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I am submitting herewith a dissertation written by Joshua Olayiwola Oyekan entitled "Positive Self-Esteem Training Using Nonverbal Communication Cues: Facial Behaviors." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Educational Psychology and Guidance.

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POSITIVE SELF-ESTEEM TRAINING USING NONVERBAL COMMUNICATION CUES: FACIAL BEHAVIORS

A Dissertation

Presented for the

Doctor of Education

Degree

The University of Tennessee, Knoxville

Joshua Olayiwola Oyekan

March 1979

1380209

DEDICATION

The piece of work is dedicated to Oyetunde, Oyekunle, and Oyeyemi, without whose dedicated moral support this time consuming undertaking would never have been completed successfully.

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ABSTRACT

The purposes of the study were: (1) to determine the degree to which an eclectic counseling psychology model could be employed in building self-esteem through nonverbal communication cues such as facial behaviors, and (2) to find out whether sex, race, or the group assignment had any statistical significance on subjects' ability to judge facial affect pictures. Twenty-eight graduate and undergraduate students who volunteered to participate in the study were randomly selected into four groups with seven subjects in each group. Six different hypotheses were tested in the study to determine the degree to which high self-esteem could be built through the usage of nonverbal communication cues. Four dependent variables (Tennessee Self-Concept Scale (TSCS); Multiple Affect Adjective Checklist (MAACL); Rosenberg four-Point Self-Esteem Scale (RSS); and Facial Affect Pictures (FAP) were used to gather subjects' responses concerning their self-esteem. Various statistical methods (t-test, Fisher's exact test, simple anova, and two-way anova) were used to analyze the data collected at .05 level of confidence.

Experimental subjects were exposed to seven one-hour sessions of training during which an eclectic counseling psychology model was used. In addition to the pre- and post-test instruments that were administered to the experimental subjects during the individual sessions, they were also shown slides of different facial affects (happy, sad, fear, disgust, surprise, anger, and neutral). Subjects in the control groups

were not exposed to the training session experiences. The results of the study showed that: (1) the results of a one-way anova test indicated that there was no statistically significant difference between the experimental and control subjects with regard to their posttest mean scores on the Tennessee Self-Concept Scale (TSCS); (2) regardless of the training, one-way anova results indicated that the training helped low self-esteem experimental subjects perceive themselves as highly as the high self-esteem experimental subjects; (3) experimental subjects' race, sex, and group affiliation had no direct bearing on their ability to judge facial affect pictures as measured on the TSCS, MAACL, and RSS; (4) there was a significant difference between the experimental and control subjects with regard to their posttest mean scores on the Rosenberg Four-Point Self-Esteem Scale (RSS).

In light of these results, it was concluded that (1) a series of training sessions based upon an eclectic counseling psychology model was effective in raising the self-esteem of low self-esteem experimental subjects to the degree that there was virtually no significant differerence between them and the high self-esteem experimental subjects; (2) the training helped both high and low experimental subjects to understand the possible causes of feelings of anxiety, depression, and hostility, and that the ability to judge or rate FAP is independent of sybjects group affiliation. The following suggestions were advanced in light of future replication studies. First, since the present population was narrow and not adequately representative of people who may have actual low self-esteem, future studies may select subjects from academic and nonacademic settings. Second, future studies may exclude neurosis,

psychosis and maladjustment items from the TSCS because volunteer subjects may not emit any of these behaviors; and third, future studies should control for the verbal and nonverbal interactions between the experimenter and the subjects because these interactions may affect the overall results of such studies.

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CHAPTER I

INTRODUCTION AND STATEMENT OF THE PROBLEM

Dobson's research (1978) has shown that self-esteem can be traced to many causes, most of them linked with early home life in one way or another. It is felt that an adult who felt unloved or disrespected as a child may likely never fully forget the experience. Dobson has also linked the roots of low self-esteem to three main factors: (1) the feeling of not being needed, (2) the role of beauty, and (3) the basis of intelligence. The general view held by Dobson has been that women tend to develop low self-esteem if they do not feel needed, or are not sexually attractive, or are not as intelligent as men. Erikson (1968), while equating self-esteem with secure identity stressed also that a person with a secure identity usually feels at home in his body, knows where he is going, and feels assured of recognition from people who count. On the other hand, people with low self-esteem would usually have a relatively unstable self-concept which means that they lack a consistent frame of reference within which to assimilate their experiences of self and others. According to this point of view, low self-esteem is capable of provoking anxiety, a state intensified by the strain of putting on a front. This view further holds that people with low self-esteem are more likely than high self-esteem individuals to be lonely. They are very likely to be more vulnerable; they are likely to be sensitive to criticism; they are easily bothered if others

have a poor opinion of them; they are deeply disturbed if they do poorly at some task; they are prone to become upset when they become aware of a personal fault or inadequacies; and they may be touchy and easily hurt.

Numerous experimental studies are available to support the view that the feeling of either high or low self-esteem is capable of influencing how one behaves in private or public (Spence et al., 1975; Schlenker, 1975; Shrauger, 1965). However, very few research studies have examined the relationships which exist among subjects' sex, race, and group affiliation and the extent to which nonverbal facial behaviors might be improved through the use of eclectic counseling. The basic problem of this study was to determine the degree to which an eclectic counseling model as well as subjects' sex, race, and group affiliation could be employed in building high or positive self-esteem.

A. PURPOSE OF THE STUDY

The research study was conducted (1) to justify the ideas posited by Goffman (1971), and Schneider (1959) that an individual maximizes some social or personal rewards and minimizes some social disapproval by presenting a self-esteem model which assures that persons have behaved in a fashion that maximizes their self-esteem, (2) to find the degree to which an eclectic counseling psychology approach as opposed to a single-theory model could be used in building self-esteem through nonverbal facial communication, and (3) to find out whether sex, race, or the group assignment to which subjects belonged had any statistical significance on subjects' ability to judge facial pictures.

B. NULL HYPOTHESES

1. As a result of the training, using an eclectic counseling model to build high self-esteem, the experimental subjects would perform significantly better than the control subjects on their posttest scores on the Tennessee Self-Concept Scale (TSCS).

2. As a result of the skills to be gained through the training sessions, high and low experimental subjects would not differ significantly on their posttest scores on the TSCS, MAACL, and FAP.

3. As a result of the training, using an eclectic counseling psychology model, female experimental subjects would not show more low self-esteem traits than male experimental subjects with regard to their posttest scores on the TSCS, MAACL, and FAP.

4. As a result of the training in self-esteem building, using an eclectic counseling psychology approach, the posttest self-esteem scores of black experimental subjects would not show more low self-esteem traits than the posttest self-esteem scores of white experimental subjects.

5. Upon the completion of the training sessions, the experimental subjects would be able to judge facial affect pictures more accurately than the control groups subjects.

6. As a result of training, there would be a significant difference between experimental and control subjects with respect to their posttest mean scores on the Rosenberg Self-Esteem Scale.

C. DEFINITION OF TERMS

1. Low self-esteem: Low self-esteem was defined in the present study as the degree to which subjects expressed the feelings of inadequacy, lack of confidence in their own abilities, and a certainty of worthlessness, as measured by the Tennessee Self-Concept Scale (TSCS), Multiple Affect Adjective Checklist (MAACL), and RSS.

2. High self-esteem: High self-esteem was defined in the study as the number of statements implying high self-esteem which subjects attributed to themselves on the TSCS, MAACL, and RSS inventories.

3. Face: The human face was operationally used to refer to those parts of the subjects' heads comprising of the upper eyelids, brows, nose, lips, jaws, the cheek, and the chin.

4. Training: Training, as used in this study, referred to the series of structured training sessions and activities, involving mini-lectures, videotaping, slide presentation, group discussions, etc., that were employed along with an eclectic counseling psychology model with the experimental subjects.

5. Nonverbal communication: Nonverbal communication referred to all the interpersonal communications executed by the subjects through their facial behaviors without the traditional usage of spoken words. These facial behaviors included anger, fear, happy, sad, disgust, surprise, and neutral facial behaviors.

6. Eclectic counseling model: Eclectic counseling model was a series of counseling techniques (Reality therapy, Gestalt therapy, Behavioral counseling, desensitization by reciprocal inhibition) which, in combination, were used to assist the experimental subjects to become

more aware of the negative influences that are usually associated with anger, sad, disgust, fear, happy, and neutral facial behaviors.

D. BASIC ASSUMPTIONS

The following basic assumptions were made concerning the present study:

1. Interpretation of facial behaviors of emotional tendencies can be made with a high degree of reliability.
2. Patterns of facial behaviors made from black and white slides of real human faces and projected on the screen are judged more accurately than are freehand drawings of facial behaviors.
3. Watching and judging facial behaviors of other people has a significant impact on how people see, accept, or reject themselves within the domains of self-esteem.
4. Ability to judge facial behaviors is universal and cross-cultural regardless of socioeconomic or educational background, race, or sex, or age of subjects.
5. The constant feeling of self-rejection, worthlessness, inadequacy, unhappiness, being alone, etc., are symptomatic of low self-esteem, while the feeling of happiness, self-actualization, self-acceptance, adequacy, etc., represent or typify high or positive self-esteem.
6. Positive self-esteem is a construct that can be measured by the following instruments: TSCS, MAACL, RSS, and FAP.

7. Positive self-esteem is a behavior that can be learned in a training program.

E. DELIMITATIONS OF THE STUDY

1. The study was limited to those graduate and undergraduate students who volunteered to participate in the research project during the spring quarter of 1978. Consequently, the apparent generalizability of the study is limited to those male and female subjects at The University of Tennessee, Knoxville.

2. The training in positive self-esteem building using nonverbal communication cues was limited to how subjects communicated anger, fear, sad, happy, disgust, surprise, and neutral facial behaviors at the time of the research.

3. Nonverbal communication has at least seven basic elements (vocal characteristics, use of time, use of space, posture, physical characteristics, environmental factors, and facial behaviors).

4. Some characteristics of the subjects other than their facial behaviors could not be controlled for in the pre- and post-training sessions.

5. There were no follow-up measures to test for the retention of high or low self-esteem attained during the training sessions.

CHAPTER II

ORGANIZATION OF CHAPTER II

Chapter II is presented under the following headings for a better understanding of the relationship between self-esteem and facial behaviors. Section A--Historical Perspectives on Self-Esteem; Section B--Theoretical Framework; Section C--Review of Literature on Self-Esteem; Section D--Review of Literature on Facial Behaviors; Section E--Rationale for Training; and Section F--Literature Review on the Use of Slide Pictures.

A. HISTORICAL PERSPECTIVES ON SELF-ESTEEM

In the early 1890's, William James (1890) described the self by saying that a man's self is the sum total of all that he can call his. He divided this notion into three constituent parts: "the material Me," "the social Me," and "the spiritual Me." By the "material Me," James referred to one's body, possessions, one's family etc. By the "social Me," he meant the recognition which the person received from other people. However, by the "spiritual Me," James meant the states of consciousness involving feelings and emotions, reflected on or perceived by the person himself. James contended that in order to understand the "ME" in the total sense, one must look not only at the constituents of the "ME" but also at the feelings and emotions they arouse. In other words, one must look into the degree of self-appreciation and the acts

which they prompt. James argued that people are prone to seek honor for themselves, and that the extent to which people actually experience success can be called "heightened self-esteem." He further contended that the evaluations that one places on himself or herself are vitally related to the amount of aspirations one has. In other words, a person unquestioningly possesses high self-esteem if he has high aspirations.

Cooley (1964), a sociologist, advanced the theory of "the looking-glass-self." By this term, Cooley hypothesized that an individual's conception of himself is determined by perception of other people's reaction to him. In his writing, Cooley spoke of three essential components of the self: (1) the imagination of one's appearance to other people, (2) the imagination of one's judgment of that appearance, and (3) some sort of self-feeling. Cooley argued that the self is a kind of instinct which is capable of functioning to unify and stimulate the individual's behavior. He used self-esteem interchangeably with the idea of self-feeling, an aspect of one's looking-glass self.

Mead (1934) theorized that self-esteem is an evaluative component of a set of reflexive attitude toward the self. In trying to account for self-conscious behavior, Mead used the notion or attitude as a predisposition to act in a given way with respect to a given object. In psychoanalytic terms, self-esteem is associated with one's ability to adapt to the world realistically. It is also employed in terms of self-as-knower or self-as-actor.. While Fromm (1939) quickly asserted that to pursue positive self-esteem is to strive after "self-fulfillment," Hoenry (1950) used the term interchangeably with "self-realization." Maslow (1923), in his hierarchy of needs, identified self-esteem with

the idea of "dominance-feeling"--a kind of sureness, pride, sense of mastery, or feeling of adequacy when dealing with other people.

From a historical viewpoint, self-esteem also has roots in clinical records especially in Carl Roger's Client-centered therapy. Rogers (1951) spoke of "self-regarding attitudes"--a person's perceptions and cognitions of his abilities, actions, and relations within his social milieu. Rogers argued that self-esteem was the same as "self-acceptance." Rogers (1961) felt that a positive emotional tone toward the self seems to exist when self-structure is firmly organized. A negative self-feeling exists when experiences occur which are seen as inconsistent with structure. Rogers claimed that a consistent self-esteem could be achieved either by honest and flexible self-appraisal or by the use of defensive behaviors. Dittes (1959) posited the theoretical view that people with different levels of self-esteem are prone to employ different kinds of psychological defenses in their interpersonal communications. In his propositions, he clearly associated self-esteem with interpersonal attraction and stressed that a person would naturally be attracted to another person similar to himself or herself on the condition that he likes himself first. He objectively used self-esteem within the context of a person's sense of self worth, and concluded that in equity theory, self-esteem could be used in calculating justifiable or equitable outcomes. The contention is that self-esteem affects the outcomes that a person may feel he deserves from his dealings with other people. In classifying emotions, philosophers started with the simple feelings and moved on toward the composite feelings to emotions. They defined composite feelings as intensive states of unitary

character in which single affective components are to be recognized. In this case, some of the relatively permanent combinations of feelings could be termed moods. They argued that the composite feelings might be resolved into component feelings and into resultant feelings.

According to Wundt (1907), the component feelings are always simple sense feelings which, may be analyzed into a total feeling and partial feelings. He felt that while there is no sharp line of demarcation between total and partial feelings, every feeling of greater intensity is nothing but an emotion. According to Wundtian philosophy, the totality of one's personality is affected when one speaks of emotional feelings. One is prone to defend or project his or her self-esteem by the way he expresses the particular type of emotion nonverbally through the facial behavior.

B. THEORETICAL FRAMEWORK

Viewing self-esteem as a kind of evaluative attitude, Rosenberg (1965) has said that people have attitudes about all sorts of objects. He felt that the self-image is a global property of personality. He argued that all self-attitudes have an evaluative dimension which produces a "self-estimation" of the attitude object--"how the individual actually rates himself with regards to a particular characteristic." In his view, Rosenberg suggested that people with low self-esteem would show more personality characteristics symbolizing neurotic tendencies, and a high degree of difficulty and hesitation in social interaction. Rosenberg further stressed that people with low self-esteem would have lower aspirations and expectations for success than people with high

self-esteem. Ziller et al. (1969) theorized that self-esteem could be spoken of in terms of a field theory of personality. They stressed that self-evaluation emerges largely within a social frame of reference. Ziller himself described self-esteem as a component of a person's self-esteem which serves as a buffer zone between the self and the real world outside the senses. He linked self-esteem to the concept of personality integration relative to the person's ability to react to a variety of incoming stimuli. Ziller argued that people with overly low self-esteem might very likely not possess a well-developed conceptual buffer for evaluative stimuli. He further contended that people of low self-esteem are field dependent; that is, they tend to conform passively to the influence of the prevailing field or context. Additionally, he felt that high personality integration could be correlated with high or positive self-esteem. He also postulated the idea that people with high self-esteem naturally maintain an effective social functioning.

According to Exline and Winters (1965), research on eye contact has shown that in a situation in which people are being negatively evaluated, they tend to avoid looking at hostile interviewers. Theoretically, the human face can be defined as that part of the human head comprising of the upper eyelids, brows, nose, lips, jaws, and the chin. Emotion is usually conveyed through the face, and, as used in this study, emotion was defined as a special class of stimuli which result in physiological responses including visceral activity, motor responses, and verbal responses reflecting awareness of physiological activation. From time immemorial the human face has been regarded as the most visible expressor of human emotion. According to Mortensen

(1972), the face is the key to self-identity and the main vehicle for personal recognition. Mortensen contended that no other feature of the human body is as richly expressive of inner feelings (interest, excitement, joy, anguish, surprise, fear, shame, contempt, anger, etc.), nor as readily subject to misinterpretation and ambiguity as the face. Shennum (1976) has said that:

> People are exposed to a myriad of pleasant and unpleasant social events practically everyday. We experience these events either directly, by reading or hearing about them, by recalling them from memory, or by imagining them. One important way we respond to them is by generating facial expressions. In fact, a typical strategy used to discover whether someone is experiencing an event positively or negatively is to watch their facial behaviors . . . (p. 179).

Citing Bem and Allen (1974), Shennum (1976) stressed that situational variables can affect facial expressions, in that one person may be expressive at home but not all expressive at work. He also argued that others may be expressive or nonexpressive in both situations (p. 179). It can be argued on the grounds of perceptual styles that the ways in which persons perceive an event may partly or exclusively determine how they respond to it. In his conclusions, Shennum (1976) posited the idea that facial expressions can provide observers with information about the ongoing situation and how it seems to them pleasant or unpleasant. Usually, such information is not communicated verbally. In light of this statement, nonverbal communication as used in this study, is a term which embraces several elements used by human beings. According to Exline and Winter's (1965) eye theory, the interviewee may simply consider the interviewer's hostile staring as a threat to his self-esteem. The fact that the interviewee doesn't feel capable of reacting back is simply symptomatic of a feeling of low

self-esteem. The tendency is for the interviewee to develop negative self-concept which invariably leads to feelings of uncertainty, inferiority, inadequacy, or lack of self-confidence. Theoretically, the end result of these different feelings of rejection is poor personal social adjustment.

Theoretically, self-esteem is a by-product of the subject's contact with people, how they treat the subject, what they say to and about him, and what status he holds in the group. Self-esteem is usually enhanced by many factors--i.e., the most significant people in the person's life, then, the peers and teachers; hereditary endowment on the person and even one's feeling of self-worth or self-rejection. It can be argued that the degree to which the individual can cope with the problems associated with different stages of development will in no small dimension influence one's self-esteem. Horney (1967) argued that, with regard to intense need for love, low self-esteem individual would show excessive need for the approval of others and extreme sensitivity to rejection. According to her, low self-esteem people tend to perceive all kinds of things as rejection and react with intense hate (p. 248). Jacobs et al. (1971) asserted that low self-esteem individuals appear to like others less whether objectively accepting or rejecting, than do high self-esteem individuals, simply because low-esteem individuals generally perceive others more rejecting than those with high self-esteem. With respect to the present study, it was assumed that subjects with low self-esteem feeling would show this by their responses to items stressing how they saw themselves in relation to others, etc. (on TSCS, MAACL, and Rosenberg Four-Point Self-Esteem Scale). An anonymous writer

compared a low self-esteem individual with a high or positive self-esteem personality by saying:

> If a child lives with criticism, he learns to condemn.
> If he lives with hostility, he learns to fight.
> If he lives with fear, he learns to be apprehensive.
> If he lives with pity, he learns to feel sorry for himself.
> If he lives with tolerance, he learns to be patient.
> If he lives with jealousy, he learns to feel guilty.
> If he lives with ridicule, he learns to be shy.
> If he lives with shame, he learns to be ashamed of himself.
> If he lives with encouragement, he learns to be confident.
> If he lives with praise, he learns to be appreciative.
> If he lives with acceptance, he learns to love.
> If he lives with approval, he learns to like himself.
> If he lives with recognition, he learns to have a goal.
> If he lives with fairness, he learns to value justice.
> If he lives with honesty, he learns to value it.
> If he lives with security, he learns to have faith in himself and others.
>
> (Author Unknown)

Employing the sequential model for viewing behavior (Figure 1), Malnati and Trembley (1974) proposed that it can be justifiably inferred that feeling of positive or high self-esteem, or negative or low self-esteem does not develop arbitrarily. According to these two renowned authors, there is a situational context from which behavior oozes out. Theoretically, they argued that situational context generates covert thinking; covert thinking, on the other hand, yields covert mediating responses, which in turn produce overt behavior and a long reaction chain ensues. The chain of action and reaction can be presented diagrammatically as presented in Figure 1.

