to men, but also because they can look at the roles they play in heterosexual relationships without acting them out. Instead of competitiveness, a sense of cooperation, patience and understanding develops...<sup>44</sup>

Studies of Self-Actualization Specific  
in the Nursing Field

Pittman and Kerchner found in a study of self-actualization in supervisory public health nurses that the supervisors were more self-actualized than nursing students, faculty, and staff public health nurses. Moreover, those with master's degrees were more self-actualized than those

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<sup>44</sup>Betty Meador et al., "Encounter Groups for Women Only," in New Perspectives on Encounter Groups, eds. Lawrence N. Soloman and Betty Berzon, pp. 342-43.



without a master's degree.<sup>45</sup>

Green, in studying sophomore nursing students, suggested that there might be an element of anxiety present in those students who scored low on the P.O.I. scales of Existentiality, Time Competence, and Capacity for Intimate Contact, which interfered with their ability to be flexible, use time effectively, and experience warm relationships.<sup>46</sup>

Marram studied the effects of T groups on registered nurses. To see if age was a factor in the success of the T group, she divided the nurses into two groups: those under twenty-eight and those over twenty-eight. Both groups expressed feelings of increased self-actualization after the group sessions.<sup>47</sup>

Davies, in studying the effects of sensitivity training and programmed instruction on the development of human relations skills, found that freshmen nursing students seemed to derive more benefit from the programmed instruction. Both

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<sup>45</sup>R. Pittman et al., "A Study of the Relationship Between Staff Attitudes and Dimensions of Supervisory Self-Actualization in Public Health Nursing," Nursing Research XIX (May-June 1970): 231-38.

<sup>46</sup>Edith J. Green, "The Relationship of Self-Actualization to Achievement in Nursing," (Ph.D. dissertation, Indiana University, 1967).

<sup>47</sup>Gwen D. Marram, "What is Happening to Nurses," International Nursing Review XVI (#4 1969): 320-28.



approaches, however, were significantly beneficial.<sup>48</sup>

Kramer has studied the effects of role conflict and adaptation in baccalaureate degree nurses and their relationship to self-actualization. While her original hypotheses were not supported, some interesting trends and relationships were found: (1) Nurses rated as highly successful were consistently higher on these components of self-actualization: Time Competence, Inner Direction, Nature of Man , Synergy, and Self-Actualizing Value, than were the average and unsuccessful nurses. (2) The effect of high bureaucratic and high professional allegiance was different for nurses rated highly successful as compared with those rated average or unsuccessful. It was suggested that perhaps the self-actualizing person is able to transcend the apparent dichotomies of bureaucratic role and professional role conflict or hold values of a third unrelated higher value system, while the unsuccessful nurse remains paralyzed by the conflict. (3) Stroking in the form of positive regard seemed to be related to the development of self-actualizing values. Non-stroking or unsuccessful rating seemed to interfere with the development of a self-actualizing value system since self regard is

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<sup>48</sup>Michael M. Davies, "A Comparison of the Effects of Sensitivity Training and Programmed Instruction on the Development of Human Relations Skills of Beginning Nursing Students in an A.D. Program," (Ph.D. dissertation, St. Louis University, 1970).

is one of the component factors.<sup>49</sup>

#### Summary

Since 1963, when the P.O.I. was developed by Shostrom, researchers have avidly been studying the effects of growth group experiences on levels of self-actualization attained by a variety of subjects, including students, teachers and mental health workers. The majority of research findings thus far support the claim that a growth group experience is a powerful tool to promote growth and change. From the literature review, it seems quite evident that change as the result of a small group experience is dependent on a variety of factors among which are: (1) the motivation for change displayed by the group members, and (2) the group composition.

The P.O.I. has been presented in the literature as a reliable and valid instrument which since its development has been used widely as a measure of self-actualization. One major criticism of it, however, has been that its scale constructs are not mutually exclusive and that one's level of self-actualization could be more accurately determined by fewer scales: notably the Inner Support, Time Competence, and Self-Actualizing value scales.

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<sup>49</sup>Marlene Kramer et al., "Self-Actualization and Role Adaptation of Baccalaureate Degree Nurses," pp. 111-23.

## CHAPTER III

### METHODOLOGY

#### Introduction

This study utilized an experimental two group, pre and post test design with random assignment of subjects to groups. The growth group process was designed as the independent variable. Two psychological testing instruments, namely the Personal Orientation Inventory and the Self Actualizing Behavior Survey, were employed in the measurement of the dependent variable-level of self-actualization attained by nurses. The setting was a large general and psychiatric hospital; a conference room within the hospital was used for the group meetings. An experienced and well qualified staff psychologist functioned as the facilitator for the growth group. Meetings lasting two and three hours were held each week for ten consecutive weeks during the summer months of May, June and July, 1973.

#### Method of Subject Selection

Volunteers were sought to participate in a growth group. The investigator sent letters explaining the project to all 387 registered nurses within the hospital's nursing service and in addition, spoke about the project during a head nurses and supervisors' meeting. Potential subjects

were accepted from any service within the hospital such as medicine, psychiatry, surgery, inservice education, coronary care, etc. and at levels of function ranging from staff nurse to head nurse. Volunteers were utilized because meaningful participation in a group experience cannot be forced. That has been the collective experience of many therapists of developmental groups, sensitivity groups, T groups, encounter groups, and individual psychotherapy over the past decade.

All volunteers were interviewed by the group leader. This was a two-way interview which gave tentative group members a chance to ask questions and clarify their understanding of the procedures of the growth group and the control group.

#### Method of Group Assignment

The twenty screened volunteers were randomly assigned to either the growth group or the control group. Those assigned to the non-treatment group agreed not to participate in any other growth group during the period of study. Control group participants were promised an opportunity to be in a growth group when the data collection was completed.

#### Development of a Measuring Instrument

The Self-Actualizing Behavior Survey (S.A.B.S.) was designed by the investigator to measure observable

self-actualizing behavior. While the Personal Orientation Inventory was a valid instrument to measure self-perception of self-actualization, no instrument existed for the measurement of observable self-actualizing behavior using peers, subordinates, or superiors as raters. The subordinate was chosen as the rating source in this study because often he is the first to notice small insidious changes in his supervisor's behavior.

The instrument consists of twenty items to be rated on a Likert type scale from 0-10. Zero is the lower limit of the scale and is used to indicate a behavior which never occurs. Ten is the upper limit and is used to indicate a behavior which always occurs. A wide range was chosen since a limited number of categories usually produces an instrument measure which lacks sensitivity; that is, it fails to detect fine differences caused by the independent variable.<sup>1</sup> Some of the statements were adapted from Shostrom's Personal Orientation Inventory; others were formulated by the investigator within the context of her understanding of Maslow's Self-Actualization theory put in behavioral terms. No attempt was made to do reliability studies on the instrument although it was pretested utilizing

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<sup>1</sup>Faye G. Abdellah and Eugene Levine, Better Patient Care Through Nursing Research (New York: The Macmillan Company, 1965), p. 239.

two peers and two subordinates to rate each of six nurses. These nurses came from a work situation within the hospital to be used in the study. Their participation in the pre-testing of the instrument excluded them from participating in either the control group or the growth group. Those items which were found to be ambiguous were revised and clarified. Also, vague instructions for using the instrument were made clear. The instrument was examined for content validity by two psychologists familiar with Maslow's Self-Actualization theory.

#### Growth Group Procedures

A series of communication skill exercises were utilized in the beginning sessions with group members working in dyads for part of the group time. As group members became more comfortable with each other, more focus was placed on expressing spontaneously what they were feeling in the here and now, and what they were learning about themselves and each other.