The Malnati and Trembley's taxonomy seems to imply a Freudian or psychoanalytic overtone. In other words, past experiences (1) may be related to home life influences as a child was growing up. Favorable or unfavorable home life situation might have led the child to seek repose

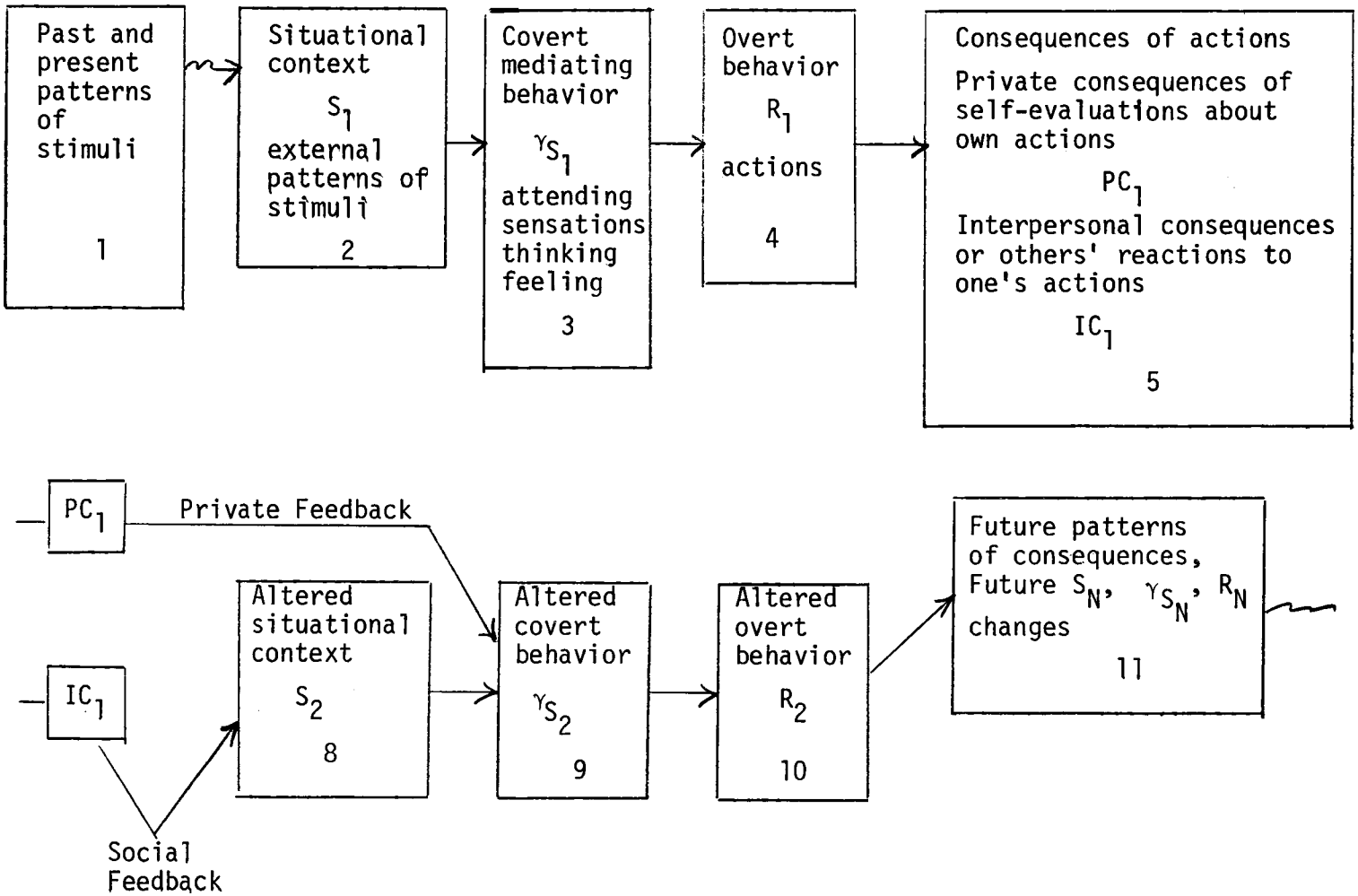


FIGURE 1. Sequential model for understanding self-esteem development.

outside of home. This situational context (2) such as peer group pressure in the group may generate covert thinking of being accepted or rejected (3). A child who feels rejected will unquestioningly demonstrate his/her feelings of anger, fear, or disgust overtly (4) through his/her facial behaviors. Consequently, such a child may develop low self-evaluation about himself/herself ($5PC_1$) and, such a low self-esteem disposition may tarnish his/her interpersonal relationships ($5IC_1$). With adequate intervention such as acquisition of self-awareness, or the development of positive self-esteem, the reactions may be altered. The result, however, may yield altered situational context ($8\ S_2$), altered covert behavior ($9\ RS_2$), and altered overt behavior ($10\ R_2$). Covertly if a child accepts himself/herself positively, he/she will show this acceptance through his/her facial expression--happiness, etc.

Theoretically, it is possible for any person to refer to the cognitive, affective, as well as the behavioral aspects of his or her personality. Jacobs et al. (1971) hypothesized that different features of identity generally have some judgment or feeling of good or bad associated with them. On the same train of thought, they stressed that there are usually both the positive and negative dimensions on the self. Combining these different viewpoints, it can be said that self-esteem possesses either an evaluative, judgmental, or an affective process. When self-esteem is being described in terms of evaluative processes, it is doubtless that the term "instrumentality" is either used or implied. Instrumentality operationally connotes the assignment of some judgment of good-bad on the basis of an object's usefulness. In like manner, Diggory (1966) said that man might be viewed as a

purposive instrument, and might evaluate himself/herself. The evaluation extends to the degree that one is able to reward and avoid failure, anxiety, or punishment.

C. REVIEW OF LITERATURE ON SELF-ESTEEM

Operationally, self-esteem is defined as the degree to which subjects showed self-love, self-confidence, self-respect, self-acceptance or rejection, self-satisfaction, self-evaluation, self-appraisal, self-worth, personal sense of adequacy, personal efficacy, sense of competence, self-ideal congruence, ego, or ego strength. The prefix "self" has been defined by Rogers (1951) as the person's image of who he/she is and what he/she values in himself/herself, in others, and in life in general. The self is comething one acquires gradually over the years by observing how other people react to him/her, how he/she see himself/herself, and how he/she interprets other people's perception of him/her. Self-esteem can be used in its affective dimension to emphasize the emotional and behavioral concomitants of self-evaluations. The role of self-esteem is so central in determining behavior that it has been pursued very relentlessly by many researchers. Certain researchers feel that in terms of the individual's social development, one of the most accepted views is that a self-concept develops from the individual's perceptions of the actual ways in which others behave toward him. McGuire (1968) argued that self-esteem may be related to two psychological processes. One process is the person's ability to receive a message adequately--as may be characteristic of people with high self-esteem. Another process is the person's tendency to yield to the

views of others as may be characteristic of people with low self-esteem. Eagly (1959) found that the difference between self-esteem and persuasibility between men and women may be due to the fact that in women persuasibility is a function of acceptance of sex-role pressures. Janis and Field (1959) demonstrated that people with high self-esteem are more resistant to social influence than are people with low self-esteem. In quite separate studies, Rogers (1951) found that favorable self-regard is a prerequisite to positive mental health. He argued that the need for positive evaluations from others is a central motivation in human behavior. He concluded, in his studies, that people with high self-esteem normally feel accepted by others. In addition to Roger's viewpoint, Walster (1965) found that people with high self-esteem are more likely to assume that others like them; and the more they suspect that others like them, the more they will reciprocate the liking. On the other hand, low self-esteem people are not normally geared toward making such assumptions; they may even assume dislike.

The implication for the current study was that people within the high self-esteem bracket, and who feel liked by others would admit being happy; whereas low self-esteem subjects who felt rejected one way or the other would admit being sad, lonely, mad, and angry, blue, offended, disgusted, or overly anxious. The degree to which one feels adequate or accepted will tend to be shown by the nonverbal emotions the individual communicates on his/her face. Because of the relationship that may exist between self-esteem and the nonverbal communication of one's emotional feelings through the face, Ekman and Friesen (1975) stressed that often one does not know that a facial expression is the

basis of one's hunch or intuition about someone. They argued that it is possible only to sense something about a person without being able to trace the source of one's own impression. By studying facial behaviors it will be easy to achieve the following goals: (1) bring attention to what one may be missing entirely, (2) show what one may be doing without knowing it, (3) correct what one may be misinterpreting, (4) show subtleties and complexities, and (5) provide techniques for learning whether one shows emotions in his or her own face in an unusual fashion. According to Hirst (1975),

> Communication is the exchange or passage of meaningful information between minds. When two people communicate, each receives sensations and perceptions of the other both consciously and unconsciously which influence the sensations and perceptions of the other. . . . We see each other's facial expressions . . . all of which are signals by which we not only communicate but by which we reveal ourselves and discover others. . . . There are two extensive systems for emotions, body responses and emotionally impelled behavior: a positive system which produces pleasurable emotions along with orgiastic responses and behavior, and a negative system which produces painful emotions along with alarm responses and behavior which would be fear-and-rage emotions along with run-and-fight emotionally impelled behaviors (pp. 70, 95).

Underlying these assertions is the fact that one's feeling of high or low self-esteem comes into focus as a result of the degree of one's involvement in interpersonal communication with others.

D. REVIEW OF LITERATURE ON FACIAL BEHAVIORS

In a study, Burton (1973) found that the face, as the interpersonal agent for the whole body, has virtually been ignored in psychotherapy. Yet, as a vehicle of interpretation and a carrier of emotions, it is an important nonverbal aspect of any psychotherapeutic

situation; psychologists and clients are normally seen as performers and that the road to therapeutic growth may be the face. There is such a concept as facial style. To practice psychotherapy successfully it is necessary to be at peace with one's own face. The face and the mouth should express the same feelings and thoughts at a particular time. Additionally, the components of the face are significant for understanding the deeper aspects of the client's behaviors. Frijda (1958) has said that facial expression represents only a general pattern; a general behavioral attitude, containing the state of attention and withdrawal of the person, the degree of his activity, and the degree to which he is involved in his own reactions; or the mere presence of some truly "inner" event. In other words, facial expressions may be an outward expression of covert feelings (positive or negative) and, which may have a subsequent overt coloration (actual expression of the covert behavior in an observable fashion).

The present study, while it attempted to adopt the typologists' philosophy of the study of facial expressions, went a little beyond that boundary to link facial expressions with how human beings develop self-esteem either positively (high) or negatively (low).

Laird (1974) in a study on "The Effects of Expressive Behavior on the Quality of Emotional Experience" conducted two experiments using a total of 77 undergraduates. The experiments required subjects to "smile" and "frown" without awareness of the nature of their expressions. Subjects reported feeling more angry when frowning and happier when smiling. Subjects also reported that the cartoons they viewed while they were smiling were more humorous than those they viewed while

frowning. Laird concluded that an individual's expressive behavior mediated the quality of his/her emotional experience. The implication for the present study was that by having an immediate feedback on the facial behaviors through viewing of slides and through their own facial expressions on the video tape monitor, they would gain better awareness of their own self-esteem.

Fugila et al. (1977) examined the kinesic behavior of 30 high and 30 low self-esteem male undergraduates (according to their scores on the Tennessee Self-Concept Scale, TSCS) while the subjects were interacting with either a physically attractive or unattractive female confederate. A technique was developed and utilized to gain experimental control over the confederate's visual behavior without resorting to the unnatural procedure of either having her consciously looking at the subject or arbitrarily looking according to a predetermined, signaled sequence. Both the self-concept of the male subjects and the physical attractiveness of the female confederates were found to influence subjects' nonverbal behaviors. In a study on the "Effects of Framed Spectacles and Contact Lenses on Self-Ratings of Facial Attractiveness," Terry and Brady (1976) found that subjects who wore glasses de-emphasized the importance of their eyes and facial structures, while subjects who wore either contact lenses or no correctives did not. The researchers concluded that glasses appeared to be considered a true detriment to facial attractiveness among females who wore them.

Ekman et al. (1971) found that primary affects: happiness, anger, fear, surprise, sadness, disgust, etc., are very easily conveyed the same way by different people in different cultures. Their conclusion was

that, in order to make affective displays evolve in the same way for each person, all subjects need to use the same equipment. Speaking on "Some Functions of Gaze-Direction in Social Interaction," Kendon (1967) hypothesized that at least four functions of gazing are necessary:

> Cognitive: subjects may look away when having difficulty encoding; Monitoring: subjects may look at their interactant to indicate the conclusions of thought units; Regulatory: responses which are demanded or suppressed by looking; and Expressive: degree of involvement or arousal which may be signaled through looking (pp. 22-63).

Kendon also found that the eye could be used by subjects to seek feedback, control communication channel, demonstrate status, attitude, personality differences, or signal distance. The implication is that as the eye is employed in one or more of these ways, the subjects would be conveying certain things about their self-esteem, which might be positive or negative.

Deutsch (1973) contended that because man is "predominantly a visual animal, the use of the visual system has been a major concern in the study of interaction patterns" (p. 163). Simmel (1921), in a study entitled "Sociology of the Sense: Visual Interaction," noted that mutual eye contact is probably the most direct and purest reciprocity which can exist between people. Satre (1957), an existentialist, once said of the experience one has when another enters his visual field:

> When the other looks at me, a basic change occurs in my way of being. I become aware of myself as being an object of another, placed in a situation not defined by me. The other, by looking at me, becomes the limit of my freedom. I realize this experience not by way of cognition, but by a sentiment of uneasiness or discomfort (p. 236).

Deutsch (1973) has further said that the visual system has been reported (a) to regulate conversation, (b) to help define a relationship, and (c) to announce social accessibility. Other researchers (Wada, 1961; Shrauger, 1972) in the fields of psychology and psychoanalysis have reported that both human and nonhuman primates manifest physiological and behavioral changes when they experience that they are being looked at. For example, Kendon (1967) showed that during hesitant speech the speaker looks away from the listener more often than he does during fluent speech. The implication is that in many instances, the "looking away" syndrome can be associated with one's level of self-esteem. With regard to using the eye as a tool to define a relationship, Exline and Snadowsky (1971) concluded that speakers were usually most comfortable in their interaction when their listeners looked at them about 50 percent of the time. They further said that anything less than this was taken either as disinterest or rejection.

In order to maintain positive self-esteem, it is necessary to develop what Goffman (1972) called "civil inattention." According to him, this refers to a state when one individual gives enough attention to another to demonstrate that he really appreciates that other is present and fully recognized. Goffman felt that this act calls for the eyes of the looker to pass over the eyes of the other. He defined "civil inattention" operationally as that which the individual demonstrates when he has no reason to fear the others, be hostile to them, or to avoid them; that he has nothing to fear or avoid in being seen and being seen seeing; and that he is not ashamed of himself or of the place and company in which he finds himself. The implication for the

present study was that by developing this "civil inattention" stance, the participants in the research study who had low self-esteem feelings upon entry into the training would be able to cast off their yoke of inhibition, or inferiority complex, and would boldly check those questionnaire items which stress positive self-esteem disposition.

Libby and Yaklevich (1973) studied the effects of three personality needs--nurturance, intraception, and abasement--of 35 female undergraduates on their ocular responses during a structured interview by a female interviewer. The interviewees' responses to each of 48 questions were scored as (a) maintenance of eye contact throughout verbal responses, (b) break of eye contact before end of question, (c) lateral gaze aversion, and (d) vertical gaze aversion. Subjects high (low self-esteem) in need of abasement looked away markedly more often to the left than subjects low (high self-esteem) on the need. Also, subjects high on nurturance (high self-esteem) maintained eye contact more than low nurturance subjects. The authors suggested in their conclusion that the face "leaks" information regarding the personality.

In the Psychosomatic Medicine, Schwartz et al. (1976) conducted an electrmyographic study on "Facial Expression and Imagery in Depression." Twelve depressed and twelve matched normals were requested to generate happy-sad imagery, first with the instruction simply to "think" about the imagery, and then to regulate the affective state by "re-experiencing the feelings" associated with the imagery. Continuous recordings of facial EMG were obtained from the corrugator, zygomatic major, depressor anguli, oris, and mentalis muscle regions. The researchers found that as a result of the experiment, muscle sites were

reliably differentiated between happy and sad imagery. The implication for the present study was that experimental subjects would be able to differentiate among different facial behaviors (anger, sadness, fear, disgust, happiness, neutral, and surprise) by the distinctive muscle contours on each slide.

A number of investigators (Cohen, 1959; Janis, 1954; Leventhal and Perloe, 1962; Silverman, 1964; etc.) have indicated that individuals with different levels of chronic self-esteem would show differential responsiveness to acute success and failure experiences. Herch and Scheibe (1967) have presented evidence which suggests that internally oriented subjects are characterized by high levels of self-esteem and self-acceptance. According to their findings, internally oriented subjects (high self-esteem) were characterized by high levels of self-esteem and in responding to a personality inventory, checked a greater number of favorable self-descriptive adjectives and also described themselves in more favorable terms than did external (low self-esteem).

Researchers (Frijda, 1953; Schlosberg, 1952; Vinackle, 1949; Woodworth, 1938) have experimentally demonstrated that facial behaviors of emotions or feelings can be interpreted with a maximum degree of ease. Carmichael and Wessel (1973) demonstrated that the perception of the causality of the emotion expressed can modify the interpretation. In their own studies, Munn (1940) and Sherman (1937) argued that one's interpretations of the facial behaviors expressed are prone to add to the correctness or incorrectness of such facial behaviors. In an article captioned "Facial Expression and Situational Cues," Frijda (1958) hypothesized that the meaning of facial expressions is more

general than the interpretations commonly attributed to them. He also argued that the greater specificity of interpretation is attributable to situational cues, which could lead to greater correctness. "General" was defined as: a pattern of relational functioning (withdrawal, attention, tenseness, degree and nature of activity), regardless of the nature of the objects toward which the functioning is directed. "Specific" was defined as: any reference to an event in the inner or outer world, either explicit or implicit; or any reference to thought-content to forthcoming behavior (p. 149). In his conclusions, Frijda posited the idea that reactive feelings to some outer event, like fear, disapproval, and feelings concerning own self, like frustration, insufficiency both can be more personal feeling in which deeper levels of the person are involved. Frijda's study assigned such feelings as "she is afraid, or feeling uneasy," that this is performed in public, to "more personal feelings," and to "reactive feelings." He also assigned "rising feeling of despair, fear to be unable to solve problem," to "more personal feelings," and to those concerning own self. This study, however, stopped short of demonstrating how these feelings influenced the person's feeling of self-esteem (high or low).

Indirectly relating facial expression of emotion to self-esteem, Bell (1806), in Anatomy and Philosophy of Expression as Connected with the Fine Arts, said that many of the outward expressions (facial behaviors) arose from the inward actions of the heart and lungs. This argument was based on two important premises that facial expressions were significant because: (1) the muscular movements were closely associated with the brain, and (2) because they were used to support the

organs of sense of taste, smell, and sight. In the doctrines of physiognomy, Ruckmick (1936) has argued that the coordinated movements of eye, ear, hand, and other features of the body account for practically all the expressions involved in emotions. No one muscle acts alone. Since there is a chain reaction in the features, it can be assumed then, that whatever affects the facial behaviors will affect or reflect on the self-esteem of that individual because the feeling of self-worth arises from the heart. Ruckmick operationally defined "physiognomy" as the face or features which are considered as revealing character or outward look of an object. Ruckmick argued further that the human face could be seen as establishing four principles: (1) cognitive as well as affective meanings are interpreted in the face of an individual, (2) the face is a means of identification of the individual, (3) the face is an index of generic traits of personality, and (4) the face can be used to convey abstract symbolic values in human experiences. In the language of Shippee (1959), the abstract symbolic values in human experience could be thought of in terms of either "realistic self-regard," or "narcissistic self-regard," or positive and negative, or high and low self-esteem dispositions, respectively.

A number of studies have advanced the fact that self-esteem is a mediator of many types of social behaviors (Wylie, 1974; Coopersmith, 1967; Rosenberg, 1965). Wilson and Wilson (1976) have suggested that individuals with high self-esteem are more consistent in their response modalities across situations than high anxious individuals with an external locus of control. The relevance of Wilson and Wilson's study to the present one was that the high-esteem personality would directly

influence how the high self-esteem person modulates his facial behavior. It has been contended that while high anxious (low self-esteem) persons tend to look away from a threatening stimulus, a less anxious (high self-esteem) individual would not.

E. RATIONALE FOR TRAINING

According to Cooper and Jones (1970), self-esteem theory assumes that people are often worried by or about their ability to stand up for their beliefs, and that belief change may occur after warning (training), but before attack (posttest) as a self-esteem preserving maneuver. The implication is that when an individual is warned (through such series of training as were executed in the present study) of an impending attack of one of his beliefs, the person may change his belief toward greater agreement with the coming attack (confrontation with direct questions in posttest instruments). McGuire and Millman (1965), in their study, found that warning (through training) per se did produce an anticipatory lowering of the beliefs which may simply be due to change in the individual's emotional issues following the warning. The implication of this conclusion for the present study was that as a result of the different sessions of training, participants whose pretest scores showed high self-esteem inclination, possibly due to exaggeration or over-reaction to the inventories, would "discover" their real selves. This new self awareness is prone to cause subjects to alter their reactions to the test questions. On the other hand, and in the light of this study, those participants whose pretest scores showed that they had low self-esteem would "find" themselves as a result of their participation

in the study. It was assumed that such "low self-esteem" participants after "finding" themselves would choose statements which would yield positive self-esteem scores. Consequently, there would be no significant difference between the posttest scores of the two experimental groups.

It was also the contention of the present experimenter that, by exposing both high and low self-esteem subjects to different training techniques (eclectic counseling psychology techniques), each of them would be able to identify with one or all of the techniques. Supposedly, this "identification with" doctrine would cause them to loosen up, become more relaxed, and less apprehensive in group discussion. As a result of all these processes, the training was intended to influence subjects to be more self-confident, more self-accepting, and develop positive self-esteem attitude toward themselves.

F. LITERATURE REVIEW ON THE USE OF SLIDE PICTURES

Proof that man has great confidence in his ability to judge facial expressions correctly may be found everyday. We often see a face which we immediately and involuntarily think of as denoting pleasure, grief, boredom, fear, etc. The usage of sketches made by artists of faces expressing various emotions, or slides, or motion pictures has been in common use for a long time. For example, Langfield (1918) made use of pictures by an artist of faces which expressed different emotions. He showed these sketches to subjects with the request that they state what emotion was being expressed. His conclusion was that certain emotional expressions could be judged more accurately than pictures. Ruckmick

(1921) and Gates (1925) tried out the ability of observers to name correctly photographs which showed such facial expressions as "pleasantness" and "surprise" and their assumption was confirmed. Landis (1928) used 77 "very expressive" pictures either which had been taken in actual situations, or which were pictures of subjects who tried to reproduce their reactions to situations as they had previously experienced them. He used 11 pictures of men and women which had been trimmed so that they showed only head and shoulders. The pictures were projected on the screen by means of a projection lantern and judges were asked to judge each facial emotion. The emotions judged included joy, sorrow, maternal, surprise, etc., which he called "general statements." Landis concluded that:

> Observers could not make a statement more accurately than one would expect by chance concerning the emotion which a subject was undergoing when photographed or concerning the probable situation which might have given rise to such an expression (p. 59).

In order to control for "chance error" as Landis hypothesized, the present study requested that subjects be both objective and subjective. Their objectivity hinged on labelling the correct emotions they saw, but their subjectivity called them to fantasize occasions which might make them experience such emotions. The primary logic was to cause the participants to re-experience or re-live past emotional experiences as well as presentize possible future emotional involvements with regard to facial expressions.

In order to guard against the errors or biases caused by subjects' inability to judge accurately on the basis of "right-and-wrong," Woodworth (1938) developed a scale consisting of six steps:

(1) love, happiness, mirth; (2) anger, determination; (3) surprise; (4) fear, suffering; (5) disgust; and (6) contempt. The categories made it easy for the subjects to pair facial expressions on the screen with particular identification marks printed on the mimeographed sheets they had before them. The result of the study yielded a .90 reliability, justifying the claim that subjects were capable of judging facial expressions using slides. While Woodworth's study used a two-dimensional pleasantness-unpleasantness approach to validate his judgment of facial expressions, Schlosberg (1954), Engen and Levy (1965) and Triandis and Lambert (1958) used 48 photographs portraying a variety of situations, moods, and emotions on three-dimensional scales: pleasantness-unpleasantness, attention-rejection, and sleep-tension. The Schlosberg's scales allowed better interpretation of the dimensions from any multi-dimensional scaling operation. The study achieved multiple correlations of .962, .982, and .965 to attest to the ability of judges to recognize facial expressions via slides. The Schlosberg's scale suffered from redundancy in that two scales seemed to serve as well as three. If a choice must be made between tension-sleep, and attention-rejection, the former would have had very slight preference. The scales also posed certain difficulty in explaining to subjects what they were required to do. The present study differs from the two- or three-dimensional approaches in that the effort was simply to ask subjects to view slides on the screen and select one emotion from a list of seven facial behaviors (fear, anger, surprise, happiness, disgust, neutral, and sadness) which corresponded with one on the screen.

Ekman and Friesen (1971) found that recognition of facial behaviors is cross-cultural and that the usage of photographs showing facial behaviors was sufficient to test for this hypothesis. The authors used sample pictures of both posed and spontaneous behavior which had been previously used by Ekman and Friesen (1968), Frijda (1968), Frois-Wittmann (1930), Izard (1968), Engen et al. (1957), and Tomkins and McCarter (1964). The study made use of a total of 40 pictures of 24 different stimulus persons, male and female, adult and child. The pictures used were prepared as 3 x 5 inch prints, cropped to show only the face and neck. The result of the study showed that facial behaviors are universally associated with particular emotions, and that faces judged in literate cultures as showing particular facial expressions were comparably judged by people from preliterate culture who had minimal opportunity to have learned to recognize foreign facial expressions. The present study included subjects from different nationalities on the same principle that the ability to recognize facial behaviors via slides or pictures is universal. This fact has been attested to by Eilan and Richardson (1976), Sana (1973), and Ekman (1973), in different research studies on the influence of sex, race, and ego on judgments of emotion portrayed in photographs. The study determined the effects of sex, age, and race on subjects' ability to judge emotions portrayed in facial expressions by using a set of 40 photographs of models of different age, race, and sex. Subjects who judged the photographs were 80 black and white male and female college students and second graders. The result of the study showed that neither race, sex, nor age of the faces showed in the photographs did

influence the subjects' judgments of the different emotions. The rationale for using slides in the present study was to demonstrate that subjects who participated in the research could successfully judge facial behaviors of others and then apply such ability to studying and understanding their own facial behaviors.

G. SUMMARY

In Chapter II, attempt was made to show that the study of self-esteem has both philosophic as well as historical dimensions. Studies by James (1890), Cooley (1964), Mead (1934), Rogers (1951), and many others were cited to justify the historical as well as the sociological foundations on which one's quest for positive self-esteem hinges. From the theoretical viewpoint, it was stressed that self-esteem could be viewed as a "global property of personality" (Rosenberg- 1965), which has its roots "within a social frame of reference" (Ziller et al., 1969; Horney, 1967). It was stressed that the sequential model (Malnati and Trembley, 1974) for viewing behavior can be employed in understanding how the individual develops self-esteem. Numerous related studies dealing with self-esteem development, or enhancement were cited to indicate what has been done thus far in the field of positive self-esteem building.

The place of motion pictures, slides, and drawings in judging facial behaviors with maximum emphasis on the reliability of the usage of slides was also mentioned in Chapter II. It was further said that while some people may have high self-esteem and others low self-esteem, the ability to judge facial behaviors is universal. The relevance of

these studies to the present study was that the studies would shed light on the fact that the study of self-esteem should be understood not only from its psychological viewpoint, but also from its sociological and philosophical dimensions. The studies also would make it possible for the present study to see the sequential implications involved in self-esteem building, as well as the degree to which slides of facial behaviors could be used to build self-esteem.

CHAPTER III

METHOD

A. INTRODUCTION

Chapter III will describe the types of subjects used in the study; the various kinds of audio and video equipment used; and the setting where the training was conducted. The chapter will also outline the types of instruments and devices which were used to collect the data (TSCS, MAACL, RSS, and FAP). The method used in assigning subjects into experimental and control groups as well as what constituted the independent and dependent variables will be discussed. Furthermore, experimental procedures detailing how each of the seven training sessions was conducted will also be described.

B. SUBJECTS

The subjects were 28 male and female students who volunteered to participate either because they were interested in the nature of the study, or in return for partial credit toward course credit in educational psychology 3110, 3810, or 5330. The student population consisted of both graduate and undergraduate students who were attending The University of Tennessee in Knoxville during Winter and Spring quarters, 1978. In order to control for possible cultural bias (Scheflin, 1972), different nationalities and ethnic groups (7 white, 7 black, and 14

foreign students) attending the University were invited to participate in the study. Subjects were between the ages 22 and 45 years. Subjects were randomly selected from the 60 graduate and undergraduate students who responded to the announcement. Of the 60 students who responded to the announcement, 51 showed up for the signing of the Informed Consent Form (Appendix A), the general orientation discussion, and the taking of the pretest.

C. VIDEO AND AUDIO EQUIPMENT

A 19-inch Sony Television monitor, a Sony video camera with a 12.5 mm, F 1:1.9 lens, a Sony video recorder HAV-3600, and a Sony dynamic microphone were used in the video-taping portions of the research project. Black and white 110 2 x 2-inch slides (designed and validated by Ekman and Friesen, 1975) were used along with remotely controlled 750H Carousel slide projector. A 12 x 12-inch wide mirror was also used in the research study to help subjects see their own facial behaviors whenever the VTR was not used.

D. SETTING

Room 118, located in the Claxton College of Education building was used for the entire project. The room was well ventilated all the time, and adequate seating was made available during every session of meeting. Adequate lighting was always provided and seats were usually arranged in semi-circular fashion to enable both experimenter and subjects to maintain good eye contact.

E. INSTRUMENTS AND DEVICES USED IN THE COLLECTION OF DATA

Two scales (TSCS, RSS), one checklist (MAACL), and a set of slides (FAP) were used to collect data on subjects' real feeling of high or low self-esteem.

1. Tennessee Self Concept Scale (TSCS). The TSCS consists of 100 self-description items of which 90 assess self-criticism. The TSCS measures the following aspects of the self: identity, self-satisfaction, behavior, physical self, moral-ethical self, family self, and social self. The TSCS is highly correlated with other measures of personality functioning. For example, the Taylor Anxiety scales correlate -.70 with Total Positive; it has correlations of from .50 to .70 with the Cornell Medical Index, and correlations with various MMPI scales are frequently in the .50's and .60's. Test-retest reliability is in the high .80's. The TSCS has very high internal consistency coefficients of up to .91. The TSCS was originally standardized on 626 persons.

2. Rosenberg Four-Point Self-Esteem Scale (RSS). The scale is a ten-item Guttman scale with items answered on a four-point scale from strongly agree to strongly disagree. "Positive" responses on the RSS indicate low self-esteem while "Negative" responses indicate high self-esteem. The scoring of the items are on a six-point scale. According to the designers of the scale, reproducibility of the scale is 93 percent, scalability of items is 73 percent, scalability of individuals is 72 percent, and test-retest reliability is .85. The

original sample on which the scale was developed consisted of 5,024 high school juniors and seniors from 10 randomly selected schools in New York state. It has, however, been found useful for subjects above the high school age level (Crandall, 1973; Rosenberg, 1965; Silber and Tippett, 1965; Wylie, 1974).

3. Multiple Affect Checklist (MAACL). The MAACL contains 132 adjectives, alphabetically arranged in three columns on one side of a single sheet. The MAACL was designed to measure the negative affects of anxiety, depression, and hostility. Affect is defined as the psychological aspects of emotion, or the emotional response which is assessed by means of verbal reports. Affect is also defined as "subjective feeling." Odd-even and plus-minus reliabilities for both the General and Today forms range from .17 to .92, median is .72. Today forms have very high internal consistency estimates of .77, .79, and .84. The MAACL was used because the scales have sufficient differential validity which reflects meaningful changes in affect for groups of subjects subjected to different types of stresses.

4. Facial Affect Pictures (FAP). The set of 110 35mm black and white slides, cardboard-mounted that were used in this study were originally developed by Ekman and Friesen (1975). Each of the 110, 2 x 2 inches black and white slides was numbered and the poser in each slide was identified by one or two letters. There were 14 different slides representing happiness, anger, disgust, neutral and surprise facial emotions. Thirteen slides represent sadness, and 11 slides represent fear. There were six males each representing fear and anger, and eight females representing fear. The reliability of the instrument was

established by showing the slides for 10 seconds to small groups of U. S. born college students. The observers were requested to select one word which best described the emotion expressed in each slide. All the photographs were judged to show emotion by at least 70 percent of the observers. All but 11 were correctly rated by more than 80 percent of the time; 59 were correctly judged by more than 90 percent of the raters.

F. DESIGN

The subjects were randomly selected into high and low self-esteem groups on the basis of their pretest scores on the TSCS. Subsequently, the subjects were randomly divided into high experimental, high control, low experimental, and low control. Each of the four groups consisted of seven subjects, male and female. The study was run for nine sessions including pretest and posttest as well as seven additional sessions for training. In addition to the pre- and post-test data that were collected at each session, experimental subjects were asked to rate the overall effectiveness of training sessions at the end of the eighth session. The primary objective was to determine the degree to which the subjects felt that the training sessions had been beneficial to them.

G. PROCEDURE

Subjects were invited to participate voluntarily in the research study by signing a descriptive Informed Consent Form (Appendix A). On the day of the orientation, the pretest on the Tennessee Self-Concept

Scale (TSCS), Multiple Affect Adjective Checklist (MAACL), Rosenberg Four-Point Self-Esteem Scale (RSS), and Facial Affect Pictures (FAP) was administered to all 51 subjects. On the basis of their pretest scores on the Tennessee Self-Concept Scale, 28 subjects (14 male and 14 female) were randomly selected into high and low self-esteem groups. Two specific steps were taken in assigning subjects to groups. First, on the basis of the subjects' overall scores on the TSCS, subjects who scored high were grouped into high self-esteem, and those who scored low were grouped into low self-esteem group. Second, seven subjects were randomly selected from the high self-esteem group to form the high experimental group, and seven were also randomly selected from the same group to form the control group. From the subjects who scored low, seven were randomly selected into the low experimental group and seven were randomly selected into low control group. All other subjects who were not selected into any group were asked to withdraw from further participation in the research study.

Independent Variable

The independent variable was the positive self-esteem training using nonverbal facial behaviors. Only the experimental subjects were exposed to the series of training sessions during which an eclectic counseling psychology approach was used to train the subjects in how to cope with the problems associated with the negative influences relating to fear, anger, sadness, surprise, happiness, disgust, and neutral facial behaviors. The control subjects were excluded from participation in the training sessions. An eclectic counseling

psychology model was used in each of the training sessions. An eclectic counseling was operationally defined as the process of making use of one particular counseling technique during each session, while at the same time employing pertinent portions of other theories as occasion warrants. For example, the Johari Window (Luft, 1970) and systematic desensitization therapy (Wolpe, 1961) were used to deal with Fear during session one. During session two, Sadness was dealt with by combining the eight steps of Reality Therapy (Glasser, 1975) with ideas from systematic desensitization and Johari Window techniques at appropriate intervals during the session. Behavior modification (Belkin, 1975) was used as the primary technique to deal with Anger during the third training session; however, appropriate references were made to Reality Therapy and Desensitization in order to make subjects understand the process more clearly.

Gestalt therapy (Perls, 1961) technique was used along with simple directive counseling technique to deal with the problem of disgust during the fourth session. Session five dealt with Surprise, and Reality therapy was used along with Gestalt therapy technique to make subjects become more aware of themselves within the "here and now" context. In order to deal with Happiness during the sixth session of training, an exercise on Happiness was conducted using Roger's (1951) nondirective counseling technique simply as a way of letting subjects develop a silent self perception of what happiness meant to them. This was followed by Gestalt therapy approach which was aimed at enabling them to verbalize their self-awareness. In order to get in touch with the self-awareness more practically, a "mirror-looking exercise" was

used during which period each subject looked into the mirror to see his or her own facial behaviors first hand. Directive counseling in the form of slide presentation and discussion method predominated during the seventh session, but other theories which had been used in previous training sessions were used appropriately. The rationale for using the eclectic counseling model was to expose all the experimental subjects to these different approaches, thereby making it possible for each subject to choose and use the approach best suited to his or her own condition.

Dependent Variables

The dependent variables included subjects' pre- and post-test scores on the Tennessee Self-Concept Scale (TSCS), Multiple Affect Adjective Checklist (MAACL), Rosenberg Four-Point Self-Esteem Scale (RSS), and Facial Affect Pictures (FAP). Each dependent variable contained direction which explained to subjects what they were supposed to do. In the case of the Facial Affect Pictures, the following instructions were read to all subjects.

> You are about to see a set of 110 black and white slides in which different emotions are being expressed, and numbered 1-110. On the Facial Affects sheets which you have before you, you will find a list of seven names of facial behaviors or feelings (happy, sad, fear, anger, surprise, disgust, neutral). Each of the slides will be projected on the screen for 10 seconds while you try to identify the particular emotion that is expressed. You are to watch and decide on what the emotion is and then indicate your choice by merely checking one of the seven names of facial behaviors on your sheet. You need to know that the slides 1-110 correspond to the numbers on the sheets in successive order, therefore, match every slide with its corresponding number on your sheets.

Experimental Procedures

The experimental procedures covered seven successive sessions following the administration of pretest. The posttest followed the last training session. Each session was conducted in the following fashion.

Session one: fear.

Step 1: In order to assess the level of subjects' understanding of what fear was at that time, as well as why they were usually afraid, or how much of their own susceptibility to fear they had, they were requested to rate certain statements concerning fear on a scale of 1-10 (Appendix F). The rationale for such pre-training rating was to provide valid data with which to compare similar post-training, thereby helping to validate the effectiveness of the training sessions.

Step 2: In broadening subjects' understanding of the probable causes of fear, both the Johari Window (Luft, 1970), and Wolpe's desensitization techniques were used. Luft and Ingham (1955), in their quadrant model defined each quadrant as shown in Figure 2.

	Known to Self	Not Known to Self
Known to others	1 Open	2 Blind
Not known to others	3 Hidden	4 Unknown

FIGURE 2. The Johari Window.

According to Luft and Ingham,

> Quadrant 1 refers to behavior and motivation known to self and others. Quadrant 2 refers to the blind area where others can things in ourselves of which we are unaware. Quadrant 3, the avoided or hidden area, presents things we know but do not reveal to others. Quadrant 4 refers to the area of unknown activity, where neither the individual nor others are aware of (pp. 11, 12).

The relevance of the Luft/Ingham's model to the present study was that fear may be caused by one or all of the following factors: (1) feeling that there are certain aspects of one's personality which one does not seem to be aware of but are clearly known to others as one nonverbally communicates the feelings through facial behaviors, (2) inability to reveal what one knows to others, and (3) fear of the unknown itself, since neither the individual nor other people know the root of the fear.

Step 3: Following the minilecture, Subjects did paper and pencil exercise on "dealing with fear" (Appendix G).

Step 4: A slide presentation on fear face with a series of distinguishing characteristics of "fear face" were pointed out.

(1) The eyebrows appear raised and straightened and drawn together so that the inner corner of the eye brows are closer together.
(2) There are horizontal wrinkles across the forehead.
(3) The eyes are open and, the upper lid raised and the eyelid tense.
(4) The mouth open in fear but the lips are tense (Ekman and Friesen, 1975, p. 117).

Step 5: Systematic desensitization techniques for coping with the problem of fear were used (Wolpe, 1961; Bugg, 1972; Rachman, 1967; Gervey and Hergrenes, 1966). Systematic desensitization is a learning principle of reciprocal inhibition. Subjects were instructed to use only their faces while they engaged in fantasizing a typical fear-producing situation. Subjects were told to relax the facial muscles, imagine a mild

form of fear stimulus, relax again, stop imagining, and then relax again. They were specifically asked to pay attention to the amount of energy expended in tensing their facial muscles and to express feelings of either satisfaction or dissatisfaction with such facial muscle tensing. They were asked to express the degree to which muscle tensing around the face is capable of affecting their self-esteem.

Step 6: A posttest was administered to all experimental subjects. It was meant to allow subjects to rate their understanding and ability to deal with fear as a result of the training.

Session two: sadness.

Step 1: A pretest was administered as in session one (Appendix F).

Step 2: A short lecture on sadness was delivered in the following manner:

> Sadness is caused by a repetition of the idea of loss. A sad person has difficulty in expressing anger and making assertive responses since he views himself responsible for and deserving of any rude or insulting actions about other people. Sadness is the result of the self-instigated lowering of the self-esteem. A sad person is prone to regard himself as defeated or at least thwarted in his life's major goals. A sad person may be led into developing a suicidal behavior. A sad person expresses self criticism. A sad person concludes that he is worthless, inadequate, or in the process of deterioration (Ekman and Friesen, 1975, pp. 114-116).

Step 3: A slide presentation in which features distinguishing "sad faces" from any other emotions were pointed out (Appendix K).

Step 4: Video taping of subjects' facial behavior symbolizing sadness was conducted. Each subject's face was video taped and the video tape was played back to enable subjects to study the characteristic

features very closely and then answer such questions as: (1) Is this how I look when I am sad? (2) How do people see my face when I am sad? (3) Does this kind of "sad face" have an influence on my self-esteem or not?

Step 5: Treatment modality for sadness: In order to train subjects to be able to cope with sadness, the eight steps of Reality Therapy were introduced. Glasser (1975) conceived of suffering as a direct result of irresponsible behavior. "Responsibility," according to Glasser, "is the ability to fulfill one's need, and to do so in a way that does not deprive others of the ability to fulfill their needs" (p. xviii). Subjects were led through the following steps:

1. Involvement: make a list of what you've done to overcome your sadness.
2. Evaluate: ask yourself, "are these (see your list) helping me cope with my sadness to the degree that my self-esteem is not jeopardized?
3. Choosing alternatives: make a list of what you've done but failed to relieve you of your sadness. In the light of such failure, make other workable alternative solutions to the problem (sadness), test these and continue choosing from different alternatives until you succeed.
4. Making new plans: you've got to practice whatever alternative plans you have by working on those features which make your face look "sad" (Appendix K).
5. Commitment: saying something is quite different from actually doing it, so commit yourself to doing the things in No. 4 above.

6. No excuse: you are sad because you choose to be sad; do not pass the blame on external factors.
7. No punishment: by blaming others, or not following up on your commitment, you may be punishing your self-esteem by leaving your face "sad" all the time.
8. Don't give up: if you fail at any time and on any of your endeavors to alleviate the sad feeling, recycle steps 1-7.

Step 6: Posttest: Immediately following the training session, and with a view to enabling the experimental subjects to give an objective evaluation of the effectiveness of the training, they were asked to rate their understanding of the possible causes of the facial behavior discussed on that day. The posttest was also an effort to let the experimental subjects demonstrate the degree to which they could cope with such facial behavior using the skills gained as a result of the training (see Appendix H).

Session three: anger.

Step 1: Pretest (Appendix F).

Step 2: Minilecture on anger: Anger is probably the most dangerous of all emotions. According to Ekman and Friesen,

> An angry person is most likely to hurt others. Anger may be caused by frustration from interference with your activity, physical threat, observing someone who violates your darely held moral beliefs, a person's failure to meet your expectations, another's anger directed to you instead of to the one involved, etc. The signs of anger include: blood pressure increases, the face may be reddened while the veins in the forehead and neck become more apparent, breathing changes, etc. (pp. 78-80).

Step 3: A slide presentation on "angry" face was done to afford all subjects the opportunity to identify specific features which distinguish anger from any other emotions of the face (Appendix K).

Step 4: Video taping of subjects' posed "angry" faces was done simply by requesting that each subject pose as if he or she was actually angry. The video tape was played back and analyzed to recognize the features mentioned in Step 3.

Step 5: Assessment of personal anger: Each subject was given a sheet of paper containing five simple questions on how to assess personal anger (Appendix I).

Step 6: Treatment model: A behavior modification technique was used to train subjects in how to cope with anger. According to Dimick and Huff (1970), behavior is a function of a stimulus--$B = (f)_s$, and to reduce the frequency of a typically discomforting behavior (anger), the client has to "learn new responses to old situations" (Belkin, 1975, p. 277). The following steps were taken in teaching subjects how to cope with anger: (1) pinpoint the problem (I am angry because . . .), (2) determine the frequency of the incompatible behavior (I am so often . . .), (3) determine the setting events for the occasion (I am angry when such and such happens), (4) recognize what carrying "anger face" does to your very self-esteem. If it disturbs you and you want to change your behavior, then apply treatment by reinforcing yourself whenever you succeed in not becoming outrageously angry. Punish (by withdrawing token reinforcement) yourself whenever you behave angrily. (5) Always carry with you a small pocket-size mirrow so that you can look at your own face whenever you feel angry.

Step 6: Posttest (Appendix H).

Session four: disgust.

Step 1: Pretest (Appendix H): In order to assess the subjects' objective understanding of the causes of disgust, they were asked to rate certain statements concerning their understanding and their ability to cope with the facial behavior prior to receiving the training.