#### Data Collection Procedures

Both growth and control groups were given the Personal Orientation Inventory before the first group session and one week after the last group session was held. The P. O. I. was used to measure self-perception of attitudes, feelings, and behaviors indicative of self-actualization.

Since it was conceivable that there might be change

in self-perception without change in behavior which was noticeable by others, subordinate ratings were used to see if a behavioral change was observed by others. Each group member of both groups was rated by three of his subordinates in the work setting using the Self-Actualizing Behavior Survey. The three raters for each subject were randomly selected by the investigator from eligible employees listed on the unit time sheet. An employee was considered eligible if he/she was not going to resign or take a leave of absence before the data collection was completed.

Subjects involved in the growth group were also asked to fill out a subjective evaluation of their group experience. This was done to aid the investigator and group leader in planning future group experiences for nurses.

#### Problems Encountered

Problems encountered by the investigator fell into two main categories: (1) those involving the subjects, and (2) those involving the subordinates who rated subjects. Problems were encountered within the growth group when subjects did not attend regularly. Some subjects missed as many as four of the ten sessions. This was detrimental to the individual and the group. Since participation seems to relate to successful group experience, it seems doubtful that those who missed frequently benefited much from the group experience. Reasons most often given for absences were change of shift and heavy work schedules on the units.

According to the group facilitator, the growth group never gained the usual group cohesiveness. Poor group attendance and low motivation for group involvement may have been responsible for this. The investigator considers low motivation for group involvement a factor since there were not enough volunteers to attempt the project until the Chief of Nursing Service addressed a meeting of head nurses and supervisors urging their participation in the project. Still another factor contributing to the lack of group cohesiveness may have been the group composition. An all female group with a single male leader has the potential for sparking much competitiveness among its members; and where there is great competition, there cannot be great cooperation toward developing group cohesiveness, as indicated by Meador.<sup>2</sup>

Problems associated with raters were many and varied. Difficulties were encountered when the investigator approached randomly selected subordinates to rate control and growth group subjects. There was a great reluctance and sometimes refusal on the part of subordinates to rate some nurses. Some flatly stated, "I can't rate my head nurse." Others went to a supervisor asking if it was all right for them to rate a nurse since they had "never seen this done

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<sup>2</sup>Meador et al., "Encounter Groups for Women Only," pp. 342-43.



before." Some showed resistance to participation by simply not returning the S.A.B.S. Four subjects were dropped from the study because the investigator was unable to get enough subordinate ratings. Only one of the initial raters was unavailable at the time of the second ratings; she had ceased employment unexpectedly. Some raters had difficulty following the instructions. For two of the subjects in the growth group, a combination of peers/subordinate, had to be used for the ratings because on those units there were not enough subordinates to use them exclusively for the ratings.

#### Scoring Procedures

The Personal Orientation Inventories were hand scored and individual raw scores were converted to standard scores on all twelve scales to prevent any built-in variance due to inequality of the individual scales. Since it was recommended by the test manual that ratio scores not be used in statistical analyses, only the scores from the Time Competence Scale and the Inner Directed Scale were used in addition to the other ten scales.<sup>3</sup>

The Self-Actualizing Behavior Surveys were hand scored item by item. For each subject, an average score of the three ratings was computed for each of the twenty items. For three of the subjects only two raters were used; consequently the average item score was determined on the basis

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<sup>3</sup>Everett Shostrom, Manual for the Personal Orientation Inventory (San Diego: Educational and Industrial Testing Service, 1963) p. 7.

of two scores instead of three scores.

### Method of Data Analysis

The .05 level of significance was chosen as the accepted level of statistical significance for this experiment.

An initial one way analysis of variance (Lindquist, type 1) was used on the data obtained from the Personal Orientation Inventory to see if the groups were statistically equal on the pre-test measure. T-tests comparing group means on pre-test scores were then done for each of the twelve scales of the inventory. Those scales on which there were no significant differences between groups were then analyzed for post-test changes using a simple t-test. Those scales which showed an initial significant difference between groups were analyzed for post-test change using a t-test for correlated means.<sup>4</sup>

The Willcoxon. Matched-Pairs Signed Ranks Test was used on each item of the Self-Actualizing Behavior Survey to see if there were any significant changes within the groups on the repeated measures. The Median Test was used to compare group medians for all items that showed significant

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<sup>4</sup>The t-test for correlation makes use of difference scores obtained by subtracting the pre-test score from the post-test score for each group. It provides a way to compare accurately group differences when the groups have not had equivalent pre-test values. It is represented by the formula

$$t = \frac{X d_1 - X d_2}{\sqrt{6 \left( \frac{1}{N_1} + \frac{1}{N_2} \right)}}$$

change.

The subjective evaluation form filled out by all growth group members was not dealt with statistically. Comments received by growth group members were summarized and discussed.

## CHAPTER IV

### ANALYSIS AND INTERPRETATION OF THE DATA

#### Demographic Characteristics

Information regarding age, marital status, years of service within the institution, level of education preparation, area of service within the hospital, and level of nursing practice was obtained for both control and growth group subjects and is presented in Table 1.

All subjects for both groups were females. Control group subjects had a mean age of 42.6 years and an age range of 28 to 50 years. Somewhat younger growth group subjects had a mean age of 35 years and an age range of 24 to 49 years. Regarding marital status, 4 of the control subjects were married, 3 were divorced and 1 was single; while of the growth group subjects, 6 of the nurses were married and 2 were single. Years of service within the institution for control group subjects ranged from 1 to 23 years with a mean of 8.1 years of service. Growth group subjects, however, in years of service only ranged from 1 to 10 years, with a mean of 5.0 years of service. Educational backgrounds for both groups of subjects were quite similar; however, growth group subjects had more of a spread with 2 nurses having master's degrees, 3 having bachelor's degrees, and 3 having diplomas in nursing.

TABLE 1

A COMPARISON OF CONTROL GROUP AND GROWTH GROUP  
SUBJECTS BY VARIABLES OF AGE, MARITAL STATUS,  
YEARS OF SERVICE WITHIN THE INSTITUTION,  
EDUCATIONAL PREPARATION, AREA OF SERVICE,  
AND LEVEL OF NURSING SERVICE

VARIABLE	CONTROL GROUP	GROWTH GROUP
Mean age of subjects	42.6 Yrs.	35.0 Yrs.
Marital Status		
Married	4	6
Single	1	2
Widowed	0	0
Divorced	3	0
Mean Years of Service Within the Institution	8 Yrs.	5 Yrs.
Educational Preparation		
M.S. or Higher	0	2
B.S.	6	3
Diplomas	2	3
A.A.	0	0
Area of Service Within Hospital		
Medical-Surgical	4	4
Psychiatric	4	2
Inservice Education	0	2
Level of Nursing Practice		
Supervisor	0	0
Head Nurse	5	3
Staff Nurse	3	5

Control group subjects were more homogenous regarding educational preparation with 6 nurses having bachelor's degrees and 2 having diplomas in nursing. Both groups were also similar regarding area worked within the hospital. In both groups 4 nurses worked in medical-surgical areas. The

remaining 4 nurses of the control group worked in psychiatric areas of the hospital, while in the growth group 2 worked in psychiatric areas and 2 worked in inservice education. Control group subjects held more leadership positions than did growth group subjects. In the control group, 5 held head nurse positions while 3 held staff positions. Conversely, 3 of the nurses in the growth group held head nurse positions while 5 functioned as staff nurses.

In summarizing, control group and growth group subjects were most similar in terms of educational preparation and area of service within the institution. They were most different when considering the variables of age, marital status and years of service within the institution.

Information concerning age and years of service within the institution was also obtained from those subordinates who participated in the ratings and is presented in Table 2.

TABLE 2  
COMPARISON OF RATERS FOR CONTROL AND GROWTH  
GROUP SUBJECTS BY AGE AND YEARS OF SERVICE  
WITHIN THE INSTITUTION

VARIABLE	CONTROL GROUP	GROWTH GROUP
Mean age of raters	40.1 years	41.1 years
Raters mean years of service within the institution	12.4 years	12.3 years

The rater groups were more similar to each other than

were the control and growth groups. Control group raters had a mean age of 40.6 years and an age range of 21 to 53 years. Raters for the growth group had a mean age of 41.1 years and an age range of 22 to 56 years. The range for years of service within the institution was identical for both groups, 1 to 30 years. The means for years of service, although not identical, were very close with control group raters have a mean of 12.4 years and the growth group having a mean of 12.3 years.

#### Discussion of Data Pertaining to Hypothesis 1

It was hypothesized that nurses who participate in a growth group consisting of ten weekly sessions would change significantly in the direction of increased self-actualization as measured by the P.O.I. while those in the control group would not. The data obtained from the P.O.I. did not support this hypothesis. The initial one way analysis of variance applied to pre-test scores of the P.O.I. for both groups indicated that the groups were not equal in some respects and that randomization had not totally accomplished its purpose. A summary of this information is provided in Table 3.

An examination of pre-test P.O.I. scores showed the control group to be significantly higher than the growth group on three scales: Self-actualizing Value, Spontaneity, and Acceptance of Aggression. These data are presented in Table 4.

TABLE 3

ANALYSIS OF VARIANCE APPLIED TO PRE-TEST SCORES OF  
THE P.O.I. FOR CONTROL AND  
GROWTH GROUP SUBJECTS

SOURCE OF VARIANCE	DEGREES OF FREEDOM	SUMS OF SQUARES	MEAN SQUARES	F-RATIOS
Subjects	15	5300.5273	353.3684	.0000
Groups	1	510.2578	510.2578	1.4913
Error (b) Between Groups	14	4790.2695	342.1621	.0000
Within SS Sums of Square	176	9140.0976	51.9323	.0000
Scores	11	627.0625	57.0056	1.2350
Interaction Groups X Scores	11	1404.4296	127.6754	2.7659*
Error (W) Within Groups	154 191	7108.6054 14440.6250	46.1597 75.6053	.0000 .0000

\*Significant at the .05 level of significance where  $F = 2.43$ .



TABLE 4

COMPARISON OF PRE-TEST SCORES FOR CONTROL AND GROWTH  
GROUP SUBJECTS ON TWELVE SCALES OF THE P.O.I.  
SHOWING MEAN STANDARD SCORES, STANDARD  
DEVIATIONS, AND T VALUES

P.O.I.	GROWTH GROUP	CONTROL GROUP	$\alpha$ (WEIGHTED AVERAGE SD)	T
1. Time Competence	$\bar{x}$ 50.12 Sd 6.70	49.12 12.41	10.677	.187
2. Inner Support	$\bar{x}$ 44.50 Sd 5.89	48.62 6.14	6.426	1.309
3. Self-actualizing Value	$\bar{x}$ 43.12 Sd 8.81	54.00 8.17	9.077	2.401*
4. Existentiality	$\bar{x}$ 45.87 Sd 8.70	42.00 9.68	9.838	.786
5. Feeling Reactivity	$\bar{x}$ 49.75 Sd 7.95	49.50 4.24	6.804	.073
6. Spontaneity	$\bar{x}$ 45.87 Sd 8.02	54.50 5.59	7.389	2.338*
7. Self-regard	$\bar{x}$ 47.50 Sd 5.41	52.12 7.11	6.753	1.367
8. Self-acceptance	$\bar{x}$ 46.25 Sd 5.56	50.75 6.59	6.511	1.349
9. Nature of Man	$\bar{x}$ 49.25 Sd 7.40	43.62 8.45	8.485	1.328
10. Synergy	$\bar{x}$ 48.50 Sd 7.37	48.50 11.34	10.247	0
11. Acceptance of Agression	$\bar{x}$ 43.37 Sd 9.27	56.00 6.20	8.426	3.000*
12. Capacity for Intimate Contact	$\bar{x}$ 44.50 Sd 9.21	49.00 7.28	8.860	1.015

\* Significant at  $\alpha = .05$  at 15 degrees of freedom.

On these three scales, the control group matched or surpassed the standard scores of those individuals nominated as self-actualized by clinicians in a study done by Knapp.<sup>1</sup> The growth group, however, neither matched nor surpassed the standardized scores obtained in Knapp's study on any of the P. O. I. scales in the initial testing. These differences may have been a reflection of such sample differences as age, years of service within the institution, and number of head nurses in the group. Of course, no conclusion can be drawn from this speculation, but it does remain interesting to consider.

The growth group was a younger group both in terms of individuals' ages and years of institutional service. The control group had two more head nurses than did the growth group. On inspection, almost without exception, the head nurses' individually demonstrated scores which were higher than staff nurses' scores, showing the head nurses to be more self-actualized which is what one would expect. This, incidentally, lends further support to the findings of Pittman and Kerchner that supervisors were more self-actualized than nursing students, faculty, and staff public health nurses.<sup>2</sup> Some group similarities were evidenced by

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<sup>1</sup>Knapp, "Relationship of a Measure of Self-Actualization to Neuroticism and Extraversion," 168-72.

<sup>2</sup>Pittman, et al., "A Study of the Relationship Between Staff Attitudes and Dimensions of Supervisory Self-Actualization in Public Health Nursing," 231-238.

the pre-test scores. The two groups were most similar on three scales: Time Competence, Feeling Reactivity and Synergy.

An examination of the post-test P. O. I. scores for both groups clearly shows that there were no statistically significant changes brought about by the growth group, especially if one examines only the Time Competence and Inner Support scales, which have been shown to be a quick but valid overall measure of self-actualization. These data are presented in Table 5.

Although no statistically significant findings resulted, three scales had t-values which increased in the hypothesized direction: Self-Actualizing Value, Self-Regard, and Acceptance of Aggression. There was a general trend for both groups to increase their post-test scores. The control group increased their scores on eight of the scales while the growth group increased their scores on eleven of the scales.

An important question asked by the investigator was why did not the growth group increase significantly on P. O. I. measures, as anticipated? One could simply assume that the growth group is not a valuable change agent, but that is contrary to much of the literature already reviewed. The investigator proposes that reasons for lack of significant change may be found in the group process. The attendance problems of the growth group have already been reported

TABLE 5

COMPARISON OF POST-TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON TWELVE SCALES  
OF THE P.O.I. SHOWING MEAN STANDARD  
SCORES, STANDARD DEVIATIONS,  
AND T VALUES