Step 2: Lecture on disgust: According to Ekman and Friesen,

> Disgust is a feeling of aversion caused by: the taste of something you want to spit out, the smell of what you want to block out, the thought of something discomforting, the sight of something repulsive, or the sounds that are related to abhorrent events . . . (p. 66).

Step 3: Slides portraying "disgust faces" were projected on the screen for subjects to see, and react to by pinpointing the facial contours distinguishing "disgust faces" from any other facial behaviors (Appendix K).

Step 4: Treatment modality for coping with "disgust face" or feeling was prescribed in the form of (1) actually wanting to get rid of the feeling inasmuch as it is considered to affect one's self-image, (2) getting rid of the feeling by avoiding the distinguishing features listed in Appendix K, (3) getting away from whatever stimuli may be disgusting to your five senses, (4) getting used to the stimuli that may be disgusting to you. In the case of getting used to the feeling, subjects were taught a simple self-management technique using behavior modification as in session three.

Step 5: Posttest (Appendix H): Subjects were asked to rate their understanding of the causes of disgust and their ability to deal with the behavior on the basis of the effectiveness of the training.

Session five: surprise.

Step 1: Pretest (Appendix H).

Step 2: Lecture following the ideas proposed by Ekman and Friesen:

> Surprise is the briefest emotion. It is sudden in its onset. If you have to think about the event and consider whether or not you are surprised, then you are not. Surprise may be one or both of the following types: unexpected, or misexpected. Almost anything can be surprising, provided it is either unexpected or misexpected. Surprise lasts only just as you've had time to think of it, then its no more a surprise. Surprise may also be: questioning surprise, astonished surprise, dazed or less interested surprise, or full surprise . . . (pp. 34-37).

Step 3: A slide presentation was done to pinpoint characteristic features of "surprise" facial affect (Appendix K).

Step 4: Modelling/demonstration: Anderson and Faust (1975) feel that the first thing to do in teaching a behavior is to model or demonstrate. After the experimenter had demonstrated using only facial features to communicate surprise, subjects were asked to practice with a dyad partner observing and giving feedback. Subjects were asked to express their feeling while they were experiencing specific surprising events.

Step 5: Coping techniques: Subjects were given an adaptation of Reality Therapy with which they could cope with surprise. (1) Recognize that surprise is a normal part of life which cannot be escaped or lived without. (2) Be prepared to be surprised inasmuch as it is the briefest form of emotion. (3) Reflect on the experiences as soon as it elapses by analyzing why you were surprised in the first place, and to what extent you felt your self-esteem was affected. (4) Use the feeling to plan for future surprises. If one feeling of surprise

tended to lower your self-esteem in the presence of that surprising stimulus, recognition of surprise as a normal part of life will make its reoccurrence less threatening.

Step 6: Group discussion: Subjects were instructed to share with others in the group what it meant to be surprised, how one usually felt when surprised, and how to cope with any surprising episode.

Step 7: Posttest (Appendix F).

Session six: happiness.

Step 1: Pretest (Appendix F).

Step 2: Exercise on happiness aimed at answering the following questions: (1) What does happiness mean to you? (2) When last did you feel very happy? (3) What are the common causes of happiness? (4) If you happen to be in a happy mood, what would you like to do? (5) How will you compare the influence of happy mood to an unhappy mood with regard to its influence on your self-esteem?

Step 3: Slide presentation depicting happy faces was done and features which differentiate this feeling from others were specifically stressed (Appendix K).

Step 4: Lecture:

> Happiness is the emotion most people want to experience. Happiness is a positive emotion. Happiness may be caused by a feeling of accomplishment, positive self-concept, or the anticipation of an event which you know will cause pleasurable sansations. There are: excitement-happiness, pleasure-happiness, self-concept happiness, or relief-happiness. Happiness may either be mild, audible, silent, or ecstatic. Happiness varies from a smile to a broad grin (Ekman and Friesen, pp. 99-103).

Step 5: "Treatment" (Gestalt Therapy technique). The fundamental principle upon which Gestalt Therapy techniques are based are: Behavior change, Awareness, Maturation, Integration, Responsibility, Authenticity, and Self-regulation (Perls, 1969; 1973; Perls et al., 1951). Subjects were taken through some of the processes in the following order.

(a) Behavior change: You should want to be happy as opposed to being unhappy.

(b) Awareness: Be fully aware of all the stimulus events that make you happy--by presentizing past happy events, or foreseeable future events.

(c) Responsibility: Take full responsibility for having a happy-looking face, because no one really makes you happy, but you yourself.

(d) Authenticity: By being authentic, you easily get involved in happiness; find out what makes you happy, etc. In the light of these facts, you should do the following things: (a) set up a time or season when you can meaningfully enjoy happiness (don't be a bookworm, or a workaholic); (b) get turned on when you are enjoying happiness by not staying happy half-heartedly; (c) don't get "turned on too loudly" by overdoing anything which brings you happiness; (d) feel good about being happy, enjoy happiness by looking at your face in the mirrow to find out what features distinguish this feeling from other feelings; (e) let the experience of happiness linger in your mind by telling others about it; and (f) experience the real meaning of happiness by <u>wanting</u> to be happy.

Step 6: Mirror-looking exercise: Subjects were asked to view their own facial appearances by holding a mirror and actually looking very intently to see the features described earlier. Subjects were also asked to share any experience they had with the whole group.

Step 7: Posttest (Appendix F).

Session seven: neutral.

Step 1: Pretest (Appendix F).

Step 2: Lecture: Subjects were taught the different styles of remaining neutral; i.e., remaining who one is while maintaining positive self-esteem. The eight types of neutral faces were type-written and given to the subjects (Appendix K).

Step 3: Slide presentation was conducted to compare neutral faces with the ones they saw in previous sessions.

Step 4: Discussion: The discussion period was designed to let subjects know how to study their own face with or without the help of others: (1) taking pictures of your face, (2) analyzing the pictures by covertly asking yourself "How is this look influencing my self-esteem? (3) work with a mirrow every time you are in doubt as to how you actually look to yourself, or others.

Step 5: Posttest (Appendix F).

Step 6: Overall rating of the training: In order to validate the effectiveness or the usefulness of the training sessions, subjects were presented with series of statements which they were instructed to read and rate on a scale of 1-10 (Appendix J).

Posttest session: Both the experimental and control groups were called together during this ninth session and the posttest was administered to all subjects using TSCS, MAACL, RSS, and FAP.

H. TESTING STATISTICAL HYPOTHESES

A detailed analysis of the data collected was done by scoring the dependent variables: Tennessee Self-Concept Scale (TSCS), Rosenberg Self-Esteem Scale (RSS), Multiple Affect Adjective Checklist (MAACL), and the Facial Affect Pictures (FAP). The raw data were computer scored by Vanderbilt University Computer Center (TSCS), Educational and Industrial Testing Service (MAACL), and The University of Tennessee Computer Center (all variables). Data analysis was done to test each of the six hypotheses proposed by the experimenter. Different statistical approaches were adopted to test the significance or non-significance of the hypotheses at .05 level of confidence.

Frequency distributions were conducted on experimental subjects' overall rating of the effectiveness of the training sessions as well as their judging of the facial affect pictures. The primary reason for carrying out the frequency distributions was to avail the opportunity of determining the mean, mode, median, kurtosis, range, standard deviations, and even the variance of each group's scores. It was also aimed at facilitating a graphical comparison of the different means. Champion (1970) has defined frequency distribution as "the simple tally or scores or values of characteristics which have been taken from any collection of elements" (p. 17). A two-tailed test statistic was computed to answer the question "is the group difference attributable to a

population mean, or may it be random variation from a single population mean?" (Snedecor, 1959, p. 85). Simply stated, the attempt was to determine if there were significant group mean differences before the administration of the training sessions.

A simple anova test was used to determine whether there was a significant difference between two or more means obtained at .05 probability level. According to Gay (1976),

> The concept underlying ANOVA is that the total variation of covariance of scores can be attributed to two sources--variance between groups (variance caused by treatment), and variance within groups (error variance). As with t-test, a ratio if formed (the F-ratio) with group differences as the numerator (variance between groups) and an error term as the denominator (variance within groups). At the end of the study, after administration of the independent variable (training), we determine whether the variance between groups differs from the within group variance by more than what could be expected by chance. In other words, if the treatment variance is enough larger than the error variance, a significant F-ratio results, the null hypothesis is rejected, and it is concluded that the treatment had a significant effect on the dependent variable. If, on the other hand, the treatment variance and error variance are essentially the same (do not differ by more than what could be expected by chance), the resulting F ratio is not significant and the null hypothesis is not rejected (p. 254).

A two-way anova was also used to analyze the data to find whether there was (1) a significance between row effect, (2) significance between column effect, and (3) a significant interaction effect. The interaction effect F-value is the ratio of the interaction variance to within-cell variance (McGee, 1971, p. 186). On one hand, statistical significance merely points to the fact that the effect of an independent variable is different from zero. On the other hand, practical significance of the results may refer to the relative magnitude of the effect. In order to test the practical importance of the difference, "nomothetic

data analysis" (Kindall, 1975, p. 52) were used for between-group (white/black; or male/female) comparisons. The data from these comparisons are presented in figures in Chapter IV. Myers (1976) has defined interaction effect as:

> The variability among cell means that still remains when variability doe to the main effects is removed. A significant A x B interaction indicates that the differences among the means of the populations defined by the levels of A change as a function of the level of B, or equivalently, that the differences among the means for the level of B change as a function of the level of A. A first-order interaction (that which involves only two independent variables) is significant when the difference among the simple effects of one variable change significantly over the levels of the second variable. A second-order interaction (that which involves three independent variables) effect is significant when the simple interaction effects of two variables change as a function of the level of the third variable (pp. 103, 131).

Hypothesis One

Both simple anova and two-way anova tests were computed to test hypothesis one. In doing this, the pre- and post-test scores of the experimental subjects were compared with those of the control subjects on the Tennessee Self-Concept Scale (TSCS).

Hypothesis Two

Hypothesis two was tested with a simple anova test at .05 confidence level to compare the posttest mean scores of high and low experimental subjects on TSCS and MAACL.

Hypothesis Three

Hypothesis three was tested with a simple anova and Fisher's Exact test to compare the mean posttest scores of female experimental

subjects with the posttest scores of male experimental subjects on the TSCS, MAACL, and RSS.

Hypothesis Four

A simple anova test was computed to test hypothesis four. The posttest mean scores of minority subjects were compared with those nonminority subjects on TSCS and MAACL.

Hypothesis Five

A simple anova test was computed to validate hypothesis five. Experimental subjects' judgment of the facial affect pictures were compared with control subjects' judgment of the same instruments during posttest.

Hypothesis Six

Experimental and control subjects' posttest scores on the Rosenberg Four-Point Self-Esteem Scale were analyzed with a simple anova test at .05 confidence level.

I. SUMMARY

Twenty-eight male and female subjects participated voluntarily in the study. Subjects were randomly selected from the 51 graduate and undergraduate subjects who responded to an announcement made in classrooms during Winter and Spring quarters, 1978. The independent variable was positive self-esteem training using nonverbal communication cues, and the dependent variables were subjects' responses to TSCS, MAACL, RSS, and FAP. Subjects were randomly selected from various ethnic

groups that took the pretest; group assignment was also based on subjects' pretest scores on the TSCS.

There were seven training sessions during which an eclectic counseling psychology model was used to teach subjects the skills needed to understand and cope with various negative implications associated with nonverbal facial messages (anger, fear, sad, happy, surprise, disgust, neutral). Pre- and post-tests were administered to experimental subjects during each session with a view to assessing subjects' understanding of their nonverbal facial behaviors as a result of the effectiveness of the training.

The video and audio equipment used in the study were all of good quality SONY video and audio materials and the setting where the study was conducted was adequate. The control subjects received everything that the experimental subjects except the independent variable. The data collected were analyzed with various statistical tests (t-test, simple anova, two-way anova, Fisher's Exact test) to reject the null hypotheses at .05 level of confidence.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

The data presented in Chapter IV are the results of testing the six hypotheses which were formulated by the researcher. Data analysis was done at The University of Tennessee Computer Center and the Statistical Analysis System was used. The statistical tests used included the t-test, simple anova, two-way anova, and Fisher's Exact test. The level of significance was established at .05.

A. HYPOTHESES TESTING--HYPOTHESIS ONE

As a result of the training received, the experimental subjects would perform significantly better than the control group on their posttest scores of the TSCS.

The Self-Criticism Scale

The self-criticism scale is a scale of 10 items which are mildly derogatory statements that most people say are true for them. To deny most of these is to be defensive or to try to present a favorable of oneself. High scores generally show a normal, healthy openness and ability to cope with self-criticism. The results presented in Table 1 show an F-value of .147 which was found to be nonsignificant at an established .05 level of confidence. The results point up the fact that experimental subjects were not significantly different from the control

TABLE 1. ANOVA: comparison of experimental and control groups subjects on self-criticism scale.

Source of Variation	df	Mean Squares	F	P
Between groups	1	19.521	.147	.705
Within groups	26	132.718		
TOTAL	27	152.239		

groups at the end of the training. An obtained F-value of .147 was found to be significant only at .705, hence, hypothesis one was rejected at .05 level of confidence.

According to Fitts (1961):

> The True-False ratio scale is a measure of response set or response bias, an indication of whether the subjects' approach to the task involves any strong tendency to agree or disagree regardless of item content. High T/F scores show that the individual achieves self-definition or self-description by focusing on what he is and relatively unable to accomplish the same thing by eliminating or rejecting what he is not (pp. 2-4).

The results shown in Table 2 indicate that there was no significant difference between experimental and control groups' scores at .05 level of confidence on the True-False ratio scale. The F-value of .139 did not reach statistical significance at that predetermined probability level. F reached significance at .712. On the basis of a nonsignificant F value, it was concluded that experimental group subjects did not differ significantly from the control group subjects; consequently, hypothesis one was rejected.

Net conflict scores: these scores indicate the degree to which subjects' responses to positive items would differ from, or conflict with their responses to negative items in the same area of

TABLE 2. ANOVA: comparison of experimental and control subjects true-false ratio scale.

Source of Variation	df	Mean Squares	F	P
Between groups	1	20.427	.139	.712
Within groups	26	146.639		
TOTAL	27	167.066		

self-perception. The data presented in Table 3 portray the fact that there was no significant difference between the two groups with regard to their posttest scores. A nonsignificant F-value of .390 was an indication that experimental subjects, notwithstanding their training, did not show any statistically significant difference on the posttest when compared with the control group subjects. F was not significant at .05 level, rather, at .538; hence, hypothesis one was rejected.

TABLE 3. ANOVA: comparison of experimental and control groups subjects on net conflict scale.

Source of Variation	df	Mean Squares	F	P
Between groups	1	36.831	.390	.538
Within groups	26	94.330		
TOTAL	27	131.161		

The total conflict scores: these scores are used to determine the total amount of positive and negative (P-N) conflicts in subject's scores. High scores indicate "confusion, contradiction, and general conflict in self-perception. Low scores have the opposite trend, but extremely low scores indicate an extremely tight and rigid self-description" (Fitts, p. 4). The data in Table 4 show no significant posttest score difference ($F = .16$, $p = .901$) at .05 level of confidence. The results further show that the training that the experimental subjects were exposed to did not influence them in such a way as to have caused a statistically significant difference between them and the control group subjects. In the light of the data presented in this table, hypothesis one was rejected.

TABLE 4. ANOVA: comparison of experimental and control subjects on total conflict scale.

Source of Variation	df	Mean Squares	F	P
Between groups	1	3.466	0.16	.901
Within groups	26	219.612		
TOTAL	27	223.078		

According to Fitts (1966),

> The scale, Total Positive, is generally used to convey three primary messages (1) This is What I am, (2) This is how I feel about myself, and (3) This is what I do. Principally, it reflects a subject's overall level of self esteem. Subjects with high scores tend to like themselves, feel that they are persons of worth and value, have confidence in themselves, and act accordingly. People with low scores are doubtful about their worth, see themselves as undesirable, often feel anxious, depressed, and unhappy, and have little faith or confidence in themselves (p. 2).

The results presented in Table 5 indicate that the probability of the training causing any statistically significant difference between the experimental and control groups was not significant at .05 confidence level ($F = .16$, $p = .901$). Hypothesis one was rejected at that predetermined level of confidence.

TABLE 5. ANOVA: comparison of experimental and control subjects on total positive scores.

Source of Variation	df	Mean Squares	F	P
Between groups	1	71.572	.484	.493
Within groups	26	147.736		
TOTAL	27	219.308		

Row 1 positive scores focus on IDENTITY with reference to "what I am" items. The subjects here described what they were as they perceived themselves. The results in Table 6 show that while experimental subjects received some form of training but the control group subjects did not, there was no significant difference between the two groups. It was concluded that, regardless of the training, both experimental and

TABLE 6. ANOVA: comparison of experimental and control groups on row 1 positive score.

Source of Variation	df	Mean Squares	F	P
Between groups	1	195.391	1.325	.261
Within groups	26	186.861		
TOTAL	27	382.252		

control subjects perceived themselves fairly equally. An F value of 1.325 was not significant at .05 confidence level; hence, hypothesis one was rejected. F was found to be significant at .261.

Row 2 positive scores indicate self-satisfaction. Subjects expressed how they felt about themselves--reflecting their level of self-satisfaction and self-acceptance. The results presented in Table 7 show an F value of .502 which was not found to be significant at .05 confidence level. An obtained F-value of .502 was found to be significant at .485 which was higher than the established .05 confidence level. It was concluded that there was no significant difference between experimental and control subjects. In light of this conclusion, hypothesis one was rejected.

Row 3 positive score--behavior. The scores derived from subjects' responses to items that say "this is what I do," or "this is the way I act," are usually classified under a row 3 positive scale. The score measures subjects' perception of their behavior or the way they function. The results presented in Table 8 indicate an F value which was not

TABLE 7. ANOVA: comparison of experimental and control subjects on row 2 positive score.

Source of Variation	df	Mean Squares	F	P
Between groups	1	64.579	.502	.485
Within groups	26	128.666		
TOTAL	27	193.245		

TABLE 8. ANOVA: comparison of experimental and control groups on row 3 positive scores.

Source of Variation	df	Mean Squares	F	P
Between groups	1	32.571	.304	.586
Within groups	26	107.041		
TOTAL	27	139.612		

significant at .05. There was no significant difference between experimental and control groups subjects; therefore, the hypothesis was rejected.

Scores on column A indicate how subjects reacted to their own physical selves--their view of their body, health, appearance, skills, and sexuality. The figures presented in Table 9 show that the results of the F ratio was found to be nonsignificant at .05 confidence level. The specialized training did not engender a significant difference between the two groups on their posttest responses to these items. In light of the results, hypothesis one was rejected on this subscale.

TABLE 9. ANOVA: comparison of experimental and control subjects on column A: physical self.

Source of Variation	df	Mean Squares	F	P
Between groups	1	81.240	.630	.435
Within groups	26	129.033		
TOTAL	27	210.273		

Column B scores are geared toward how subjects assess their moral-ethical selves--moral with relationship with God, feelings of being good or bad person, and satisfaction with one's own religion or lack of it (Fitt, p. 3). An F-value of .037 was not significant at .05 level (Table 10). It was concluded that the experimental subjects did not perform significantly better than the control subjects on the posttest. Hypothesis one was rejected.

TABLE 10. ANOVA: comparison of experimental and control subjects on column B: moral-ethical self.

Source of Variation	df	Mean Squares	F	P
Between groups	1	4.631	.037	.848
Within groups	26	123.703		
TOTAL	27	128.324		

Column C scores are designed to measure subjects' perception of their personal selves which significantly reflects their sense of personal worth, feeling of adequacy, and relationships to others. The main effects (between groups) F-value of .032 that appears in Table 11 was not significant at .05 level. Therefore, it was concluded that experimental group did not differ from the control group in any statistically significant fashion. F reached statistical significance at a level of significance which was higher than the established .05 level of confidence. Hypothesis one was rejected.

TABLE 11. ANOVA: comparison of experimental and control subjects on column C: personal self.

Source of Variation	df	Mean Squares	F	P
Between groups	1	4.161	.032	.859
Within groups	26	129.231		
TOTAL	27	133.392		

Column D: Family Self

This scale "reflects one's feeling of adequacy, worth, and value as a family member. It reflects the individual's perception of self in reference to his closest and most immediate circle of associates" (Fitts, p. 3). A nonsignificant F value of .465 presented in Table 12 shows that the control subjects reflected on these feelings just as equally as the experimental subjects who were trained. It was felt that nonsignificance points up the fact that the training did not contribute to how the experimental subjects responded to the items.

Hypothesis one was rejected because the obtained F-value reached statistical significance at a level which was higher than the .05 level.

TABLE 12. ANOVA: comparison of experimental and control subjects on column D: family self.

Sources of Variation	df	Mean Squares	F	P
Between groups	1	67.550	.465	.502
Within groups	26	145.273		
TOTAL	27	212.823		

The social-self scale indicates "self as perceived in relation to others which pertains to others in a more general way" (Fitts, p. 3). Table 13 indicates that experimental groups were not significantly different from their control counterparts after they had received the prescribed training. Because F was not significant at .05 confidence level, it was assumed that experimental subjects were not significantly

TABLE 13. ANOVA: comparison of experimental and control subjects on column E: social self.

Source of Variation	df	Mean Squares	F	P
Between groups	1	283.029	2.133	.157
Within groups	26	132.687		
TOTAL	27	415.716		

better than the control groups with respect to their posttest scores on this scale. Hypothesis one was not rejected.

The variability scores, according to Fitts, provide a simple measure of the amount of variability, or inconsistency from one area of perception to another. High scoring persons tend to compartmentalize certain areas of self and view these areas quite apart from the remainder of self. Well integrated people generally score below the mean on the scales but above the first percentile (p. 3). The statistical evidence presented in Table 14 shows that there was no significant difference between experimental groups which received the training and the control or no treatment group when both groups were retested after the training sessions. Between groups, F-values were calculated to be .757 which did not meet the prescribed probability level of .05 level. Hypothesis one was rejected.

Column total variability scale indicates variations <u>within</u> columns and, according to the results in Table 15, experimental subjects did not differ significantly from control subjects in the way they

TABLE 14. ANOVA: comparison of experimental and control subjects on total variability scores.