P. O. I.	GROWTH GROUP	CONTROL GROUP	$\alpha$ (WEIGHTED AVERAGE SD)	T
1. Time Competence	$\bar{x}$ 47.12 Sd 8.10	48.25 12.04	10.954	.206
2. Inner Support	$\bar{x}$ 51.00 Sd 5.63	50.75 10.30	8.871	.058
3. Self-Actualizing Value	$\bar{x}$ 49.87 Sd 8.07	54.25 10.41	9.954	1.706 <sup>c</sup>
4. Existentiality	$\bar{x}$ 51.12 Sd 9.29	44.62 13.40	12.328	1.050
5. Feeling Reactivity	$\bar{x}$ 50.75 Sd 6.10	52.12 4.73	5.830	.471
6. Spontaneity	$\bar{x}$ 53.50 Sd 7.25	57.12 8.22	8.283	1.207 <sup>c</sup>
7. Self-regard	$\bar{x}$ 51.00 Sd 3.91	56.12 6.45	5.700	1.796
8. Self-acceptance	$\bar{x}$ 49.00 Sd 7.92	48.75 11.77	10.724	.046
9. Nature of Man	$\bar{x}$ 50.50 Sd 9.35	48.00 8.66	9.633	.518
10. Synergy	$\bar{x}$ 50.50 Sd 3.50	45.75 16.18	12.513	.759
11. Acceptance of Aggression	$\bar{x}$ 49.50 Sd 7.14	55.50 5.34	6.737	1.964 <sup>c</sup>
12. Capacity for Inti- mate Contact	$\bar{x}$ 51.37 Sd 5.91	51.25 8.90	8.074	.029

c = t test computed by using  
correlated means

$\alpha 0.5 = 2.131$   
15 degrees of freedom

elsewhere. If Henderson's findings<sup>3</sup> are valid, that amount of positive change as a result of a group experience is directly related to amount of participation, then the growth group's lack of significant change may be partially explained by poor attendance.

According to Meador's findings,<sup>4</sup> already discussed in the literature review, another factor worthy of discussion is the effect of sex roles. The growth group was an all female group with a male leader. Since the expenditure of energy in comparison and competition makes it difficult for women to listen to each other, the lack of change may be partially a result of the group composition. Certainly the leader's observation that the growth group lacked the usual group cohesiveness could be due to this influence. Most of the groups studied in the literature were heterosexual groups. It seems reasonable to speculate that it is preferable to have more than one male present, if any are to be present, because the energy usually spent in comparison and competition will be more quickly dissipated and evenly distributed.

Another factor to consider is the positive change made by the control group. It is interesting to speculate

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<sup>3</sup>Henderson, "Development Group and Change."

<sup>4</sup>Meador et al., "Encounter Groups for Women Only," pp. 342-43.

why that might have occurred. One control subject, in particular, made considerable positive changes on eight of the scales. She took the post-test the day after returning from a three week vacation period. This raises an interesting question: What effect do vacations have on self-actualization levels? Similarly, another control subject made considerable increases on four scales. These were Inner Support, Existentiality, Spontaneity, and Capacity for Intimate Contact.

By examining changes in standard deviations, an interesting observation was made. Standard deviations for the control group increased on four scales although they decreased on the other eight scales. This would seem to indicate that the growth group became a more homogeneous group during the group process, and the control group became more divergent.

#### Discussion of Data Pertaining to Hypothesis 2

It was hypothesized that nurses who participate in a growth group process consisting of ten weekly sessions would change significantly in the direction of increased observable self-actualizing behavior identified by their subordinates and measured by the S.A.B.S. while those in the control group would not. The data obtained from the S.A.B.S. did not support the hypothesis; however, there was an observed general tendency for the growth group to increase their scores on the S.A.B.S. This was not observed

TABLE 6

COMPARISON OF CONTROL AND GROWTH GROUP CHANGES ON  
PRE/POST MEASURES OF SELF-ACTUALIZING BEHAVIOR  
SURVEY USING MEDIAN

ITEM #	CONTROL			GROWTH		
	PRE	POST	DIRECTION OF CHANGE	PRE	POST	DIRECTION OF CHANGE
1.	8.333	8.667	+	8.333	10.000	+
2.	5.667	7.500	+	6.500	6.667	+
3.	8.834	9.167	+	6.333	8.000	+
4.	8.667	8.500	-	7.500	8.000	+
5.	9.000	7.500	-	7.333	8.000	+
6.	6.584	6.834	+	8.000	8.500	+
7.	7.834	7.834	No change	6.667	8.667	+
8.	8.834	8.167	-	8.333	8.667	+
9.	8.584	9.167	+	8.333	6.333	-
10.	9.000	8.167	-	7.667	7.667	No change
11.	7.500	8.000	+	8.333	8.667	+
12.	7.500	7.084	-	6.667	8.000	+
13.	7.584	7.084	-	6.667	9.000	+
14.	8.417	8.000	-	8.333	8.333	No change
15.	9.000	8.917	-	9.000	8.667	-
16.	8.334	8.667	+	8.333	8.667	+
17.	8.000	7.500	-	7.667	8.667	+
18.	7.917	7.917	No change	7.500	8.667	+
19.	9.000	9.250	+	8.668	8.667	No change
20.	6.500	5.500	-	5.667	7.667	+

for the control group. A comparison of pre-post group medians showing direction of change is presented in Table 6.

A reason for this may have been that raters scored the growth group subjects higher because they "expected" them to improve. The attitude of reluctance observed by the investigator may have influenced ratings as well. Since reliability and validity of the measuring instrument remains unassessed, it is difficult to draw any inferences.

The results of the Willcoxon matched-pairs signed ranks test applied to each item of the S.A.B.S. for both groups are presented in Appendix B. The Comparison of pre/post-test scores for the control group showed no significant change on any item of the S.A.B.S. When the same comparisons were made for the growth group, a significant change was found for only one item of the survey. On item 20, subordinates rated growth group nurses significantly higher on the post-test than they had previously on pre-test. These data are presented in Table 7.

The significant change for the growth group on item 20 of the Self-Actualizing Behavior Survey which reads: "stand up for own opinion even when a superior or a majority of co-workers are against it" indicates that there was a change in behavior which was noticeable to others. This change for the growth group seems to relate to increases in the hypothesized direction on two of the P.O.I. scales. The growth group increased in Self-regard (pre  $\bar{x}$  47.50 to post  $\bar{x}$



TABLE 7

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 20  
OF THE S.A.B.S.

ITEM 20: STANDS UP FOR OWN OPINION EVEN WHEN A SUPERIOR OR A MAJORITY OF CO-WORKERS ARE AGAINST IT					
CONTROL GROUP					
PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	8.667	8.667	0	-	1
11	5.000	5.500	.500	1	2
12	5.667	4.667	-1.000	-3	4
13	8.667	4.000	-4.667	-6	7
14	6.667	7.500	.833	2	
16	10.000	10.000	0	-	
17	7.500	5.000	-2.500	-5	
18	4.000	5.500	1.500	4	

N = 6

T = 7 No significant change.

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	5.667	7.667	2.000	6	-2
3	8.000	9.333	1.333	3	
4	8.333	9.667	1.334	4	
5	3.333	7.500	4.167	7	
6	8.333	10.000	1.667	5	
7	5.000	5.667	.667	1	
9	5.000	4.000	-1.000	-2	

N = 7

T = 2 Significant difference at  $\alpha = .05$

49.50).

To see if there was a significant difference between the control group and the growth group on item 20 (post-test scores) the Median Test was applied. Since the obtained p value .1933 was not less than the alpha level .05, the null hypothesis (stating no differences exist between the control and growth groups) could not be rejected.