Source of Variation	df	Mean Squares	F	P
Between groups	1	46.210	.757	.392
Within groups	26	61.008		
TOTAL	27	107.218		

TABLE 15. ANOVA: comparison of experimental and control subjects on column variability.

Source of Variation	df	Mean Squares	F	P
Between groups	1	42.363	.638	.432
Within groups	26	66.368		
TOTAL	27	108.731		

responded to these items during the posttest. The results presented in Table 15 show an F-value which was not significant at .05 level. Hypothesis one was rejected.

The data presented in Table 16 show that the sum of experimental subjects' variations across the rows after the training was not significantly different from those variations across control group's rows. The data supported the claim that there was no significant posttest difference between the two main groups at .05 level of confidence; consequently, hypothesis one was rejected.

TABLE 16. ANOVA: comparison of experimental and control subjects on row total variability.

Source of Variation	df	Mean Squares	F	P
Between groups	1	34.771	.433	.516
Within groups	26	80.230		
TOTAL	27	115.001		

According to Fitts (1966),

> The Distribution Score indicates the certainty about the way one sees himself across five available choices in responding to the scale. High score indicates that one is very definite and certain in what he says about himself while low scores indicate just the opposite (p. 3).

Even though it was established that there was a significant covariate F-value prior to the training sessions, the results presented in Table 17 show that the training itself did not contribute to the creation of

TABLE 17. ANOVA: comparison of experimental and control groups on distribution score.

Source of Variation	df	Mean Squares	F	P
Between groups	1	164.086	1.173	.289
Within groups	26	139.904		
TOTAL	27	309.990		

posttest difference. The F-value of 1.173 was not significant at .05 level of confidence. In light of the nonsignificance of F-value, the experimental subjects were thought not different from the control group; hypothesis one was rejected.

The defensive positive scale is a subtle measure of defensiveness. A high score shows a positive self-description. A significantly low score is an indication of lack of the usual defenses for maintaining minimal self-esteem. According to the data presented in Table 18, main effects results were not significant at .05 probability level. Hypothesis one was rejected.

The general maladjustment scale is an inverse scale of adjustment/maladjustment which indicates that a low raw score results in high T-scores, and vice versa. Regardless of whether the scale is inverse or not, the results of experimental and control subjects' performance presented in Table 19 clearly indicate that experimental subjects did not perform better than the control subjects. An obtained F-value

TABLE 18. ANOVA: comparison of experimental and control groups on defensive positive score.

Source of Variation	df	Mean Squares	F	P
Between groups	1	122.005	.923	.344
Within groups	26	132.250		
TOTAL	27	254.255		

TABLE 19. ANOVA: comparison of experimental and control subjects on general maladjustment score.

Source of Variation	df	Mean Squares	F	P
Between groups	1	62.639	.463	.503
Within groups	26	135.371		
TOTAL	27	198.010		

of .463 was not significant at .05 level; hence, hypothesis one was rejected.

The psychosis scale differentiates psychotic from nonpsychotic patients. The results presented in Table 20 show a posttest F-value of .373 which was not significant at .05 probability level. Results indicate that there was no difference of any statistical significance between the experimental and control subjects in the way they both responded to the psychosis items. Hypothesis one was rejected.

TABLE 20. ANOVA: comparison of experimental and control groups on psychosis scale.

Source of Variation	df	Mean Squares	F	P
Between groups	1	32.290	.373	.547
Within groups	26	86.592		
TOTAL	27	118.882		

Fitts (1966) has said that: "The personality disorder scale differentiates between people with basic personality defects and weaknesses in contrast to psychotic states or the various neurotic reactions" (p. 5). An F-value of .177 that is presented in Table 21 shows that there was no significant difference between how the two groups reacted to the items constituting this scale. Hypothesis one was not justified; hence, it was rejected.

TABLE 21. ANOVA: comparison of experimental and control groups subjects on personality disorder scale.

Source of Variation	df	Mean Squares	F	P
Between groups	1	23.088	.177	.678
Within groups	26	130.413		
TOTAL	27	123.501		

The pretest F-value of 10.406 was statistically significant at .05 level of confidence (P = .003). On the basis of the pretest difference, it was hypothesized that the experimental group would maintain this difference as a result of the training they were to receive. However, the results presented in Table 22 show an F value of 1.516 which was not significant at .05 level of confidence. Hypothesis one was rejected.

TABLE 22. ANOVA: comparison of experimental and control subjects on neurosis scale.

Source of Variation	df	Mean Squares	F	P
Between groups	1	174.111	1.516	.230
Within groups	26	114.871		
TOTAL	27	288.982		

> The personality integration scale (PI) differentiates the PI group from other groups. The scale defines subjects in terms of being average, or better in terms of their level of adjustment or degree of personality integration (Fitts, 1966, p. 5).

Significant differences existed between the experimental and control groups before the training. A pretest F-value of 8.374 was found to be significant at .008 level of significance; hence, it was significant at .05 level of confidence (Table 23). That the treatment did not cause the two groups to be significantly different after the treatment (training) is evidenced by an F-value of .213 which was not statistically significant at .05 level. It was concluded that hypothesis one could be rejected.

TABLE 23. ANOVA: comparison of experimental and control subjects on personality integration.

Source of Variation	df	Mean Squares	F	P
Between groups	1	28.686	.213	.648
Within groups	26	134.459		
TOTAL	27	163.145		

The NDS scale is an empirical measure which is a count of the number of deviant features on all other scores. There was a significant difference between experimental and control groups before the administration of treatment (training). An F-value of 10.373 was found to be significant at .004 level of significance (Table 24). With training,

TABLE 24. ANOVA: comparison of experimental and control subjects on number of deviant signs score (NDS).

Source of Variation	df	Mean Squares	F	P
Between groups	1	57.983	.860	.363
Within groups	26	67.455		
TOTAL	27	125.438		

however, an F-value of .860 was obtained but was not significant at .05 level. It was felt that the groups were not significantly different from each other on this scale; on this ground, hypothesis one was rejected.

B. TWO-WAY ANALYSIS OF VARIANCE RESULTS ON SELECTED TSCS TABLES

Two-way anova was computed to determine if there were possible interaction effects among certain variables constituting the Tennessee Self-Concept Scale. Interaction effect has been defined by Myers (1976) as "the variability among cell mean that still remains when variability due to the main effects is removed" (p. 103). The types of interaction effects presented in the following tables are either two-way interaction effects, or three-way interaction effects. These terms have been called first-order interaction (that which involves only two independent variables), or three-order interaction effects (that which involves

three independent variables), respectively. Tables 25 through 33 represent only those TSCS items where interaction effects were found.

TABLE 25. Two-way ANOVA: comparison of experimental and control subjects--row 2 variability.

Sources of Variation	df	Mean Squares	F	P
MAIN EFFECTS	3	90.441	.574	.639
Exp. X Cont. (GRA)	1	4.583	.029	.866
High X Low (GRB)	1	19.750	.125	.727
Sex	1	173.465	1.101	.307
2-WAY INTERACTIONS	3	263.868	1.674	.204
GRA X GRB	1	737.655	4.694	.043*
GRA X SEX	1	131.357	.834	.372
GRB X SEX	1	86.759	.551	.467
WITHIN GROUPS	21	157.588		

*F was found to be significant at .05 confidence level. It was concluded that there were interaction effects between GRA and GRB.

TABLE 26. Two-way ANOVA: comparison of experimental and control subjects on column A--physical self.

Sources of Variation	df	Mean Squares	F	P
MAIN EFFECTS	3	48.755	.310	.818
GRA	1	51.973	.331	.572
GRB	1	33.264	.212	.650
SEX	1	30.838	.196	.662
2-WAY INTERACTIONS	3	238.622	1.519	.240
GRA x GRB	1	672.987	4.285	.052*
GRA x SEX	1	92.391	.588	.452
GRB x SEX	1	76.027	.484	.495
WITHIN GROUPS	21	157.053		

*F was found to be significant at .05 confidence level. Significant interaction effects were found to be present between GRA x GRB.

TABLE 27. Two-way ANOVA: comparison of experimental and control subjects on distribution scores 5.

Sources of Variation	df	Mean Squares	F	P
MAIN EFFECTS	3	380.496	1.878	.166
GRA	1	207.378	1.023	.324
GRB	1	608.660	3.003	.098
SEX	1	70.846	.350	.561
2-WAY INTERACTIONS	3	432.924	2.136	.128
GRA x GRB	1	1218.594	6.013	.024*
GRA x SEX	1	204.142	1.007	.328
GRB x SEX	1	137.891	.680	.419
WITHIN GROUPS	21	202.654		

*F was significant at .05 level of confidence. There were significant interaction effects between GRA and GRB.

TABLE 28. Two-way ANOVA: comparison of experimental and control subjects on distribution scores 2.

Sources of Variation	df	Mean Squares	F	P
MAIN EFFECTS	3	339.991	2.921	.059
GRA	1	281.490	2.418	.136
GRB	1	484.514	4.162	.055
SEX	1	55.832	0.480	.497
2-WAY INTERACTIONS	3	126.764	1.089	.377
GRA x GRB	1	353.644	3.038	.097*
GRA x SEX	1	5.076	0.044	.837
GRB x SEX	1	9.013	0.077	.784
WITHIN GROUPS	21	116.408		

*F-value showed a functional trend toward statistical significance. In light of this functional trend the idea of the presence of interaction effects was sustained.

TABLE 29. Two-way ANOVA: comparison of experimental and control subjects on defensive positive scale.

Sources of Variation	df	Mean Squares	F	P
MAIN EFFECTS	3	411.753	2.992	.055
GRA	1	78.291	0.569	.459
GRB	1	109.062	0.793	.384
SEX	1	724.832	5.267	.033
2-WAY INTERACTIONS	3	236.857	1.721	.195
GRA x GRB	1	554.385	4.028	.058*
GRA x SEX	1	393.641	2.860	.106
GRB x SEX	1	28.459	0.207	.654
WITHIN GROUPS	21	137.617		

*An F-value of 4.028 showed a trend toward significance (P = .058). Significant interaction effects were found to be present between GRA and GRB.

TABLE 30. Two-way ANOVA: comparison of experimental and control subjects on psychosis scale.

Sources of Variation	df	Mean Squares	F	P
MAIN EFFECTS	3	83.197	0.601	.622
GRA	1	0.410	0.003	.957
GRB	1	47.364	0.342	.565
SEX	1	116.663	0.843	.370
2-WAY INTERACTIONS	3	159.106	1.149	.354
GRA x GRB	1	15.707	0.113	.740
GRA x SEX	1	440.054	3.179	.090*
GRB x SEX	1	28.063	0.203	.657
WITHIN GROUPS	21	138.438		

*F showed a trend toward significance. The results support the fact that two-way interaction effects were present on the scale.

TABLE 31. Two-way ANOVA: comparison of experimental and control subjects on neurosis scale.

Sources of Variation	df	Mean Squares	F	P
MAIN EFFECTS	3	133.104	0.816	.500
GRA	1	83.505	0.512	.483
GRB	1	43.786	0.268	.610
SEX	1	182.384	1.118	.303
2-WAY INTERACTIONS	3	182.298	1.117	.366
GRA x GRB	1	531.938	3.260	.086*
GRA x SEX	1	25.106	0.154	.699
GRB x SEX	1	0.373	0.002	.962
WITHIN GROUPS	21	163.175		

*F showed a trend toward significant first-order interaction.

TABLE 32. Two-way ANOVA: comparison of experimental and control subjects personality integration.

Sources of Variation	df	Mean Squares	F	P
MAIN EFFECTS	3	383.240	3.061	.052
GRA	1	82.084	0.656	.428
GRB	1	733.887	5.861	.025
SEX	1	57.363	0.458	.506
2-WAY INTERACTIONS	3	287.338	2.295	.109
GRA x GRB	1	841.737	6.722	.017*
GRA x SEX	1	42.436	0.339	.567
GRB x SEX	1	12.298	0.098	.757
WITHIN GROUPS	21	125.217		

*F was significant at .05 confidence level. Significant first-order interaction effects were present on PI scale.

TABLE 33. Two-way ANOVA: comparison of experimental and control subjects on number of deviant signs scale.

Sources of Variation	df	Mean Squares	F	P
MAIN EFFECTS	3	60.821	0.986	.419
GRA	1	72.711	1.179	.290
GRB	1	113.021	1.833	.191
SEX	1	30.676	0.498	.489
2-WAY INTERACTIONS	3	342.533	5.555	.006
GRA x GRB	1	378.740	6.143	.022*
GRA x SEX	1	949.091	15.393	.001*
GRB x SEX	1	2.120	0.034	.855
3-WAY INTERACTIONS	1	0.896	0.015	.005*
WITHIN GROUPS	21	61.657		

*F was found to be significant at .05 level of confidence. Two-way and three-way interaction effects were present.

Summary

All the F-values which reached statistical significance at .05 confidence level, as presented in the two-way anova Tables 25 through 33 showed that there was significant first-order interaction effect between experimental and control groups on those particular TSCS variables. Also, the fact that an obtained F-value of .015 reached statistical significance at .05 confidence level in Table 33 showed that there was a three-way interaction effect between experimental subjects, control subjects, and the sex of these subjects, on the number of deviant signs subscale of the Tennessee Self-Concept Scale (TSCS). The implication was that as a result of the training that was administered, the experimental subjects performed significantly better than the control subjects when their posttest scores were analyzed with the two-way anova test. On the other hand, all the F-values which reached statistical significance at levels greater than .05, but less than .10 confidence level showed that there was a noticeable trend toward significance on each of those TSCS variables; especially trends toward interaction effects between experimental and control subjects. Rejection or non-rejection of the hypothesis was not based on the trends because these trends might have occurred by chance. Hypothesis one was rejected because there was no significant statistical difference between the posttest mean scores of the experimental and control groups in spite of the training sessions to which the experimental subjects were exposed.

C. HYPOTHESIS TWO

As a result of the skills to be gained through the treatment sessions (training), high and low experimental subjects would not be different significantly on their posttest scores on the TSCS, MAACL, and the Facial Affect Pictures.

Tennessee Self-Concept Scale (TSCS)

The descriptions of TSCS presented in the following tables are exactly as those tables presented in hypothesis one.

The data presented in Table 34 show that treatment caused low self-esteem subjects to become more aware of themselves to the point that the self-awareness influenced their posttest responses to the self-criticism items. An F-value of 1.665 was not significant at .05 level of confidence. Hypothesis two was not rejected in the light of the results.

TABLE 34. ANOVA: comparison of high and low experimental subjects on self-criticism scale.

Source of Variation	df	Mean Squares	F	P
Between groups	1	309.060	1.665	.223
Within groups	12	185.655		
TOTAL	13	494.715		

A nonsignificant F-value of .001 at .05 level of confidence (Table 35), pointed to the fact that as a result of the training, low self-esteem experimental subjects were not significantly different from the high self-esteem experimental subjects at the end of the training. The indication was that the training helped change the self perception of the low self-esteem experimental subjects on the true-false ratio items. Hypothesis two was not rejected.

TABLE 35. ANOVA: comparison of high and low experimental subjects on true-false ratio scale.

Source of Variation	df	Mean Squares	F	P
Between groups	1	.057	.001	.979
Within groups	12	76.196		
TOTAL	13	76.253		

On the basis of a nonsignificant F-value presented, hypothesis two was not rejected at .05 confidence level (Table 36). It was assumed that the training caused the difference.

The results presented in Table 37 show a nonsignificant F-value of 1.857 at .05 confidence level; therefore, hypothesis two was not rejected. It was argued that low self-esteem experimental subjects did not differ significantly from the high self-esteem experimental subjects simply because of the training they received.

TABLE 36. ANOVA: comparison of high and low experimental subjects on net-conflict scale.

Source of Variation	df	Mean Squares	F	P
Between groups	1	36.377	.720	.414
Within groups	12	31.474		
TOTAL	13	67.851		

TABLE 37. ANOVA: comparison of high and low experimental subjects on total conflict scores.

Source of Variation	df	Mean Squares	F	P
Between groups	1	229.573	1.857	.200
Within groups	12	123.626		
TOTAL	13	353.199		

The fact that the training caused low self-esteem experimental subjects not to be different from high self-esteem experimental subjects in any significant dimension is highlighted by the data presented in Table 38. The obtained F-value of 1.146 was not statistically significant, at the prescribed .05 confidence level; therefore, hypothesis two was not rejected.

TABLE 38. ANOVA: comparison of high and low experimental subjects on total scores.

Source of Variation	df	Mean Squares	F	P
Between groups	1	151.340	1.146	.307
Within groups	12	132.085		
TOTAL	13	183.425		

An F-value of .166 which is presented in Table 39 was found to be nonsignificant at .05 level of confidence. Hypothesis two was not rejected because of the conclusion that low self-esteem experimental subjects scored as highly as the high self-esteem experimental subjects on the skills they acquired through training.

Table 40 presents an F-value of 4.316 which was not significant at a prescribed probability level of .05. However, the table also shows a significance level of .062 which was a trend showing the influence of the training or lack of it on subjects' response to the items. Inasmuch as the trend (P = .062) was not significant, it was concluded that hypothesis two was not rejected.

TABLE 39. ANOVA: comparison of high and low experimental subjects on row 1.

Source of Variation	df	Mean Squares	F	P
Between groups	1	28.658	.166	.692
Within groups	12	172.703		
TOTAL	13	201.361		

TABLE 40. ANOVA: comparison of high and low experimental subjects on row 2.

Source of Variation	df	Mean Squares	F	P
Between groups	1	323.914	4.316	.062
Within groups	12	75.046		
TOTAL	13	398.960		

Hypothesis two was not rejected because the nonsignificant F-value (F = .566). The data in Table 41 showed that low self-esteem experimental subjects were not significantly different from the high self-esteem experimental subjects when they were both tested immediately following the training sessions. Hypothesis two was not rejected on the basis of the data presented in Table 41.

TABLE 41. ANOVA: comparison of high and low experimental subjects on row 3.

Source of Variation	df	Mean Squares	F	P
Between groups	1	52.012	.556	.472
Within groups	12	93.573		
TOTAL	13	145.585		

An F-value of 3.567 was found to be nonsignificant as .05 level of confidence (Table 42). Hence, hypothesis two was not rejected on this scale. However, the fact that the obtained F-value reached statistical significance below .10 confidence level pointed up the fact that there was a noticeable trend toward significance on column A subscale of the Tennessee Self-Concept Scale (TSCS). The implication was that the trend toward significance could have been attributable to effectiveness of the training on one hand, or to error chance on the other hand. The trend, therefore, was not used in the rejection or nonrejection of the hypothesis.

TABLE 42. ANOVA: comparison of high and low experimental subjects on column A.

Source of Variation	df	Mean Squares	F	P
Between groups	1	334.659	3.567	.068
Within groups	12	93.813		
TOTAL	13	428.472		

The results in Table 43 show that an F-value of 1.465 did not reach statistical significance at the .05 level. As a result of this result, it was felt that the training had closed the variance between high and low experimental subjects. It was concluded that the training was effective; hence, hypothesis two was not rejected.

TABLE 43. ANOVA: comparison of high and low experimental subjects on column B.

Source of Variation	df	Mean Squares	F	P
Between groups	1	121.503	1.465	.251
Within groups	12	82.924		
TOTAL	13	204.427		

An F-value of 1.004 presented in Table 44 was not significant at the predetermined probability level of .05. F was, however, found to be significant at .338; consequently, the effectiveness of the training enabled low self-esteem experimental subjects to answer column C items just as high experimental subjects. In light of the obtained results, hypothesis two was not rejected.

TABLE 44. ANOVA: comparison of high and low experimental subjects on column C.

Source of Variation	df	Mean Squares	F	P
Between groups	1	113.475	1.004	.338
Within groups	12	168.553		
TOTAL	13	282.028		

The results of high and low experimental subjects' responses to items under column C of the TSCS are presented in Table 45. An F-value of .359 showed that hypothesis two was not rejected at .05 level of significance.

Hypothesis two could not be rejected on the basis of a nonsignificant F-value presented in Table 46. High experimental groups did not perform significantly better than their low self-esteem experimental counterparts as was predicted in the hypothesis.

The following conclusions were based upon the data presented in Table 47. First, the obtained F-value of .015 was not significant

TABLE 45. ANOVA: comparison of high and low experimental subjects on column D.

Source of Variance	df	Mean Squares	F	P
Between groups	1	33.733	.359	.561
Within groups	12	94.070		
TOTAL	13	127.803		

TABLE 46. ANOVA: comparison of high and low experimental subjects on column E.

Source of Variation	df	Mean Squares	F	P
Between groups	1	4.086	.018	.896
Within groups	12	228.364		
TOTAL	13	232.450		

TABLE 47. ANOVA: comparison of high and low experimental subjects on total variability scores.

Source of Variation	df	Mean Squares	F	P
Between groups	1	0.758	.015	.904
Within groups	12	49.520		
TOTAL	13	50.278		

at the predetermined .05 confidence level. Second, in light of the results, it was felt that low self-esteem experimental subjects showed the same level of self-esteem as the high self-esteem experimental subjects. Third, hypothesis two was not rejected.

The results in Table 48 which show a nonsignificant F of .621 at .05 confidence level pointed to the fact that the training had caused the low self-esteem experimental subjects not to be significantly different from the high self-esteem experimental subjects in the way column variability items were answered. Hypothesis two was not rejected.

An F-value of .675 presented in Table 49 was found to be statistically nonsignificant at .05. High and low self-esteem experimental subjects, therefore, were assessed as being the same on the row total variability scale as was predicted in the hypothesis. Hypothesis two was not rejected. It was assumed that the training was effective enough to have warranted the low self-esteem experimental subjects' shift toward the high self-esteem stance.

TABLE 48. ANOVA: comparison of high and low experimental subjects on column variability scores.

Source of Variation	df	Mean Squares	F	P
Between groups	1	31.495	.621	.447
Within groups	12	50.698		
TOTAL	13	82.193		

TABLE 49. ANOVA: comparison of high and low experimental subjects on row total variability.

Sources of Variation	df	Mean Squares	F	P
Between groups	1	28.713	.675	.429
Within groups	12	42.509		
TOTAL	13	71.222		

The data presented in Table 50 show an F-value which was not found to be significant at .05 level of confidence. Hypothesis two was not rejected in view of the fact that the training helped to remove the variance between the high and low self-esteem experimental subjects.

TABLE 50. ANOVA: comparison of high and low experimental subjects on distribution scores.

Sources of Variation	df	Mean Squares	F	P
Between groups	1	5.021	.027	.873
Within groups	12	188.557		
TOTAL	13	193.578		

The results presented in Table 51 show that an obtained F-value of .173 was not significant at the predetermined .05 confidence level. It was concluded that low self-esteem experimental subjects showed the same family-self outlook as did the high self-esteem experimental subjects. This trend was attributed to the nature of the training both groups received; therefore, hypothesis two could not be rejected.

The data presented in Table 52 show an F-value of .223 which was not significant at .05 confidence level. In light of the result, it was concluded that hypothesis two could not be rejected. It was also concluded that there was no significant difference between the two groups' responses on the general maladjustment scores.

TABLE 51. ANOVA: comparison of high and low experimental subjects on distribution-positive family self.

Sources of Variation	df	Mean Squares	F	P
Between groups	1	33.148	.173	.685
Within groups	12	191.420		
TOTAL	13	224.568		

TABLE 52. ANOVA: comparison of high and low experimental subjects on general maladjustment scores.

Source of Variation	df	Mean Squares	F	P
Between groups	1	34.009	.223	.646
Within groups	12	152.523		
TOTAL	13	186.532		

The results of whether high self-esteem experimental subjects were significantly different from the low experimental subjects is presented in Table 53. The table shows an F-value of .784 which was not significant at .05 confidence level. On this basis it was felt that there was no significant difference, and therefore, hypothesis two was not rejected.

TABLE 53. ANOVA: comparison of high and low experimental subjects on psychosis scores.

Source of Variation	df	Mean Squares	F	P
Between groups	1	50.064	.784	.395
Within groups	12	70.211		
TOTAL	13	120.275		

It was hypothesized that as a result of the training, low self-esteem experimental subjects would not be different from the high self-esteem experimental subjects. The data presented in Table 54 support this statement. An F-value of 1.423 did not reach significance at .05; consequently, hypothesis two was not rejected.

Hypothesis two, which stated that the training would not make both high and low self-esteem to be significantly different from each other was supported by the results presented in Table 55. An F-value of 1.268 reached significance at .284, higher than the predicted .05 level. In this light, hypothesis two was not rejected.

TABLE 54. ANOVA: comparison of high and low experimental subjects on personality disorder scale.

Source of Variation	df	Mean Squares	F	P
Between groups	1	158.537	1.423	.258
Within groups	12	111.381		
TOTAL	13	269.918		

TABLE 55. ANOVA: comparison of high and low experimental subjects on neurosis scores.

Source of Variation	df	Mean Squares	F	P
Between groups	1	142.199	1.268	.284
Within groups	12	112.136		
TOTAL	13	254.335		

On the basis of the results presented in Table 56, hypothesis two was not rejected because the training resulted in a nonsignificant F-value of .014 at .05 predicted probability level.

TABLE 56. ANOVA: comparison of high and low experimental subjects on personality integration.

Source of Variation	df	Mean Squares	F	P
Between groups	1	1.678	.014	.909
Within groups	12	72.658		
TOTAL	13	74.336		

The results presented in Table 57 show that F was not significant at .05 confidence. This fact showed that the type of training that the low self-esteem experimental subjects received heightened their self-awareness with regard to how they responded to the deviant signs scale items. Hypothesis two was not rejected.

TABLE 57. ANOVA: comparison of high and low self-esteem subjects on number of deviant signs.

Source of Variation	df	Mean Squares	F	P
Between groups	1	.310	.004	.949
Within groups	12	72.658		
TOTAL	13	72.968		

Multiple Affect Adjective Checklist (MAACL)

According to Zuckerman and Lubin (1965),

> The Multiple Affect Adjective Checklist (MAACL) was designed to fill the need for self-administered test which would provide valid measure of three of the clinically relevant negative affects: anxiety, depression, and hostility. . . . The scales are bipolar and that low scores on the full scales will indicate states of positive affect (p. 3).

The results of testing hypothesis two on the "anxiety," "depression," and "hostility" scales are presented in Tables 58 through 60. It is evident from the tables that nonsignificant F-values of .015, .091, and .124 were obtained, respectively. These F-values were not significant at .05 level of confidence. The reason for the nonsignificant findings might have been that the training caused low self-esteem experimental subjects to become more self-accepting to the degree that their posttest scores on the checklist were greatly affected by the self-acceptance. In light of the data, it was concluded that hypothesis two could not be rejected.

TABLE 58. ANOVA: comparison of high and low experimental subjects on anxiety scale.

Source of Variation	df	Mean Squares	F	P
Between groups	1	.104	.015	.905
Within groups	12	7.035		
TOTAL	13	7.139		

NOTE: F-value was not significant at .05 level of confidence.

TABLE 59. ANOVA: comparison of high and low experimental subjects on depression scale.

Source of Variation	df	Mean Squares	F	P
Between groups	1	1.062	.091	.768
Within groups	12	11.612		
TOTAL	13	12.674		

NOTE: An F-value of .091 was not significant at .05. Hypothesis two was not rejected.

TABLE 60. ANOVA: comparison of high and low experimental subjects on hostility scale.

Source of Variation	df	Mean Squares	F	P
Between groups	1	.793	.124	.732
Within groups	12	6.411		
TOTAL	13	7.204		

NOTE: F was found not to be significant at .05 level; therefore, hypothesis two was not rejected.

Facial Affect Pictures (FAP)

In order to assess the effectiveness of the training on the high and low experimental subjects immediately after the training, the two groups were asked to judge the Facial Affect Pictures. The underlying assumption for doing this was to test the hypothesis that high and low experimental subjects would not be different significantly in their ratings as a result of the training. It was assumed that both low and high experimental subjects would be taught specific facial features which would help them label facial emotions correctly. It was also assumed that having been exposed to different therapeutic styles of dealing with the specific emotions that were being studied, both groups would become more aware of their emotions and the effect these could have on their self-esteem. The results presented in the following tables justify the claim that the skills that the subjects gained as a result of the training led them to score equally highly on the rating. All the F-values were not significant at .05 level. As a result, it was concluded that hypothesis two could not be rejected.

Table 61 showed that hypothesis two was not rejected because F was not significant at .05 level of confidence.

The data presented in Table 62 show that no significant F could be obtained at .05 level of confidence. Hypothesis two was not rejected.

In light of a nonsignificant F-value of 2.769 presented in Table 63, it was concluded that there was no significant difference between high and low experimental subjects on the scale of the Facial Affect Pictures. In light of these findings, hypothesis two was not rejected.

TABLE 61. ANOVA: comparison of high and low experimental subjects on "happy after."

Source of Variation	df	Mean Squares	F	P
Between groups	1	3.438	1.999	.185
Within groups	12	1.720		
TOTAL	13	5.158		

TABLE 62. ANOVA: comparison of high and low experimental subjects on "sadness after."

Source of Variation	df	Mean Squares	F	P
Between groups	1	15.895	3.197	.101
Within groups	12	4.971		
TOTAL	13	20.866		

TABLE 63. ANOVA: comparison of high and low experimental subjects on "fear after."

Source of Variation	df	Mean Squares	F	P
Between groups	1	58.802	2.769	.124
Within groups	12	20.510		
TOTAL	13	79.312		

An obtained F-value was not significant at .05 level, but it reached significance at .071 (Table 64). The fact that F was significant at .071 indicated a noticeable trend which might have occurred by chance. In light of this nonsignificant F-value, hypothesis two was not rejected.

TABLE 64. ANOVA: comparison of high and low experimental subjects on "anger after."

Source of Variation	df	Mean Squares	F	P
Between groups	1	89.031	3.987	.071
Within groups	12	22.328		
TOTAL	13	111.359		

Hypothesis two was not rejected because F was not significant at the .05 level of confidence as shown in Table 65.

TABLE 65. ANOVA: comparison of high and low experimental subjects on "surprise after."

Source of Variation	df	Mean Squares	F	P
Between groups	1	9.788	.915	.359
Within groups	12	10.693		
TOTAL	13	20.866		

An obtained F-value of 1.476 was not significant at .05 level of confidence. In this light, hypothesis two could not be rejected, as shown in Table 66.

TABLE 66. ANOVA: comparison of high and low experimental subjects on "disgust after."

Source of Variation	df	Mean Squares	F	P
Between groups	1	6.939	1.476	.250
Within groups	12	4.700		
TOTAL	13	11.639		

F was found to be nonsignificant at .05 confidence level as shown in Table 67, and in view of this nonsignificance, hypothesis two was not rejected. It was concluded that both high and low experimental subjects were not significantly different with respect to how they judged the facial affect pictures depicting neutral facial emotions.

TABLE 67. ANOVA: comparison of high and low experimental subjects on "neutral after."

Source of Variation	df	Mean Squares	F	P
Between groups	1	14.189	1.236	.290
Within groups	12	11.479		
TOTAL	13	25.667		

Summary

All of the F-values in Tables 61 through 67 (pages 103 through 106, respectively), except one (Table 64, page 104), did not reach statistical significance at the predetermined .05 level. The results showed that the F-values were significant at points greater than .05 confidence; hence, hypothesis two was not rejected. An F-value of .071 as presented in Table 64 showed noticeable trends toward statistical significance; however, the significance could have occurred by chance. In light of this, hypothesis two was still not rejected. The results showed that low experimental subjects acquired enough skills during the training session that their posttest mean scores were not significantly different from the posttest mean scores of high experimental subjects.

D. HYPOTHESIS THREE

As a result of the training, female experimental subjects will not show more low self-esteem traits than male experimental subjects with regard to their posttest scores on the TSCS, MAACL, and the Facial Affect Pictures.

Tennessee Self-Concept Scale (TSCS)

In order to test the hypothesis that the seven female experimental subjects would not show more low self-esteem traits than the seven male experimental subjects, the raw scores obtained from the TSCS for male and female experimental subjects were analyzed with a one-way anova statistic. The results were condensed into the data presented in Table 68 showing the degrees of freedom (df), mean squares (ms), F-values, and the probability levels (P) for each of the scales on the TSCS. Presented in the table was the fact that self-criticism scale yielded an F-value of 6.231 which was found to be statistically significant at .030 level of confidence. Because the obtained F-value of .030 is statistically lower than the predetermined .05 level of confidence, it was concluded that the female experimental subjects showed more low self-esteem traits in this situation. This significance might have occurred by chance.

Statistical significance was also found to have occurred on number of deviant signs scale since an F-value of .052 was obtained. In light of this significance, the conclusion was made that, by chance, female subjects showed more low self-esteem traits on this scale than male subjects. An F-value of .089 was obtained on defensive positive

TABLE 68. Condensed data showing main effects F-values of TSCS scores on sex (male and female).

TSCS Scales	df	Mean Squares	F	P
Self-criticism	1	850.251	6.231	.030*
True/False ratio	1	55.319	0.777	.397
Net conflict	1	50.196	1.018	.335
Total conflict	1	1.736	0.012	.915
Total	1	37.980	0.267	.616
Row 1	1	17.470	0.101	.757
Row 2	1	13.358	1.076	.450
Row 3	1	15.014	1.555	.701
Column A	1	0.699	0.006	.942
Column B	1	7.021	0.075	.789
Column C	1	47.155	0.396	.542
Column D	1	4.823	0.050	.827
Column E	1	179.083	0.843	.378
Total variability	1	64.533	1.476	.250
Column variability	1	13.452	0.257	.622
Row variability	1	77.786	2.044	.181
Distribution score	1	230.725	1.373	.266
Distribution 5	1	178.184	0.928	.356
Distribution 4	1	5.935	0.035	.854
Distribution 3	1	245.985	1.751	.213
Distribution 2	1	20.831	0.269	.615
Distribution 1	1	10.449	0.102	.755
Defensive positive	1	513.362	3.474	.089**
General maladjustment	1	8.768	0.057	.816
Psychosis scores	1	161.697	2.672	.130
Personality dis.	1	13.157	0.106	.751
Neurosis scores	1	3.870	0.031	.863
Personality integration	1	90.216	0.792	.393
No. of deviant scores	1	241.656	4.765	.052*

*F was significant at .05 confidence level.
**F showed a trend toward significance at .05 level of confidence.

scale. While this F-value was greater than the predicted .05, it showed a trend towards significance; the conclusion was reached that female experimental subjects showed more low self-esteem traits than male experimental subjects by chance on this scale. Because all other 26 F-values in Table 68 reached statistical significance at points greater than the established .05 level, it was concluded that sex could not have played any significant role in how male and female experimental subjects responded to these scale items. In light of the nonsignificant F-values that were obtained from these scales, hypothesis three was not rejected at the predetermined confidence level. It was also concluded that the three significant F-values which appeared in Table 68 might have occurred by chance only.

Multiple Affect Adjective Checklist (MAACL)

As a result of a nonsignificant F-value (F = .001) in Table 69, there was statistical justification to conclude that female experimental subjects showed no more low self-esteem traits than the male subjects on responses to the "anxiety" scale. Because F was not significant at .05 level, it was concluded that hypothesis three could not be rejected.

As a result of an F-value of .920 which was not significant at .05 confidence level (Table 70), it was concluded that female experimental subjects were not significantly different from the male experimental subjects on how the feeling of depression was being expressed. Therefore, hypothesis three was not rejected.

TABLE 69. Comparison of male and female experimental subjects on "anxiety" scale with pre A as covariate.

Source of Variation	df	Mean Squares	F	P
Between groups	1	.008	.001	.974
Within groups	12	.149		
TOTAL	13	.157		

TABLE 70. Comparison of male and female experimental subjects on "depression" scale using pre D as covariate.

Source of Variation	df	Mean Squares	F	P
Between groups	1	9.942	.920	.358
Within groups	12	10.805		
TOTAL	13	20.747		

The results presented in Table 71 show that the obtained F-value of .283 was not significant at .05 level. In view of the nonsignificant F-value, it was concluded that female subjects did not differ from the male experimental subjects on the "hostility" scale. Hypothesis three was not rejected.

TABLE 71. Comparison of male and female experimental subjects on "hostility" scale.

Source of Variation	df	Mean Squares	F	P
Between groups	1	1.790	.283	.605
Within groups	12	6.321		
TOTAL	13	8.111		

Facial Affect Pictures (FAP)

A two-tailed t-test statistic was computed to analyze the responses to male and female subjects' judging of the facial affect pictures. The t-test statistic was used because of the nature of the sample size (N = 28). The data presented in Table 72 show the mean, mode, median, standard deviation, F-value, pooled and separate variance estimates for each of the facial affect variables. The two-tailed t-values were not significant at .05 level of confidence on "happy after" (t = .715), "sadness after" (t = .514), "surprise after" (t = .335), and "neutral after" (t = .179). The results of these t-values showed that both male and female experimental subjects judged these facial behaviors significantly accurately. It was felt that sex was

TABLE 72. Analysis of facial affect pictures using t-test statistic.

Variable	Number of Cases	Mean	Standard Deviation	Standard Error	F-Value	2-Tail Prob.	T-Value	Pooled Variance Estimate Degrees of Freedom	Pooled Variance Estimate 2-Tail Prob.	Pooled Variance Estimate T-Value	Separate Variance Estimate Degrees of Freedom	Separate Variance Estimate 2-Tail Prob.
HAP AFT												
Group 1	7	17.5714	1.397	0.528	1.10	0.913	-0.37	12	0.715	-0.37	11.97	0.715
Group 2	7	17.8571	1.464	0.553								
SAD AFT												
Group 1	7	14.7143	3.251	1.229	2.16	0.372	0.67	12	0.514	0.67	10.58	0.515
Group 2	7	13.7143	2.215	0.837								
FEAR AFT												
Group 1	7	11.8571	3.805	1.438	1.86	0.469	-1.88	12	0.085	-1.88	11.00	0.087*
Group 2	7	16.4286	5.192	1.962								
ANG AFT												
Group 1	7	20.0000	4.282	1.618	1.42	0.684	2.16	12	0.052	2.16	11.66	0.052*
Group 2	7	14.5714	5.094	1.925								
SURP AFT												
Group 1	7	15.0000	2.708	1.024	1.91	0.451	0.0	12	1.000	0.0	10.93	1.000
Group 2	7	15.0000	3.742	1.414								
DISG AFT												
Group 1	7	16.2857	2.690	1.017	4.00	0.116	1.01	12	0.335	1.01	8.82	0.341
Group 2	7	15.1429	1.345	0.508								
NEUT AFT												
Group 1	7	14.5714	2.936	1.110	1.35	0.723	-1.43	12	0.179	-1.43	11.74	0.179
Group 2	7	17.0000	3.416	1.291								

not a vital factor in the subjects' ability to judge these facial affect pictures.

There was a significant t-value obtained on the "anger after" scale. The t-value of .052 was considered sufficiently close enough to warrant the conclusion that how subjects judged these facial affect pictures was related to their sex; however, the significance might have been due to chance. "Fear after" was found to be significant at .085 level in the pooled variance estimation, and .087 level in the separate variance estimate column. Separate t-values showed that there was a noticeable trend toward statistical significance on this scale; the trend might also have occurred by chance. Hypothesis three was not rejected regardless of the statistical significance of "anger after" t-value and the trend toward significance for "fear after" t-value in light of the fact that these might have occurred by chance.

E. HYPOTHESIS FOUR

> As a result of the training, the posttest self-esteem scores of the seven minority experimental subjects will not show more low self-esteem traits than the posttest self-esteem scores of the seven nonminority experimental subjects on the TSCS, MAACL, and RSS.

Tennessee Self-Concept Scale (TSCS)

The condensed data presented in Table 73 show score analysis on each of the 29 scales of the TSCS. The data present the sum of squares (ss), degrees of freedom (df), mean squares (ms), F-values (F), and the

TABLE 73. Condensed data showing main effects F-values of TSCS scores race (minority vs. nonminority).

TSCS	Sum of Squares	df	Mean Squares	F	P
Self-criticism	4.090	1	4.090	.019	.892
True/False ratio	1.606	1	1.606	.021	.887
Net conflict	69.986	1	69.986	1.474	.250
Total conflict	37.096	1	37.096	.263	.618
Total	195.229	1	195.229	1.524	.243
Row 1	199.581	1	199.581	1.270	.284
Row 2	20.279	1	20.279	.198	.665
Row 3	179.570	1	179.570	2.190	.167
Column A	23.598	1	23.598	.193	.669
Column B	32.073	1	32.073	.352	.565
Column C	69.423	1	69.423	.593	.457
Column D	0.151	1	0.161	.002	.968
Column E	693.977	1	693.977	4.189	.065**
Total variability	5.310	1	5.310	.108	.748
Column variability	2.827	1	2.827	.053	.822
Row variability	0.489	1	0.489	.011	.919
Distribution score	265.877	1	265.877	1.613	.230
Distribution 5	21.885	1	21.885	.106	.751
Distribution 4	24.632	1	24.632	.148	.708
Distribution 3	460.654	1	460.654	3.807	.077**
Distribution 2	148.651	1	148.651	2.254	.161
Distribution 1	163.995	1	163.995	1.861	.200
Defensive positive	116.903	1	116.903	.636	.442
General maladjustment	663.986	1	663.986	6.971	.023*
Psychosis scores	226.000	1	226.000	4.134	.067**
Personality dis.	72.367	1	72.367	.607	.452
Neurosis scores	14.951	1	14.951	.121	.735
Personality integration	11.968	1	11.968	.099	.759
No. of deviant scores	48.156	1	48.156	.705	.419

*F was significant at .05 confidence level.
**F showed a trend toward significance at .05 level of confidence. The significance as well as the trend toward significance might have occurred by chance.

probability levels (P) at which each of the F-values was found to be significant. Three distinct patterns were found to be present in the data. First, presented in the data is the fact that all but four of the twenty-nine F-values were not significant at .05 confidence level which had been predicted. It was assumed that the nonsignificance could be attributed to the intensiveness or comprehensiveness of the training sessions which caused minority and nonminority experimental subjects to become more aware of themselves on these scales. In light of the nonsignificance of these F-values, it was concluded that as a result of the training, the posttest scores of minority experimental subjects were not significantly different from those of the nonminority experimental subjects. Consequently, hypothesis four was not rejected at .05 confidence level.

Second, the condensed data show that column E, distribution score 3, and the psychosis scale were found to be statistically significant at .065, .077, and .067 levels, respectively. It was concluded that the noticeable fact about these three scales is that even though their respective F-values did not reach significance at the predetermined .05 level, their deviations from this predetermined reference point was an indication of apparent trend in the predicted direction. This trend was attributed to the effectiveness of the training or lack of it in influencing minority and nonminority experimental subjects in responding to these three scales. Because the trends (.065, .077, .067) were not significantly high enough to warrant an outright rejection of hypothesis four, it was concluded that the hypothesis could not be rejected at the .05 level of significance and that the trend could have occurred only by chance.

Third, the general maladjustment scale yielded an F-value of 663.986. The F-value was found to be significant at .023 level which was lower than the predicted .05 level. This was attributed to the training which had caused either the low self-esteem minority subjects to remain low on their scores, while the nonminority experimental subjects maintained their high scores, or that the training helped the low self-esteem minority subjects to gain while the high self-esteem nonminority subjects lost or remained where they were during the pretest. Regardless of this significant difference between the minority and nonminority experimental subjects, it was concluded that hypothesis four could not be rejected on the basis of the results of the general maladjustment scale.

Multiple Affect Adjective Checklist (MAACL)

A simple one-way analysis of variance (anova) statistic was first computed to determine whether there was a significant difference between how minority and nonminority experimental subjects responded to the three scales (anxiety, depression, and hostility) of the MAACL. The data presented in the following tables attest to the fact that each of the obtained F-values was not significant at the predetermined .05 confidence level. On the basis of these nonsignificant F-values, hypothesis four could not be rejected, and it was concluded that minority and nonminority experimental subjects were not significantly different in the way they experienced or expressed anxiety, depression, or hostility at the time of the posttesting.