#### Growth Group Evaluation

During the last growth group session, participants were given evaluation forms constructed by the investigator which asked for comments regarding their experience. Five of the eight participants returned their anonymously completed forms during the following week; three did not respond. One participant rated her experience "extremely positive;" four participants said it was "more positive than neutral;" and one participant said it was "more negative than neutral." Positive aspects cited by group participants included:

1. was helpful "to be more myself"
2. experienced "a sense of community"
3. had an opportunity "to express feelings and receive feedback from peers"
4. gained "insight into personal problems and problems of others"

Negative aspects most frequently cited were largely criticisms of the group process. They included the following:

1. "not enough group interaction - too much concentration on one or two members"
2. "lack of good attendance"

When asked, "What influence has the group process had on your life - personal and professional," respondents most often replied:

1. can "express myself better"
2. can "understand own and others' feelings and handle them more appropriately"
3. can "handle stressful situations better"

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### Summary

The purpose of this study was to investigate whether a growth group could serve a useful function in the in-service program of a nursing service by helping nurses achieve a greater degree of self-actualization. In light of present demands placed on nurses by the consumer of health care and other health team members, it was theorized that the nurse best able to meet these demands would be one who is growing towards self-actualization. A review of the literature indicated that the small group experience, such as a T group, encounter group, etc. was a highly successful means of increasing one's level of self-actualization.

Two hypotheses were formulated:

1. Nurses who participate in a growth group consisting of ten weekly sessions will change significantly in the direction of increased self-actualization as measured by the Personal Orientation Inventory while those in the control group will not.
2. Nurses who participate in a growth group consisting of ten weekly sessions will change significantly in the direction of increased observable self-actualizing behavior identified by their subordinates and measured by the Self-Actualizing Behavior Survey while those in the control group will not.

The study employed a two group, repeated measures research design with random assignment of subjects to groups. Volunteers were solicited from a large general and psychiatric hospital to participate in the experiential growth group process. Volunteers who further met the screening criteria were then randomly assigned to either the control or growth group. The Personal Orientation Inventory was administered to subjects in both groups before the first group session and one week after the last group session was held. Also, all subjects were rated by subordinates on their units during the same time intervals pre and post. This was to determine if changes in self-perception were accompanied by changes in observable behavior. The instrument used for the subordinate ratings was constructed by the investigator since no instrument existed for the measurement of self-actualization in observable behavioral terms.

### Conclusions

Those participating in the growth group rated their experience most often in positive terms. Most thought that they had gained from the experience, personally, and professionally.

The statistical findings did not support the research hypotheses or the previous studies cited in the literature review. These outcomes may have been influenced by a number of factors; principally, group attendance, group composition, and unanticipated positive change in the control group.

An incidental non-hypothesized finding was that head nurses had higher P. O. I. scores than did staff nurses. This supported previous findings in the literature.

The growth group increased significantly only on one item of the Self-Actualizing Behavior Survey which reads, "stands up for own opinion even when a superior or a majority of co-workers are against it." This seems to relate favorably to increases in the Self-regard and Acceptance of Aggression scales of the P. O. I.

A general trend of increase was observed for the growth group on most items of the S.A.B.S., but this was most likely caused by regression effect or rating error due to "expected change" and not caused by participation in the growth group.

The value of a growth group to the inservice program of a hospital remains unclear. The results of this study showed no significant effect of the growth group on levels of self-actualization attained by nurses. In light of various problems encountered during the study, further research is indicated.

#### Recommendations

As a result of this study, the investigator makes the following recommendations for future research:

1. that other studies be conducted using a multi-factorial design in order to measure the effects of the following variables:

- a. age of participants and raters
  - b. years of service within the institution
  - c. variety of group composition
  - d. length and timing of the group process
  - e. attendance and amount of participation
2. that future studies include follow-up testing three to six months after participation in a growth group.
  3. that further development of a reliable measuring instrument for observable self-actualizing behavior be pursued.

March 12, 1973

Dear

I am looking for volunteers to participate in a research project. The purpose of the project is to study what effect an interpersonal group experience has on its participants. The project proposes to ask, is this a valuable experience which should be made available to more people?

Those who volunteer will be randomly assigned to two different groups. In other words, if you decide to participate in the project, you may get assigned to the growth group or the control group - there are responsibilities for both.

If you are assigned to the growth group, you will meet with eight or nine other nurses in a group experience once a week for ten consecutive weeks. Each session will last two to three hours. \_\_\_\_\_, a psychologist, will be the group leader. The times for the sessions have been set up for Monday afternoons, 1:00 p.m. to 4:00 p.m. The purpose of the group is to help you become more aware of your own feelings, behavior and relationships with others and to provide opportunities for personal growth. You will be asked to answer a series of questions about your attitudes, feelings and behavior before the group experience begins. In addition, three of your co-workers will be asked to rate you on certain defined behaviors. At the end of the ten weeks, you will be asked again to answer the same questionnaire and the same co-workers will be asked to rate you again. The results of the questionnaire will be made available to you upon request; however, the ratings of co-workers are confidential and will not be available to you.

If you are assigned to the control group, you will be asked to complete the same questionnaire that those in the growth group will answer, as well as be rated by three co-workers. You will not meet together as a group. At the end of ten weeks you will again be asked to answer the questionnaire and be rated by co-workers. The results of the questionnaire will be made available to you upon request; however, the co-workers' ratings must remain confidential and will not be available to you. You must also agree to not participate in any other group experience during the ten week period. After the data has been collected, you will have an opportunity to participate



in a group experience if you are still interested.

Should you decide at this point that you are interested in this project, you will have an opportunity to ask any questions you may have during an initial interview with the group leader and the researcher of this project. After this interview, if you are still interested in participating in the project, you will be notified of your assignment to a group.

Since this project has been cleared with nursing service, efforts will be made with the scheduling of your time to make continued participation possible in the research should you decide to volunteer. Continued participation is extremely important to me, the researcher, since I am using this research as the basis of my thesis and hope to graduate in August.

If you have further questions, you may call me at the Day Hospital, Ext. 392 on Tuesdays, Wednesdays, or Fridays. If I am not in, you may leave a message with the secretary, \_\_\_\_\_, and I will return your call.

If you are interested in participating in the project, please fill out the form at the bottom of this page and return via the tube to Nursing Service, Tube B38. This must be in no later than April 1, 1973.

Thanks,

Dona Dooyema, R.N.

-----  
INTERPERSONAL GROUP EXPERIENCE PROJECT

I am interested in participating in the above named project.

NAME \_\_\_\_\_

WARD \_\_\_\_\_

EXT. \_\_\_\_\_

Remember to return to Nursing Service Office no later than April 1, 1973.

SELF-ACTUALIZING BEHAVIOR SURVEY

Instructions: You are asked to rate a fellow employee. It is important that you answer all the questions. If you are uncertain on a particular question, answer it anyway. In the block opposite each statement place any number (from 0 to 10) according to how often you think the employee exhibits the behavior described. To indicate a behavior which never occurs, use 0. To indicate a behavior which always occurs, use 10. For example, if you think that the first statement is always characteristic of the person you are rating, you would place a number 10 in the block. If you think the statement is characteristic only about half the time, you would place a number 5 in the block. If the behavior occurred never or almost never, you might place the number 0, 1, 2, or 3 in the block.

Do not place your name on the rating sheet!

- |  |                      |
|--|----------------------|
| 1. Is concerned with self-improvement.   | <input type="text"/> |
| 2. Expresses anger without blowing up or holding back.                                   | <input type="text"/> |
| 3. Is able to accept failures without getting overly depressed or immobilized.           | <input type="text"/> |
| 4. Can cope with the ups and downs of this work situation.                               | <input type="text"/> |
| 5. Can accept criticism without losing face.   | <input type="text"/> |
| 6. Expresses own opinions without concern for impressing others.                         | <input type="text"/> |
| 7. Invites staff criticism as an opportunity for growth or change in the work situation. | <input type="text"/> |
| 8. Feels free to give positive and negative feedback (opinions) to fellow employees.     | <input type="text"/> |
| 9. Is able to approach the work situation with an appropriate sense of humor.            | <input type="text"/> |
| 10. Does not let "what happened yesterday" interfere with work "today".                  | <input type="text"/> |

11. Gives people the benefit of the doubt when the facts are unclear in a situation. ☐
12. Is able to meet the needs of an individual situation without strict adherence to "rules and regulations". ☐
13. Is able to handle today's problems without "too much" concern for tomorrow. ☐
14. Can do what he believes is right in a situation without seeking first others' approval. ☐
15. If one plan of action fails, can come up with an alternative plan without becoming unglued. ☐
16. Recognizes subordinates' potential and allows them opportunity for growth and a chance to display individual talents. ☐
17. Approaches new situations with a minimum of doubts and hesitation. ☐
18. Is able to proceed with orders or directives even though the outcome is vague and uncertain. ☐
19. Seeks help from subordinates or co-workers who can offer skillful assistance. ☐
20. Stands up for own opinion even when a superior or a majority of co-workers are against it. ☐

Please submit the following information about yourself:

Sex:

Age:

Years of service in Veterans Administration:

GROWTH GROUP EVALUATION FORM

1. Would you characterize your experience in this group as positive or negative? (check a blank)

<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
Extremely Positive	More Positive Than Neutral	Neutral	More Negative Than Neutral	Extremely Negative

2. If you answered positive - in what way was it positive?  
(Be specific)

3. If you answered negative - in what way was it negative?  
(Be specific)

4. What influence or effect do you think the group experience has had on your life - personal and professional?

5. Do you have any suggestions for future groups of this kind?

TABLE 8

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 1  
OF THE S.A.B.S.

ITEM 1: IS CONCERNED WITH SELF-IMPROVEMENT

## CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	8.333	9.000	.667	4	4
11	10.000	9.500	-.500	-2	
12	8.333	7.667	-.666	-3	
13	8.333	8.000	-.333	-1	
14	10.000	10.000	0	0	
16	7.500	7.500	0	0	
17	8.333	8.333	0	0	
18	10.000	10.000	0	0	

N = 4

T = 4 No significant difference.

## GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	9.000	10.000	1.000	2	1
3	7.333	10.000	2.667	6	
4	8.333	10.000	1.667	4	
5	7.667	10.000	2.333	5	
6	8.333	7.667	-.666	-1	
7	6.667	8.000	1.333	3	
9	10.000	10.000	0	0	

N = 6

T = 1 No significant difference.

TABLE 9

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 2  
OF THE S.A.B.S.

ITEM 2: EXPRESSES ANGER WITHOUT BLOWING UP OR HOLDING BACK

CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS	
8	9.333	8.667	-.666	-1.0	-1.0	
11	5.000	9.500	4.500	7.5		7.5
12	6.333	7.333	1.000	4.5		4.5
13	8.333	7.500	.833	-3.0	-3.0	
14	3.000	7.500	4.500	7.5		7.5
16	5.000	4.000	-1.000	-4.5	-4.5	
17	9.333	10.000	.667	2.0		2.0
18	5.000	2.500	-2.500	-6.0	-6.0	
					-14.5	21.5

N = 8

T = 14.5 No significant difference.

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	8.333	9.333	1.000	2.0	No negative ranks
3	6.667	6.667	0	0	
4	5.333	6.333	1.000	2.0	
5	10.000	10.000	0	0	
6	4.667	5.667	1.000	2.0	
7	2.667	4.000	1.333	4.0	
9	6.500	8.000	1.500	5.0	

N = 5

T = 0 No significant difference.

TABLE 10

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 3  
OF THE S.A.B.S.

CONTROL GROUP					
PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	9.000	9.333	.333	1.0	3
11	10.000	9.000	-1.000	-3.0	
12	4.333	7.333	3.000	5.0	
13	8.000	8.500	.500	2.0	
14	8.667	10.000	1.333	4.0	
16	2.500	7.500	5.000	6.0	
17	10.000	10.000	0	0	
18	10.000	10.000	0	0	

N = 6

T = 3 No significant difference.

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	8.667	9.000	.333	1.0	No negative ranks
3	7.000	8.667	1.667	2.5	
4	6.333	8.000	1.667	2.5	
5	10.000	10.000	0	0	
6	3.333	6.000	2.667	4.0	
7	3.333	6.667	3.334	5.0	
9	5.000	5.000	0	0	

N = 5

T = 0 No significant difference.

TABLE 11

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 4  
OF THE S.A.B.S.

ITEM 4: CAN COPE WITH THE UPS AND DOWNS OF THIS WORK SITUATION					
CONTROL GROUP					
PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	8.333	9.000	.667	1.0	1.0
11	9.000	7.500	-1.500	-2.5	-2.5
12	8.000	6.500	-1.500	-2.5	-2.5
13	8.000	8.000	0	0	
14	10.000	10.000	0	0	
16	3.000	7.500	4.500	4.0	4.0
17	10.000	10.000	0	0	
18	10.000	10.000	0	0	
					<u>-5.0</u> <u>5.0</u>

N = 4

T = 5 No significant difference.

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	9.667	9.000	-.667	-1.5	-1.5
3	7.333	9.000	1.667	4.5	4.5
4	6.333	8.000	1.667	4.5	4.5
5	10.000	10.000	0	0	
6	5.667	6.667	1.000	3.0	3.0
7	7.667	7.000	-.667	-1.5	-1.5
9	7.500	5.000	-2.500	-6.0	-6.0
					<u>-9.0</u> <u>12.0</u>

N = 6

T = 9 No significant difference



TABLE 12

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 5  
OF THE S.A.B.S.

ITEM 5: CAN ACCEPT CRITICISM WITHOUT LOSING FACE

CONTROL GROUP					
PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	8.667	9.000	.333	1.0	1.0
11	10.000	7.500	-2.500	-6.5	-6.5
12	6.333	4.333	-2.000	-5.0	-5.0
13	8.000	7.500	.500	2.5	2.5
14	10.000	9.500	-.500	-2.5	-2.5
16	2.500	7.500	5.000	8.0	8.0
17	9.333	10.000	.667	4.0	4.0
18	10.000	7.500	-2.500	-6.5	-6.5
					<u>-20.5</u>
					<u>15.5</u>

N = 8

T = 15.5 No significant difference.

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	8.333	9.333	1.000	4.5	
3	7.000	8.000	1.000	4.5	
4	7.333	8.000	.667	3.0	
5	10.000	10.000	0	0	
6	5.000	5.333	.333	1.5	
7	7.333	7.000	-.333	1.5	
9	4.000	4.000	0	0	1.5

N = 5

T = 1.5 No significant difference.

TABLE 13

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 6  
OF THE S.A.B.S.

ITEM 6: EXPRESSES OWN OPINION WITHOUT CONCERN FOR IMPRESSING  
OTHERS

CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	8.667	8.667	0	0	
11	6.500	9.500	3.000	5	5
12	8.000	4.333	-3.667	-6	-6
13	5.667	3.500	-2.167	-2	-2
14	7.333	10.000	2.667	4	4
16	5.000	5.000	0	0	
17	6.667	8.667	2.000	1	1
18	5.000	2.500	-2.500	-3	-3
					<u>-11</u>
					<u>10</u>

N = 6

T = 10 No significant difference

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	8.000	7.333	-.667	-3.5	-3.5
3	8.333	9.000	.667	3.5	
4	8.000	8.667	.667	3.5	
5	8.333	8.500	.167	1.0	
6	6.667	9.333	2.666	7.0	
7	2.333	3.000	.667	3.5	
9	7.500	5.000	-2.500	-6.0	-6.0
					<u>-9.5</u>

N = 7

T = 9.5 No significant difference

TABLE 14

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 7  
OF THE S.A.B.S.