The covariates pre A F-value (.001) showed that the two groups were not significantly different on this scale before the training. Also, the obtained main effects F-value of 2.485 was not significant at .05 (Table 74) level pointing to the fact that the training did not influence either race in responding differently than the other. Therefore, hypothesis four was not rejected.

TABLE 74. ANOVA: comparison of minority and nonminority experimental subjects anxiety scale with pre A as covariate.

Source of Variation	df	Mean Squares	F	P
Covariates pre A	1	.008	.001	.972
Between groups	1	14.280	2.485	.143
Within groups	11	5.747		
TOTAL	13	20.035		

The results in Table 75 show that the two races were not significantly different before and after the training. In light of this evidence, it was concluded that hypothesis four could not be rejected.

F did not reach statistical significance at a predetermined .05 level in Table 76; hence, hypothesis four was not rejected. In light of the nonsignificant results produced by computing the simple anova statistic, a two-way anova test was also computed to determine if there was any significant interaction effects. The results of the two-way anova buttress the claim that the two races were not significantly

TABLE 75. ANOVA: comparison of minority and nonminority experimental subjects on depression scale with pre D as covariate.

Source of Variation	df	Mean Squares	F	P
Covariates pre D	1	.062	.006	.938
Between groups	1	20.408	2.071	.178
Within groups	11	9.853		
TOTAL	13	30.323		

TABLE 76. ANOVA: comparison of minority and nonminority experimental subjects on hostility scale with pre H as covariate.

Source of Variation	df	Mean Squares	F	P
Covariates pre H	1	2.111	.390	.545
Between groups	1	11.802	2.181	.168
Within groups	11	5.411		
TOTAL	13	19.324		

different in the way they responded to the items on the Multiple Affect Adjective Checklist.

Rosenberg Four-Point Self-Esteem Scale (RSS)

Different statistical approaches were used to test whether there was any significant difference between minority and nonminority experimental subjects on each of the six scales of the Rosenberg four-point self-esteem scales. First, a simple anova test was used to test for statistically significant differences. The results showed that the variances were so small that F-values were impossible to compute in many instances. This pointed to the fact that no significant differences existed between them. Second, a two-way anova test was computed to detect any possible interaction effects. This, too, pointed to the fact that no significant interaction effects existed because the variances were so small to allow for the computation of F-values at the predetermined .05 confidence level. Third, because of the smallness of the variances between these races' scores, the chi square test was computed to determine whether or not observed differences were significantly different from what could have been expected according to chance. Furthermore, in order to increase the chi square power, Fisher's Exact test was computed to test for the significance which could result in an exact probability for the given set of variables. Again, the obtained results showed that the variances were so small that differences could not be detected. In light of these results, it was concluded that the race or ethnic groups to which subjects belonged could not have influenced their responses to the scale items.

The data presented in Table 77 represent the results obtained after using one-way anova tests to analyze subjects' responses to Rosenberg scale 1, 3, 5. The data show that no F-values could be computed nor P-values be obtained simply because the variances were very small. The conclusion was that race was not a significant factor in how subjects responded to these items. On the basis of this fact, hypothesis four was not rejected. It was concluded further that minority and nonminority experimental subjects maintained the same degree of high self-esteem on these scales.

TABLE 77. ANOVA: comparison of minority and nonminority experimental subjects on Rosenberg scales 1, 3, 5.

Source of Variation	df	Mean Squares	F	P
Covariates pre R 1,3,5	1	0.0	0	0
Between groups	1	0.0	0	0
Within groups	11	0.0		
TOTAL	13	0.0		

The data presented in Table 78 show that even though an F-value of .058 was computed for Rosenberg scale 4, it was not statistically significant at .05 confidence level. In light of this, hypothesis four was not rejected. It was concluded that subjects' race was not a factor in how they responded to the scale.

The F-value of 1.028 that was obtained for between groups was not significant at .05 confidence level (Table 79). In light of the

TABLE 78. ANOVA: comparison of minority and nonminority experimental subjects on Rosenberg scale 4.

Source of Variation	df	Mean Squares	F	P
Covariates pre R 4	1	.000	.000	1.000
Between groups	1	.009	.058	0.815
Within groups	11	.155		
TOTAL	13	.155		

TABLE 79. ANOVA: comparison of minority and nonminority experimental subjects on Rosenberg scale 6.

Source of Variation	df	Mean Squares	F	P
Covariates pre R 6	1	.029	.382	.549
Between groups	1	.077	1.028	.332
Within groups	11	.075		
TOTAL	13	.181		

results, hypothesis four could not be rejected. It was also concluded that subjects' races had no direct bearing on how they responded to the items on the scale. Tables 80 and 81 present the results of Fisher's Exact test statistics that were computed to determine if there were any possible significant differences present regardless of the very small nature of the variance between the races.

TABLE 80. Comparison of minority and nonminority experimental subjects on Rosenberg 4, using Fisher Exact test statistic.

	Total PCT	1.1	2.1	Row Total
RACE		5	1	6
	Minority (black)	83.3	16.7	42.9
		41.7	50.0	
		35.7	7.1	
		7	1	8
	Non-minority (white)	87.5	12.5	57.1
		58.3	50.0	
		50.0	7.1	
	Column	12	2	14
		85.7	14.3	100.0

NOTE: Fisher's Exact Test = .69231. Fisher's test was found not to be significant at .05 level. Hypothesis four was, therefore, not rejected.

TABLE 81. Comparison of minority and nonminority experimental subjects on Rosenberg 6, using Fisher's Exact test.

	Total PCT			Row Total
		5	1	6
	Minority	83.5	16.7	42.9
	(black)	38.5	100.0	
		35.7		
RACE				
		8	0	8
	Non-	100.0	0.0	
	minority	61.5	0.0	
	(white)	57.1	0.0	
	Column	13	1	14
	TOTAL	92.9	7.1	100.0

NOTE: Fisher's Exact Test = 0.42857. Fisher's Exact test was not significant at .05 level of confidence; hence, hypothesis four was not rejected. Race was found not to be an important determinant of how subjects reacted to the Rosenberg self-esteem scale.

F. HYPOTHESIS FIVE

At the end of the training sessions, the experimental subjects would be able to judge facial behaviors more accurately than the control group subjects primarily as a consequence of the training they received.

The results of subjects' judging of the 110 facial affect pictures are presented in tables under hypothesis five. A one-way analysis of variance (anova) was used with appropriate covariate pre-variables to control for any pre-existing differences between subjects. As the tables indicate, subjects judged facial behaviors in the following order: happiness, fear, sadness, anger, surprise, disgust, and neutral. Nonsignificant F-ratios were obtained on all the variables. In light of this, it was concluded that the training received did not influence experimental subjects to judge facial affect pictures better than the control subjects who did not receive the training.

The results presented in Table 82 show that there was no pre-existing difference between the way experimental and control subjects understood and judged happy emotions before the training ($F = 862$, $P = 362$). A statistically nonsignificant main effects (between groups) F-value of 1.192 also pointed to the fact that the way that experimental subjects saw and judged happy emotions after they had been trained was not significantly different from the way control subjects did. It was concluded that hypothesis five was rejected.

The data presented in Table 83 point to the fact that before the training, there was a trend toward significant difference between the

TABLE 82. ANOVA: comparison of experimental and control groups subjects on "happy after" using "happy before" as covariate.

Source of Variation	df	Mean Squares	F	P
Covariate happy before	1	1.275	.862	.362
Between groups	1	1.763	1.192	.285
Within groups	25	1.478		
TOTAL	27	4.416		

TABLE 83. ANOVA: comparison of experimental and control subjects on "sadness after" using pre-sad as covariate

Source of Variation	df	Mean Squares	F	P
Covariate sadness before	1	14.633	3.058	.093*
Between groups	1	5.837	1.220	.280
Within groups	25	4.785		
TOTAL	27	25.225		

*F-value of .093 showed a noticeable trend toward statistical significance.

two groups. However, the training helped to neutralize what traces of differences were present before the training. An F-value of 1.220 was found to be nonsignificant at .05 confidence level and, as a result, it was concluded that experimental subjects were not significantly different from the control subjects after the training. The hypothesis was, therefore, rejected. Both experimental and control subjects had the same amount of expertise in judging sad emotions.

A nonsignificant covariate F-value of 1.361 shows that both experimental and control subjects were not different in their ability to judge "fearful" emotions before the experimental subjects were trained (Table 84). Further, the between groups F-value of 1.755 shows that the training did not influence the experimental subjects to the degree that they would judge "fearful" emotions more accurately than the control subjects. It was concluded that all subjects judged these emotions well regardless of training. Hypothesis five was rejected.

TABLE 84. ANOVA: comparison of experimental and control subjects on "fear after" using pre-fear as a covariate.

Source of Variation	df	Mean Squares	F	P
Covariate pre-fear	1	21.642	1.361	.254
Between groups	1	27.903	1.755	.197
Within groups	25	15.897		
TOTAL	27	65.442		

Table 85 shows that although experimental and control subjects did not differ significantly before the training, there was a significant difference between their responses at the end of the training. This pointed to the fact that the training helped the experimental subjects to become more cognizant with respect to how to differentiate anger from other emotions. In the light of this significance, hypothesis five was rejected.

TABLE 85. ANOVA: comparison of experimental and control subjects on "anger after" using pre-anger as covariate.

Source of Variation	df	Mean Squares	F	P
Covariate pre-anger	1	1.662	.081	.778
Between groups	1	98.686	4.813	.038*
Within groups	25	20.505		
TOTAL	27	120.853		

*F was found to be significant at .05 confidence level.

An F-value of .900 showed that both groups were not significantly different before the training (Table 86). A nonsignificant F-value (.150) was obtained at the end of the training. The indication was that the training had no direct relationship with the subject's ability to judge facial emotions depicting surprise. Hypothesis five, therefore, was rejected.

The results presented in Table 87 show that there was neither any pre-existing significant difference nor posttest difference between

TABLE 86. ANOVA: comparison of experimental and control subjects on "surprise after" using pre-surprise as covariate.

Source of Variation	df	Mean Squares	F	P
Covariate pre-surprise	1	15.606	.900	.352
Between groups	1	2.592	.150	.702
Within groups	25	17.341		
TOTAL	27	35.539		

TABLE 87. ANOVA: comparison of experimental and control subjects on "disgust after" using pre-disgust as covariate.

Source of Variation	df	Mean Squares	F	P
Covariate pre-surprise	1	17.018	.593	.448
Between groups	1	6.927	.242	.627
Within groups	25	26.681		
TOTAL	27	50.626		

experimental and control subjects. The implication was that subjects were able to judge facial emotions showing disgust regardless of whether they were exposed to any form of training or not. Therefore, it was concluded that hypothesis five was rejected.

The fact that there was no pre-existing difference of any significance was pointed out by a nonsignificant covariate F-ratio of .028. Therefore, it was confirmed that both groups were not different in their ability to judge neutral facial affects before the training. However, Table 88 shows that these two groups showed significant differences after the training. An F-value of 6.084 was found to be significant at .021 confidence level. The difference was attributed to the fact that experimental subjects better identified the features which distinguished neutral facial emotions from other emotions of the facial affect. It was concluded that hypothesis five was rejected because the significance could have been due to error chance.

TABLE 88. ANOVA: Comparison of experimental and control subjects on "neutral after" using pre-neutral as covariate.

Source of Variation	df	Mean Squares	F	P
Covariate pre-neutral	1	.393	.028	.869
Between groups	1	86.598	6.084	.021*
Within groups	25	14.235		
TOTAL	27	101.228		

*F was found to be significant at .05 confidence level.

G. ITEM ANALYSIS OF FACIAL AFFECT PICTURES (EXPERIMENTAL VS. CONTROL)

Even though there was an overall statistical difference between the experimental and control groups' judging of the facial affect pictures, item analysis of responses to the 110 facial affect pictures as shown in Table 89 led to the following conclusions. The comparison was based on how far or how close subjects' responses were to those of the original authors' (Ekman and Friesen) answers. The results presented in the tables show that the experimental subjects judged facial affects pictures better (54 percent) than the control groups subjects (46 percent) who did not receive the training. Both experimental and control groups judged the following affects equally: happiness (3 times), sadness (3 times), fear (1 time), anger (4 times), surprise (2 times), and neutral (2 times). This indicated that regardless of the comprehensiveness of the training administered to the experimental subjects, the control subjects were just as perceptive in judging these facial affects as the experimental subjects. On the whole, the experimental subjects judged happy facial affect slightly higher (9:8) than the control group.

The following ratios of experimental versus control subjects judging of each emotion are shown in Table 89: happy (9:8), sad (8:6), fear (7:7), anger (9:3), surprise (6:6), disgust (9:6), and neutral (6:5). From these ratios, it could be said that noticeable differences showed up only in anger (9:3), and disgust (9:6). The difference could have been attributed to the effectiveness of the training, or other confounding variables that were not controlled for in the study.

TABLE 89. Item analysis of facial affect pictures.

Group	No.	ID	Percent of Judgments of Each Facial Affect Pictures						
			Hap	Sad	Fear	Ang	Sur	Dis	Neut
Experimental Group									
E	1	A-1-06	100*	0	0	0	0	0	0
C	2	A-2-06	7	65	0	21	0	0	7
E	3	A-1-14	7	7	0	72*	0	0	14
C	4	A-1-24	0	0	14	14	65	0	7
E	5	A-1-25	7	0	0	0	7	86*	0
C	6	A-1-02	7	7	0	36	0	0	50
C	7	C-2-18	72	14	0	0	0	0	14
E	8	C-1-18	0	86*	7	7	0	0	0
E	9	C-1-23	21	0	65*	7	0	0	7
E	10	C-2-12	0	7	7	58*	0	28	0
E/C	11	C-1-10	0	14	0	0	79*	7	0
E	12	C-1-04	0	0	0	7	0	86*	7
E	13	C-2-03	7	0	0	0	0	7	86*
E/C	14	EM-4-07	93*	0	0	7	0	0	0
E	15	EM-4-24	0	58*	0	14	0	14	14
E	16	EM-5-21	0	0	65*	7	21	7	0
E	17	EM-5-24	7	0	50*	22	7	0	14
E/C	18	EM-5-14	7	22	0	36*	7	14	14
E	19	EM-2-11	0	0	0	14	86*	0	0
E	20	EM-4-17	0	0	0	0	0	100*	0
C	21	EM-2-04	14	0	0	0	0	86	0
C	22	GS-1-08	58	7	14	7	14	0	0
E	23	GS-2-01	0	50*	0	14	7	0	28
E	24	GS-1-25	0	0	86*	0	7	7	0
C	25	GS-2-08	50	7	43	0	0	0	0
E	26	GS-1-16	0	7	14	7	72*	0	0
C	27	GS-2-25	0	0	0	0	0	43	57
E	28	GS-1-04	0	7	7	0	0	14	58*
E/C	29	JB-1-09	86*	0	0	14	0	0	0
E/C	30	JB-1-23	0	0	7	79*	7	7	0
E	31	JB-1-12	0	0	0	21	79*	0	0
E/C	32	JB-1-16	0	0	7	0	0	72*	21
C	33	JB-1-03	7	7	0	7	0	7	72*
C	34	JJ-4-07	58	7	14	0	21	0	0
E	35	JJ-4-08	79*	7	0	0	0	7	7
E	36	JJ-5-05	0	86*	0	0	7	7	0
C	37	JJ-5-13	7	14	37	14	28	0	0
E	38	JJ-3-12	0	0	21	43	36	0	0
E	39	JJ-4-13	0	7	0	7	86*	0	0
E/C	40	JJ-3-20	0	7	0	0	7	86*	0
E	41	JJ-3-04	0	0	0	0	7	21	72*
E	42	JM-1-04	100*	0	0	0	0	0	0

TABLE 89. (continued)

Group	No.	ID	Percent of Judgments of Each Facial Affect Pictures						
			Hap	Sad	Fear	Ang	Sur	Dis	Neut
Experimental Group									
E	43	JM-3-11	0	93*	0	0	0	7	0
E	44	JM-5-03	36	0	7	57*	0	0	0
E	45	JM-1-16	0	0	7	7	86*	0	0
E	46	JM-2-08	0	0	0	0	14	86*	0
E/C	47	JM-1-09	0	0	0	7	14	7	72*
C	48	MF-1-06	86	7	0	0	0	0	7
E/C	49	MF-1-30	0	72*	0	28	0	0	0
E	50	MF-1-26	43	0	50*	7	0	0	0
E	51	MF-1-27	0	0	72*	0	7	21	0
E	52	MF-2-05	0	0	7	79*	0	0	14
E	53	MF-2-07	7	0	7	72*	14	0	0
C	54	MF-1-09	0	0	14	21	58	7	0
E	55	MF-2-13	0	0	14	0	14	72*	0
C	56	MF-1-02	0	0	0	0	21	0	79
C	57	MO-1-04	43	0	7	0	50	0	0
C	58	MO-1-30	50	21	0	0	0	0	29
C	59	MO-1-23	0	0	72	0	14	0	14
E/C	60	MO-1-26	0	0	79*	7	7	7	0
E	61	MO-2-11	0	0	21	79*	0	0	0
E/C	62	MO-2-13	0	0	0	65*	0	14	21
E/C	63	MO-1-14	0	0	7	7	86*	0	0
E	64	MO-2-18	0	0	0	7	7	86*	0
E	65	MO-1-05	7	0	0	0	0	0	93*
E	66	NR-1-06	93*	0	0	0	0	7	0
C	67	NR-2-15	0	72	0	7	0	14	7
E/C	68	NR-1-19	7	7	58	7	21	0	0
C	69	NR-2-07	0	0	43	50	7	0	0
E	70	NR-1-14	0	0	14	7	79*	0	0
E	71	NR-3-29	0	14	0	0	0	86*	0
C	72	NR-1-03	0	7	21	21	29	7	15
C	73	PE-2-06	50	0	29	14	0	0	7
E	74	PE-2-12	86*	7	0	0	0	0	7
C	75	PE-2-31	7	58	0	21	0	7	7
C	76	PE-5-07	0	65	7	28	0	0	0
E	77	PE-5-10	0	50*	0	14	7	7	22
E	78	PE-3-16	14	0	79*	0	7	0	0
C	79	PE-3-21	0	7	72	14	0	7	0
E	80	PE-2-21	0	0	14	86*	0	0	0
C	81	PE-6-02	0	21	0	7	72	0	0
E	82	PE-4-05	0	0	0	0	7	93*	0
E	83	PE-2-04	0	7	0	0	0	14	79*
E	84	PF-1-05	100*	0	0	0	0	0	0
E	85	PF-1-06	86*	0	7	0	0	0	7

TABLE 89. (continued)

Group	No.	ID	Percent of Judgments of Each Facial Affect Pictures						
			Hap	Sad	Fear	Ang	Sur	Dis	Neut
Experimental Group									
C	86	PF-2-12	0	86	0	14	0	0	0
E/C	87	PF-2-16	0	72*	0	0	7	14	7
C	88	PF-2-30	0	7	72	0	21	0	0
E/C	89	PF-2-04	7	0	0	72*	0	21	0
C	90	PF-1-16	0	0	14	7	79	0	0
E	91	PF-1-24	0	7	14	7	7	65*	0
E	92	PF-1-02	0	14	7	0	0	0	79*
C	93	SW-3-09	86	0	0	7	7	0	0
E	94	SW-2-16	0	86*	0	14	0	0	0
C	95	SW-2-30	0	0	50	14	14	0	22
E	96	SW-4-09	0	0	0	86*	7	7	0
C	97	SW-1-16	0	0	14	36	0	50	0
C	98	SW-1-30	0	0	7	36	7	50	0
C	99	SW-3-03	0	0	0	0	0	50	50
E	100	WF-2-11	93*	0	0	0	0	0	7
E/C	101	WF-2-12	100*	0	0	0	0	0	0
C	102	WF-3-28	0	43	43	7	0	0	0
E	103	WF-5-06	0	65*	0	28	0	7	0
C	104	WF-3-16	0	0	58	7	35	0	0
E	105	WF-3-01	0	0	7	79*	7	0	7
C	106	WF-3-04	7	14	7	65	7	0	0
C	107	WF-2-16	0	7	7	7	29	43	7
C	108	WF-3-11	0	0	0	21	28	43	28
E	109	WF-4-22	7	0	0	14	0	79*	0
E/C	110	WF-2-05	0	7	7	7	0	29	50*
Control Group									
E	1	A-1-06	86	0	0	0	0	0	14
C	2	A-2-06	0	79*	0	14	0	0	7
E	3	A-1-14	7	7	0	58	0	28	0
C	4	A-1-24	0	0	14	0	86*	0	0
E	5	A-1-25	7	7	7	7	0	65	7
C	6	A-1-02	7	0	0	0	0	21	72*
C	7	C-2-18	100*	0	0	-0	0	0	0
E	8	C-1-18	0	65	7	14	7	7	0
E	9	C-1-23	7	0	50	36	7	0	0
E	10	C-2-12	0	14	44	21	0	21	0
E/C	11	C-1-10	7	0	7	0	79	7	0
E	12	C-1-04	7	14	0	21	0	58	0
E	13	C-2-03	14	29	0	0	0	0	57
E/C	14	EM-4-07	93	0	0	7	0	0	0
E	15	EM-4-24	0	37	14	21	0	21	7

TABLE 89. (continued)