ITEM 7: INVITES STAFF CRITICISM AS AN OPPORTUNITY FOR GROWTH  
OR CHANGE IN THE WORK SITUATION

CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	6.000	8.000	2.000	1.0	1
11	10.000	10.000	0	0	
12	7.667	7.667	0	0	
13	8.000	8.000	0	0	
14	10.000	10.000	0	0	
16	2.500	0	-2.500	-2.5	
17	10.000	6.667	-3.333	-4.0	
18	5.000	2.500	-2.500	-2.5	

N = 4

T = 1 No significant difference.

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	8.000	8.667	.667	1.0	2.5 4.5 <u>7.0</u>
3	5.333	9.000	3.667	7.0	
4	8.000	9.000	1.000	2.5	
5	8.333	10.000	1.667	4.5	
6	6.667	5.667	-1.000	-2.5	
7	6.667	5.000	-1.667	-4.5	
9	5.000	7.500	2.500	6.0	

N = 7

T = 7 No significant difference.

TABLE 15

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 8  
OF THE S.A.B.S.

ITEM 8: FEELS FREE TO GIVE POSITIVE AND NEGATIVE FEEDBACK  
(OPINIONS) TO FELLOW EMPLOYEES.

CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	8.667	9.000	.333	1.5	1.5 <u>1.5</u> 3.0
11	6.500	3.500	-3.000	-5.0	
12	9.000	9.333	.333	1.5	
13	9.333	8.000	-1.333	-3.0	
14	10.000	4.500	-5.500	-6.0	
16	5.000	2.500	-2.500	-4.0	
17	8.333	8.333	0	0	
18	10.000	10.000	0	0	

N = 6

T = 3 No significant difference.

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	5.667	9.000	3.333	5.0	-3
3	7.667	8.333	.666	2.0	
4	8.333	8.667	.334	1.0	
5	8.333	10.000	1.667	4.0	
6	9.000	8.333	-.667	-3.0	
7	7.000	7.000	0	0	
9	10.000	10.000	0	0	

N = 5

T = 3 No significant difference.

TABLE 16

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 9  
OF THE S. A. B. S.

ITEM 9: IS ABLE TO APPROACH THE WORK SITUATION WITH AN  
APPROPRIATE SENSE OF HUMOR

CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	9.000	9.333	.333	1.0	
11	8.500	9.000	.500	2.5	
12	8.667	9.667	1.000	5.0	
13	8.333	7.500	-.833	-4.0	-4.0
14	10.000	10.000	0	0	
16	3.000	2.500	-.500	-2.5	-2.5
17	7.667	7.667	0	0	-6.5
18	10.000	10.000	0	0	

N = 5

T = 6.5 No significant difference

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	9.667	5.000	.333	-2.0	-2 6
3	5.333	6.333	1.000	-1.0	-1 5
4	7.333	9.333	2.000	-3.0	-3 4
5	10.000	10.000	0	0	-6 15
6	9.333	2.667	-6.666	6.0	
7	8.333	5.667	-3.666	5.0	
9	7.500	5.000	-2.500	4.0	

N = 7

T = 6 No significant difference

TABLE 17

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 10  
OF THE S. A. B. S.

ITEM 10: DOES NOT LET "WHAT HAPPENED YESTERDAY" INTERFERE  
WITH WORK TODAY

CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	9.667	8.000	-1.667	-5.5	2 3 $\frac{1}{6}$
11	9.000	9.500	.500	2.0	
12	9.000	9.667	.667	3.0	
13	7.333	7.500	.167	1.0	
14	10.000	10.000	0	0	
16	5.000	1.500	-3.500	-7.0	
17	10.000	8.333	-1.667	-5.5	
18	9.000	7.500	-1.500	-4.0	

N = 7

T = 6 No significant difference

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	9.333	10.000	.667	1.0	-4.0 -2.5 <u>-6.5</u>
3	7.667	8.667	1.000	2.5	
4	7.667	7.667	0	0	
5	10.000	10.000	0	0	
6	1.333	5.333	4.000	5.0	
7	9.333	5.667	-3.666	-4.0	
9	7.500	6.500	-1.000	-2.5	

N = 5

T = 6.5 No significant difference

TABLE 18

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 11  
OF THE S. A. B. S.

ITEM 11: GIVES PEOPLE THE BENEFIT OF THE DOUBT WHEN THE  
FACTS ARE UNCLEAR IN A SITUATION

CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	7.333	8.000	.667	2	2
11	10.000	10.000	0	0	
12	6.333	4.667	-1.666	-6	1
13	7.667	8.000	.333	1	
14	9.333	8.000	-1.333	-5	
16	2.500	1.500	-1.000	-4	
17	7.500	8.333	.833	3	$\frac{3}{6}$
18	7.500	7.500	0	0	

N = 6

T = 6 No significant change

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	8.667	9.000	.333	1	
3	7.333	8.667	1.334	5	
4	8.333	9.000	.667	2	
5	10.000	10.000	0	0	
6	6.667	5.667	-1.000	-3	
7	4.667	6.000	1.333	4	-3
9	8.500	3.500	-5.000	-6	
					$\frac{-6}{9}$

N = 6

T = 9 No significant difference

TABLE 19

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 12  
OF THE S. A. B. S.

ITEM 12: IS ABLE TO MEET THE NEEDS OF AN INDIVIDUAL SITUATION  
WITHOUT STRICT ADHERENCE TO "RULES AND REGULATIONS"

CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	8.000	8.000	0	0	2
11	7.500	8.500	1.0	2.0	
12	4.333	4.000	-.333	-1.0	
13	8.333	5.000	-3.333	-5.0	
14	7.000	9.500	2.500	4.0	$\frac{4}{6}$
16	7.500	7.500	0	0	
17	6.667	6.667	0	0	
18	7.500	6.000	-1.500	-3.0	

N = 5

T = 6 No significant difference

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	9.333	8.000	-1.333	-4.0	-4.0
3	6.000	9.000	3.000	5.0	
4	9.333	8.667	-.666	-2.5	$\frac{-2.5}{-6.5}$
5	5.000	8.500	3.500	6.0	
6	7.667	7.333	.334	1.0	
7	6.667	7.333	1.666	2.5	
9	2.500	2.500	0	0	

N = 6

T = 6.5 No significant difference



TABLE 20

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 13  
OF THE S. A. B. S.

ITEM 13: IS ABLE TO HANDLE TODAY'S PROBLEMS WITHOUT TOO  
MUCH CONCERN FOR TOMORROW

CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	8.000	7.667	- .333	-2.0	
11	6.500	5.000	-1.500	-5.0	
12	5.667	4.667	-1.000	-3.5	
13	7.667	7.500	- .167	-1.0	
14	5.667	10.000	4.333	7.0	7.0
16	7.500	10.000	2.500	6.5	6.5
17	7.667	6.667	-1.000	-3.5	13.5
18	8.000	5.500	-2.500	-6.5	

N = 8

T = 13.5 No significant difference

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	8.667	9.333	.666	2.0	
3	7.667	9.000	1.333	4.0	
4	8.667	9.000	.333	1.0	
5	6.667	10.000	3.333	6.0	
6	6.667	5.667	-1.000	-3.0	-3.0
7	5.667	8.333	2.666	5.0	
9	5.000	5.000	0	0	

N = 6

T = 3 No significant difference

TABLE 21

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 14  
OF THE S. A. B. S.

ITEM 14: CAN DO WHAT HE BELIEVES IS RIGHT IN A SITUATION  
WITHOUT SEEKING FIRST OTHERS' APPROVAL

CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	9.667	8.333	-.666	-2	5
11	3.500	5.000	1.500	5	
12	9.333	8.000	-1.333	-4	
13	7.333	8.000	.667	3	3
14	10.000	10.000	0		
16	5.000	2.500	-2.500	-6	
17	7.500	7.667	.167	1	$\frac{1}{9}$
18	10.000	10.000	0	0	

N = 6

T = 9 No significant difference

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	9.333	9.667	.334	2	2
3	8.667	-6.667	-2.000	-7	
4	8.000	8.333	.333	1	$\frac{1}{3}$
5	10.000	9.000	-1.000	-4	
6	8.333	6.667	-1.667	-6	
7	4.000	3.333	-.667	-3	
9	5.500	4.000	-1.500	-5	

N = 7

T = 3 No significant difference

TABLE 22

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 15  
OF THE S. A. B. S.

ITEM 15: IF ONE PLAN OF ACTION FAILS CAN COME UP WITH AN  
ALTERNATIVE PLAN WITHOUT BECOMING UNGLUED

CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	8.000	8.333	.333	1	-2
11	5.000	7.000	2.000	4	
12	10.000	9.333	-.667	-2	
13	7.667	8.500	.833	3	
14	10.000	10.000	0	0	
16	5.000	7.500	2.500	5	
17	10.000	10.000	0	0	
18	10.000	10.000	0	0	

N = 5

T = 2 No significant difference

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	9.000	9.333	.333	1	-6 -3 -9
3	7.667	9.000	1.333	2	
4	6.333	8.667	2.334	5	
5	10.000	10.000	0	0	
6	9.333	6.333	-3.000	-6	
7	5.667	7.333	1.666	4	
9	9.000	7.500	-1.500	-3	

N = 6

T = 9 No significant difference

TABLE 23

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 16  
OF THE S.A.B.S.

ITEM 16: RECOGNIZES SUBORDINATES POTENTIAL AND ALLOWS THEM  
OPPORTUNITY FOR GROWTH AND A CHANCE TO DISPLAY  
INDIVIDUAL TALENTS

CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	8.667	8.333	-.334	-1.0	-1
11	9.000	10.000	1.000	3.5	
12	8.000	9.000	1.000	3.5	
13	6.667	8.000	1.333	5.0	
14	6.667	10.000	3.333	7.0	
16	5.000	5.000	0	0	
17	9.333	10.000	.667	2.0	
18	10.000	7.500	-2.500	-6.0	
					<u>-6</u> <u>-7</u>

N = 7

T = 7 No significant difference

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	8.667	9.667	1.000	2.5	-4
3	8.000	9.000	1.000	2.5	
4	8.333	8.667	.334	1.0	
5	8.333	10.000	1.667	5.0	
6	9.000	7.667	-1.333	-4.0	
7	4.333	7.667	3.334	7.0	
9	5.000	7.500	2.500	6.0	

N = 7

T = 4 No significant difference

TABLE 24

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 17  
OF THE S. A. B. S.

ITEM 17: APPROACHES NEW SITUATIONS WITH A MINIMUM OF DOUBTS  
AND HESITATION

CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	8.000	8.667	.667	3	3
11	8.000	6.000	-2.000	-5	-5
12	8.333	7.667	.666	2	2
13	8.000	7.500	-.500	-1	-1
14	8.333	10.000	1.667	4	4
16	7.500	7.500	0	0	
17	10.000	6.667	-3.333	-6	-6
18	7.500	7.500	0	0	-12 9

N = 6

T = 9 No significant difference

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	9.667	9.000	-.667	-2.5	-2.5
3	8.000	8.667	.667	2.5	
4	7.667	8.667	1.000	4.0	
5	8.333	10.000	1.667	6.0	
6	5.667	6.333	.666	1.0	
7	5.333	6.667	1.334	5.0	
9	7.500	7.500	0	0	

N = 6

T = 2.5 No significant difference

TABLE 25

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 18  
OF THE S. A. B. S.

ITEM 18: IS ABLE TO PROCEED WITH ORDERS OR DIRECTIVES EVEN  
THOUGH THE OUTCOME IS VAGUE OR UNCERTAIN

CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	8.333	8.333	0	0	1.0
11	10.000	8.500	-1.500	-4.0	
12	6.000	5.000	-1.000	-3.0	
13	6.333	3.500	-2.833	-5.0	
14	9.333	9.500	.167	1.0	
16	7.500	7.500	0	0	
17	10.000	9.333	-.667	-2.0	
18	7.500	7.500	0	0	

N = 5

T = 1 No significant difference

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	8.667	9.000	.333	1.0	-4
3	7.000	8.667	1.667	5.5	
4	7.667	9.333	-1.666	-4.0	
5	8.333	10.000	1.667	5.5	
6	7.333	7.667	.334	2.0	-7 -11
7	6.667	8.000	1.333	3.0	
9	7.500	5.000	-2.500	-7.0	

N = 7

T = 11 No significant difference

TABLE 26

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 19  
OF THE S. A. B. S.

ITEM 19: SEEKS HELP FROM SUBORDINATES OR CO-WORKERS WHO CAN  
OFFER SKILLFUL ASSISTANCE

CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	9.000	9.000	0	0	
11	9.000	9.500	.500	1.0	1
12	6.000	5.333	-.667	-2.0	-2
13	9.000	7.500	-1.500	-3.0	-3
14	6.667	9.500	2.833	4.0	<u>4</u>
16	7.500	7.500	0	0	-5 <u>5</u>
17	10.000	10.000	0	0	
18	10.000	10.000	0	0	

N = 4

T = 5 No significant difference

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	9.333	9.667	.334	2.0	
3	8.000	8.333	.333	1.0	
4	8.667	9.667	1.000	3.5	
5	10.000	10.000	0	0	
6	9.333	8.333	-1.000	-3.5	-3.5
7	7.000	8.667	1.667	6.0	
9	6.000	7.500	1.500	5.0	

N = 6

T = 3.5 No significant difference

TABLE 27

COMPARISON OF PRE/POST TEST SCORES FOR CONTROL AND  
GROWTH GROUP SUBJECTS ON ITEM 20  
OF THE S. A. B. S.

ITEM 20: STANDS UP FOR OWN OPINION EVEN WHEN A SUPERIOR OR  
A MAJORITY OF CO-WORKERS ARE AGAINST IT

CONTROL GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE POST	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
8	8.667	8.667	0	0	1
11	5.000	5.500	.500	1	
12	5.667	4.667	-1.000	-3	
13	8.667	4.000	-4.667	-6	2
14	6.667	7.500	.833	2	
16	10.000	10.000	0	0	
17	7.500	5.000	-2.500	-5	4 7
18	4.000	5.500	1.500	4	

N = 6

T = 7 No significant difference

GROWTH GROUP

PAIR	S.A.B.S. SCORE PRE	S.A.B.S. SCORE	D	RANK OF D	RANK WITH LESS FREQUENT SIGNS
2	5.667	7.667	2.000	6	-2
3	8.000	9.333	1.333	3	
4	8.333	9.667	1.334	4	
5	3.333	7.500	4.167	7	
6	8.333	10.000	1.667	5	
7	5.000	5.667	.667	1	
9	5.000	4.000	-1.000	-2	

N = 7

T = 2 Significant difference at  $\alpha = .05$   
Needs Median Test



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