Group	No.	ID	Percent of Judgments of Each Facial Affect Pictures						
			Hap	Sad	Fear	Ang	Sur	Dis	Neut
Control Group									
E	16	EM-5-21	0	0	58	7	21	14	0
E	17	EM-5-24	0	14	36	7	14	0	29
E/C	18	EM-5-14	0	0	0	36	7	50	7
E	19	EM-2-11	0	0	7	0	79	14	0
E	20	EM-4-17	0	7	0	0	14	79	0
C	21	EM-2-04	0	0	7	0	0	7	86*
C	22	GS-1-08	86*	0	0	14	0	0	0
E	23	GS-2-01	0	37	0	21	7	21	14
E	24	GS-1-25	0	0	72	0	14	7	7
C	25	GS-2-08	14	0	7	72*	7	0	0
E	26	GS-1-16	0	14	21	0	65	0	0
C	27	GS-2-25	0	0	0	7	7	65*	21
E	28	GS-1-04	0	14	0	7	7	21	50
E/C	29	JB-1-09	86	7	0	0	0	7	0
E/C	30	JB-1-23	0	21	0	65	0	7	7
E	31	JB-1-12	0	0	21	0	72	7	0
E/C	32	JB-1-16	0	21	0	0	0	72	7
C	33	JB-1-03	7	0	0	7	0	7	79*
C	34	JJ-4-07	86*	0	0	7	7	0	0
E	35	JJ-4-08	43	50	0	0	0	7	0
E	36	JJ-5-05	0	72	7	14	7	0	0
C	37	JJ-5-13	0	0	65*	7	21	7	0
E	38	JJ-3-12	0	0	0	21	72	0	7
E	39	JJ-4-13	0	0	21	7	65	0	7
E/C	40	JJ-3-20	0	0	0	7	7	86	0
E	41	JJ-3-04	0	0	0	7	0	43	50
E	42	JM-1-04	50	50	0	0	0	0	0
E	43	JM-3-11	0	86	7	0	0	7	0
E	44	JM-5-03	7	21	7	44	7	7	7
E	45	JM-1-16	0	0	14	7	79	0	0
E	46	JM-2-08	0	0	0	14	7	79	0
E/C	47	JM-1-09	7	0	7	0	0	14	72
C	48	MF-1-06	93*	7	0	0	0	0	0
E/C	49	MF-1-30	0	72	7	7	0	0	14
E	50	MF-1-26	7	43	29	0	7	0	14
E	51	MF-1-27	0	0	58	7	21	0	7
E	52	MF-2-05	0	7	0	72	7	0	0
E	53	MF-2-07	0	0	14	65	21	0	0
C	54	MF-1-09	7	0	0	0	79*	7	7
E	55	MF-2-13	0	7	21	0	7	58	7
C	56	MF-1-02	0	0	0	0	7	7	86
C	57	MO-1-04	93*	0	7	0	0	0	0
C	58	MO-1-30	7	65*	0	0	0	0	28

TABLE 89. (continued)

Group	No.	ID	Percent of Judgments of Each Facial Affect Pictures						
			Hap	Sad	Fear	Ang	Sur	Dis	Neut
Control Group									
C	59	MO-1-23	0	0	86*	0	0	0	14
E/C	60	MO-1-26	0	0	79	0	21	0	0
E	61	MO-2-11	0	21	14	65	0	0	0
E/C	62	MO-2-13	0	0	7	65	7	7	14
E/C	63	MO-1-14	0	0	7	0	86	7	0
E	64	MO-2-18	0	0	14	0	7	79	0
E	65	MO-1-05	0	14	7	29	0	7	43
E	66	NR-1-06	86	0	0	0	7	7	0
C	67	NR-2-15	0	79	0	0	7	0	7
E/C	68	NR-1-19	7	0	58	0	35	0	0
C	69	NR-2-07	0	7	14	79*	0	0	0
E	70	NR-1-14	0	0	21	0	72	7	0
E	71	NR-3-29	0	0	21	7	0	72	0
C	72	NR-1-03	21	21	0	0	0	8	50*
C	73	PE-2-06	65*	0	14	0	7	7	7
E	74	PE-2-12	50	43	0	0	0	7	0
C	75	PE-2-31	0	65*	0	14	7	14	7
C	76	PE-5-07	0	79*	0	7	0	7	7
E	77	PE-5-10	7	43	7	7	14	14	7
E	78	PE-3-16	14	0	72	0	14	0	0
C	79	PE-3-21	0	0	93*	0	7	0	0
E	80	PE-2-21	0	7	0	79	7	7	0
C	81	PE-6-02	0	0	0	0	93*	7	0
E	82	PE-4-05	0	0	0	14	7	65	14
E	83	PE-2-04	0	21	0	0	0	29	50
E	84	PF-1-05	86	0	0	0	14	0	0
E	85	PF-1-06	79	0	0	7	0	0	14
C	86	PF-2-12	0	93*	0	0	0	7	0
E/C	87	PF-2-16	0	72	14	0	7	7	0
C	88	PF-2-30	0	7	86*	0	7	0	0
E/C	89	PF-2-04	0	0	0	72	0	21	7
C	90	PF-1-16	0	0	0	0	86*	14	0
E	91	PF-1-24	0	7	14	14	7	58	0
E	92	PF-1-02	7	7	7	0	7	0	72
C	93	SW-3-09	93*	0	0	0	0	7	0
E	94	SW-2-16	0	72	7	7	0	7	7
C	95	SW-2-30	0	0	65	0	29	0	7
E	96	SW-4-09	0	14	0	72	7	7	0
C	97	SW-1-16	0	0	14	0	79	7	0
C	98	SW-1-30	0	7	0	0	7	72*	14
C	99	SW-3-03	14	0	7	0	0	0	72*

TABLE 89. (continued)

Group	No.	ID	Percent of Judgments of Each Facial Affect Pictures						
			Hap	Sad	Fear	Ang	Sur	Dis	Neut
Control Group									
E	100	WF-2-11	50	50	0	0	0	0	0
E/C	101	WF-2-12	100	0	0	0	0	0	0
C	102	WF-3-28	0	58	14	0	0	14	14
E	103	WF-5-06	0	21	7	40	0	21	7
C	104	WF-3-16	0	7	79	0	7	7	0
E	105	WF-3-01	0	7	14	65	14	0	0
C	106	WF-3-04	7	7	0	72	0	14	0
C	107	WF-2-16	0	7	7	14	36	29	7
C	108	WF-3-11	0	7	7	21	0	59*	7
E	109	WF-4-22	7	0	0	21	0	72	0
E/C	110	WF-2-05	0	7	7	29	7	0	50

H. FREQUENCY DISTRIBUTION: COMPARISON OF MINORITY AND NONMINORITY SUBJECTS' JUDGING OF THE FACIAL AFFECT PICTURES

A comparison of the posttest mean scores of minority and nonminority experimental subjects (Figure 3 and Table 90) pointed up the fact that there was no difference in the way that the two races judged facial affect pictures. The sum total of minority subjects' posttest means on the Facial Affect Pictures (FAP) was found to be 109.786 with an average mean (mean of means) of 15.623. The sum total of nonminority subjects' posttest means of the Facial Affect Pictures (FAP) was found to be 109.786 with an average mean (mean of means) to be 15.684. These averages of means clearly showed that regardless of the type of graph which could be drawn with each of these different means, nonminority subjects did not rate or judge facial affect pictures better than minority subjects.

I. FREQUENCY DISTRIBUTION: COMPARISON OF MALE AND FEMALE SUBJECTS' JUDGING OF FACIAL AFFECT PICTURES

A nomothethic description of how experimental subjects male and female judged the Facial Affect Pictures is presented in Table 91 and Figure 4. The data presented in the table compare the pre- and posttest results of male as well as those of the female subjects. Intragroup and intergroup mean comparisons of male and female subjects' judging of the facial affect pictures showed the following facts.

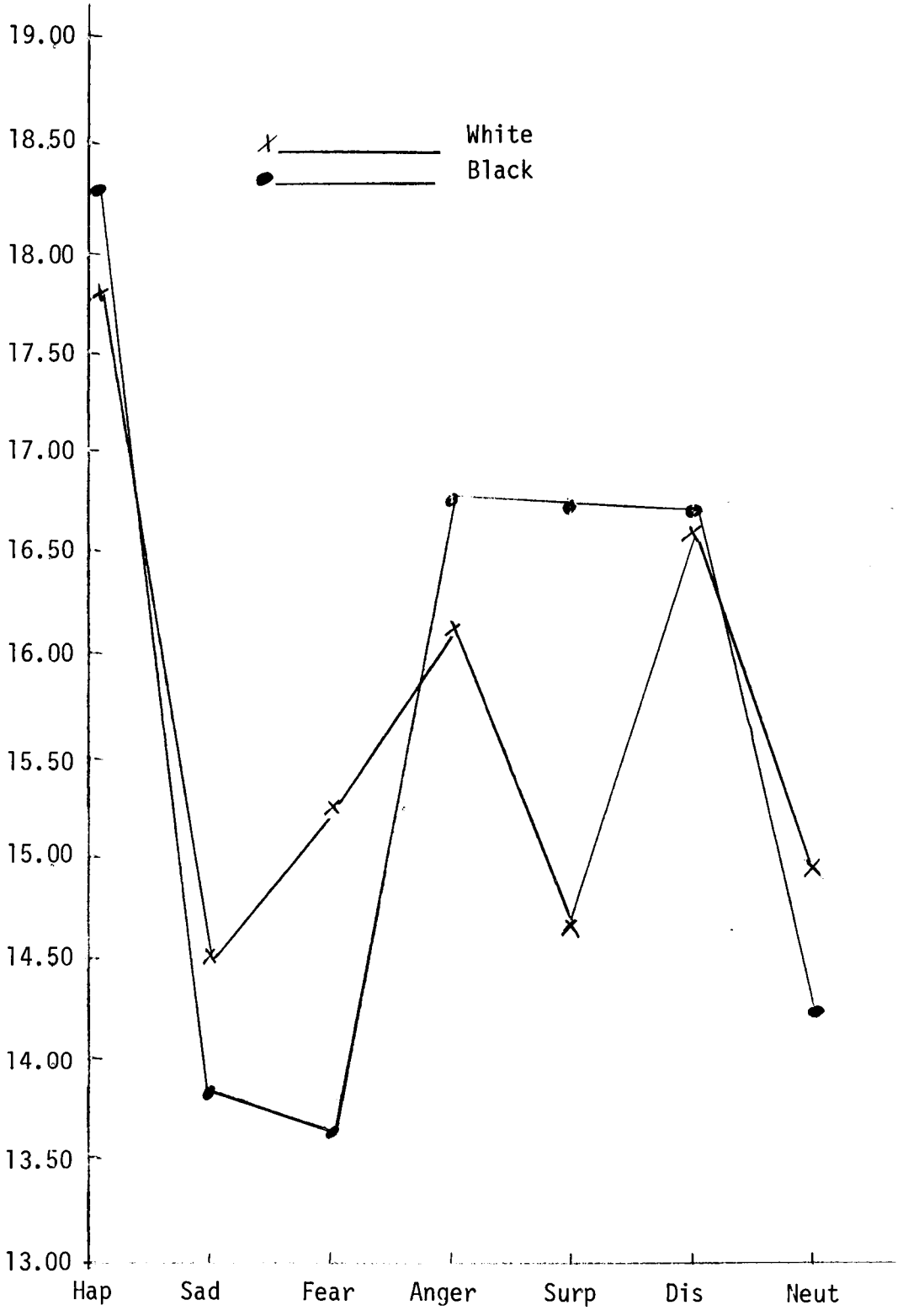


FIGURE 3. Sessional mean differences of facial affect pictures according to race (posttest).

TABLE 90. Analysis of the frequency distribution of facial affect pictures--race.

Race	Facial Affect	Std. Error	Mean	Median	SD	Kurtosis	Skewness	Variance
Pretest								
	Happy	0.231	17.857	17.786	0.864	1.746	1.140	0.747
	Sad	0.768	14.357	14.500	2.872	0.470	-0.237	8.247
	Fear	0.720	13.786	14.500	2.694	5.124	-1.938	7.258
WHITE	Anger	1.047	18.571	19.167	3.917	0.236	-0.691	15.341
	Surprise	0.609	15.429	15.000	2.277	5.197	2.022	5.187
	Disgust	1.016	16.857	15.500	3.800	2.059	1.610	14.440
	Neutral	1.092	12.929	13.167	4.085	-0.051	-0.438	16.687
	Happy	0.388	17.429	17.300	1.453	2.001	0.868	2.110
	Sad	1.585	12.571	10.500	5.932	-1.612	0.006	35.187
	Fear	1.103	15.429	16.000	4.127	2.029	-1.138	17.003
BLACK	Anger	1.723	13.786	14.500	6.447	0.940	-0.459	41.566
	Surprise	1.092	19.286	19.000	4.084	-0.471	0.274	16.681
	Disgust	1.719	15.857	16.500	6.431	-1.180	-0.314	41.363
	Neutral	0.889	15.000	15.500	3.328	1.258	-0.730	11.077

TABLE 90. (continued)

Race	Facial Affect	Std. Error	Mean	Median	SD	Kurtosis	Skewness	Variance
Posttest								
	Happy	0.286	17.714	17.833	1.069	2.114	-1.097	1.143
	Sad	0.627	14.500	15.000	2.345	0.054	-0.918	5.500
	Fear	1.112	15.286	15.500	4.159	2.669	1.067	17.297
WHITE	Anger	1.226	16.143	16.929	4.589	1.872	-1.222	21.055
	Surprise	0.862	14.643	14.167	3.225	3.114	1.114	10.401
	Disgust	1.299	16.643	15.500	4.861	2.266	0.788	23.632
	Neutral	0.722	14.929	14.500	2.702	-0.548	0.361	7.302
	Happy	0.354	18.286	18.333	1.326	3.083	-0.613	1.758
	Sad	0.601	13.857	13.500	2.248	2.567	-1.214	5.055
	Fear	1.057	13.643	13.000	3.954	0.310	-0.518	15.632
BLACK	Anger	1.359	16.786	16.500	5.087	0.956	0.424	25.874
	Surprise	1.250	16.786	16.500	4.677	0.510	0.421	21.874
	Disgust	1.543	16.429	16.167	5.774	3.140	-0.548	33.341
	Neutral	1.376	14.214	14.250	5.147	2.551	-1.072	26.489

TABLE 91. Analysis of the frequency distribution of facial affect pictures--sex.

Sex	Facial Affect	Skewness	Variance	SD	Kurtosis	Mean
Pretest						
	Happy	0.528	2.210	1.486	0.939	17.733
	Sad	-1.014	21.210	4.605	1.007	14.933
	Fear	-0.610	13.067	3.615	1.496	14.733
MALE	Anger	-0.811	52.457	7.243	0.385	16.200
	Surprise	0.399	13.314	3.649	-0.760	17.800
	Disgust	-0.325	22.314	4.724	0.744	14.800
	Neutral	-0.510	17.429	4.175	-0.646	13.000
	Happy	-0.149	0.603	0.776	0.196	17.538
	Sad	-0.914	18.359	4.285	-0.914	11.769
	Fear	-1.441	12.603	3.550	3.973	14.462
FEMALE	Anger	-0.110	13.808	3.716	0.842	16.154
	Surprise	1.729	16.308	4.038	2.551	16.846
	Disgust	-0.295	28.474	5.336	-0.352	18.154
	Neutral	-0.317	9.744	3.121	1.927	15.077

TABLE 91. (continued)

Sex	Facial Affect	Skewness	Variance	SD	Kurtosis	Mean
Posttest						
	Happy	-1.647	1.067	1.033	4.028	17.933
	Sad	-0.357	3.971	1.993	-0.109	13.600
	Fear	1.208	17.067	4.131	2.453	15.067
MALE	Anger	-0.470	20.210	4.495	-0.129	14.067
	Surprise	0.159	10.838	3.292	0.318	15.533
	Disgust	1.523	17.144	4.137	1.446	17.600
	Neutral	0.268	9.781	3.127	-0.867	16.067
	Happy	-0.157	2.077	1.441	1.493	18.077
	Sad	-1.928	6.141	2.478	4.453	14.846
	Fear	-0.749	16.359	4.045	0.428	13.769
FEMALE	Anger	1.542	12.026	3.468	2.217	19.231
	Surprise	0.952	24.910	4.991	0.723	15.923
	Disgust	-0.230	38.731	6.233	1.969	15.308
	Neutral	-1.494	19.474	4.413	4.270	12.846

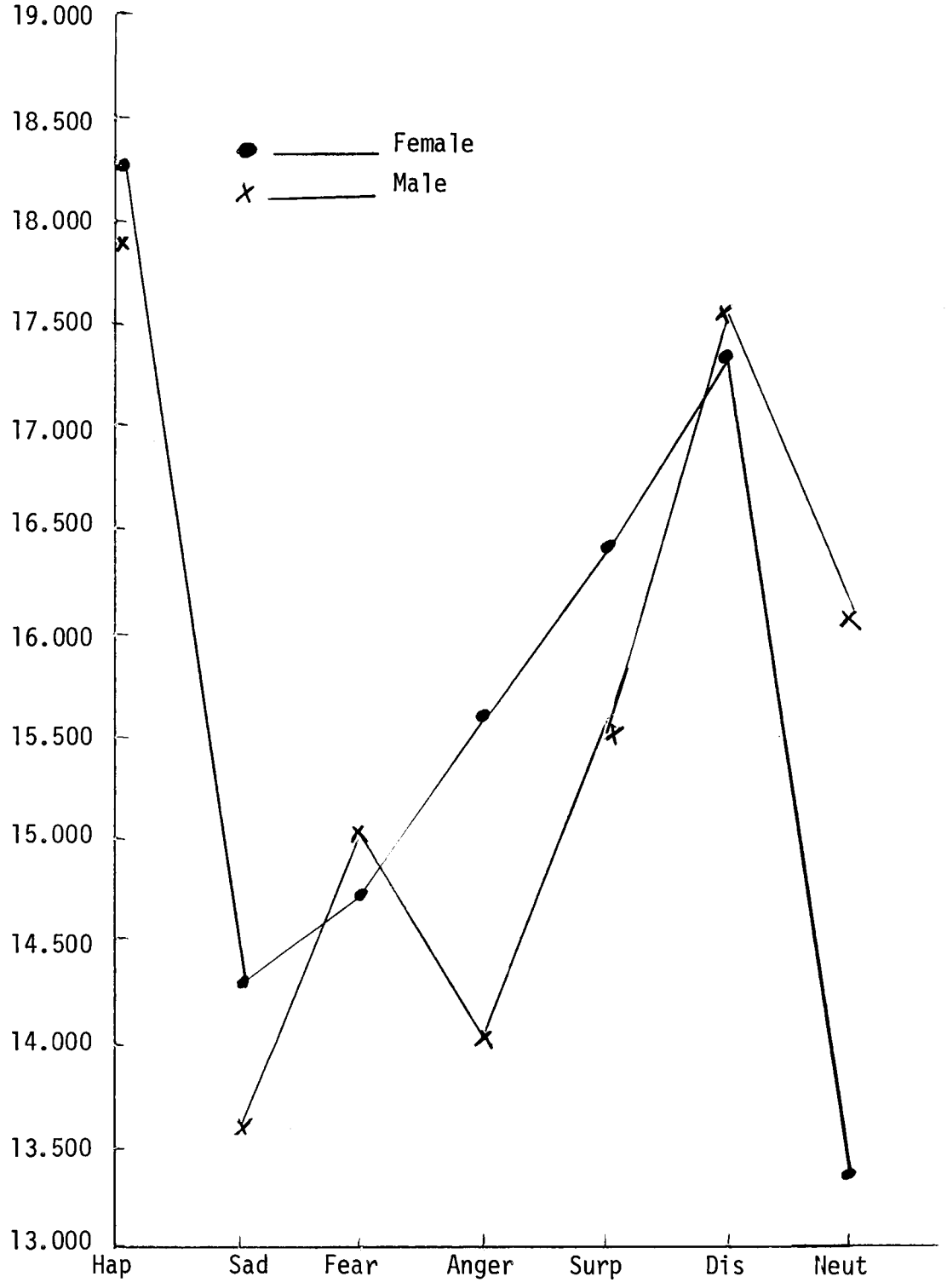


FIGURE 4. Posttest mean differences of facial affect pictures according to sex.

Intragroup Comparison (Male)

A comparison of the pre- and post-test mean scores showed that male experimental were strongest in their recognition of neutral facial effects. Male subjects' pre- and post-test mean score difference was 3.067 while their pre- and post-test mean score difference on disgust was only 2.80. However, the training did not seem to have helped male subjects in judging surprise, anger, and sadness facial affects better after the training sessions. The results showed further that male subjects' pre- and post-test mean differences on these three affects to be -2.267, -2.133, and -1.333, respectively. On the other hand, the females judged anger (3.077) and sadness (3.077) facial affects higher and better than any other emotion in the set. That the training did not help female subjects in judging fear, surprise, disgust, and neutral emotions was evident in their negative mean score differences of -0.693, -0.923, -2.846, and -2.231, respectively.

Intergroup Comparison (Male vs. Female)

The data in both Table 91 and Figure 4 show that as a result of the training, male and female experimental subjects judged happy facial affect nearly similarly (0.2 and .539), they judged disgust most dissimilarly (male 2.8, female -2.846). The discrepancy was attributed to female subjects' inability to differentiate neutral facial affect from anger (3.077), and sadness (3.077) which they rated very highly.

J. OVERALL RATING OF THE EFFECTIVENESS OF THE TRAINING

The fundamental rationale for the overall rating of the effectiveness of the training was to determine to what degree, if any, the training helped the experimental subjects, male and female, black and white, to understand their facial behaviors after the training sessions. Also, the overall rating was intended to determine the effectiveness of the training on the subjects regardless of whether statistical significance was attained at .05 confidence level. It was further intended to show which sex (male or female), or which race (black or white) gave the effectiveness of the training higher or lower overall rating.

Figure 5 is a graphic representation of how male and female experimental subjects rated the training on the basis of their ability to understand and manage such facial behaviors as happy, sad, fear, anger, surprise, disgust, and neutral facial affects. Sex--an overall rating by sex as shown in Table 92 and Figure 5 revealed that female subjects rated the effectiveness of the training higher than the male subjects on all but one (O-R-J) of the items. Female subjects rated the effectiveness or utilitarian gains of the training to them ($\overline{X}$ = 4.615) higher than the male subjects ($\overline{X}$ = 3.607), with a mean difference of .948. On the other hand, male subjects felt that the training helped them in actually maintaining their positive self-esteem higher than the female subjects with a mean difference of .615. Female subjects rated O-R-O), recommending the training to others higher than the male subjects (4.769:3.733) with a mean difference of 1.036.

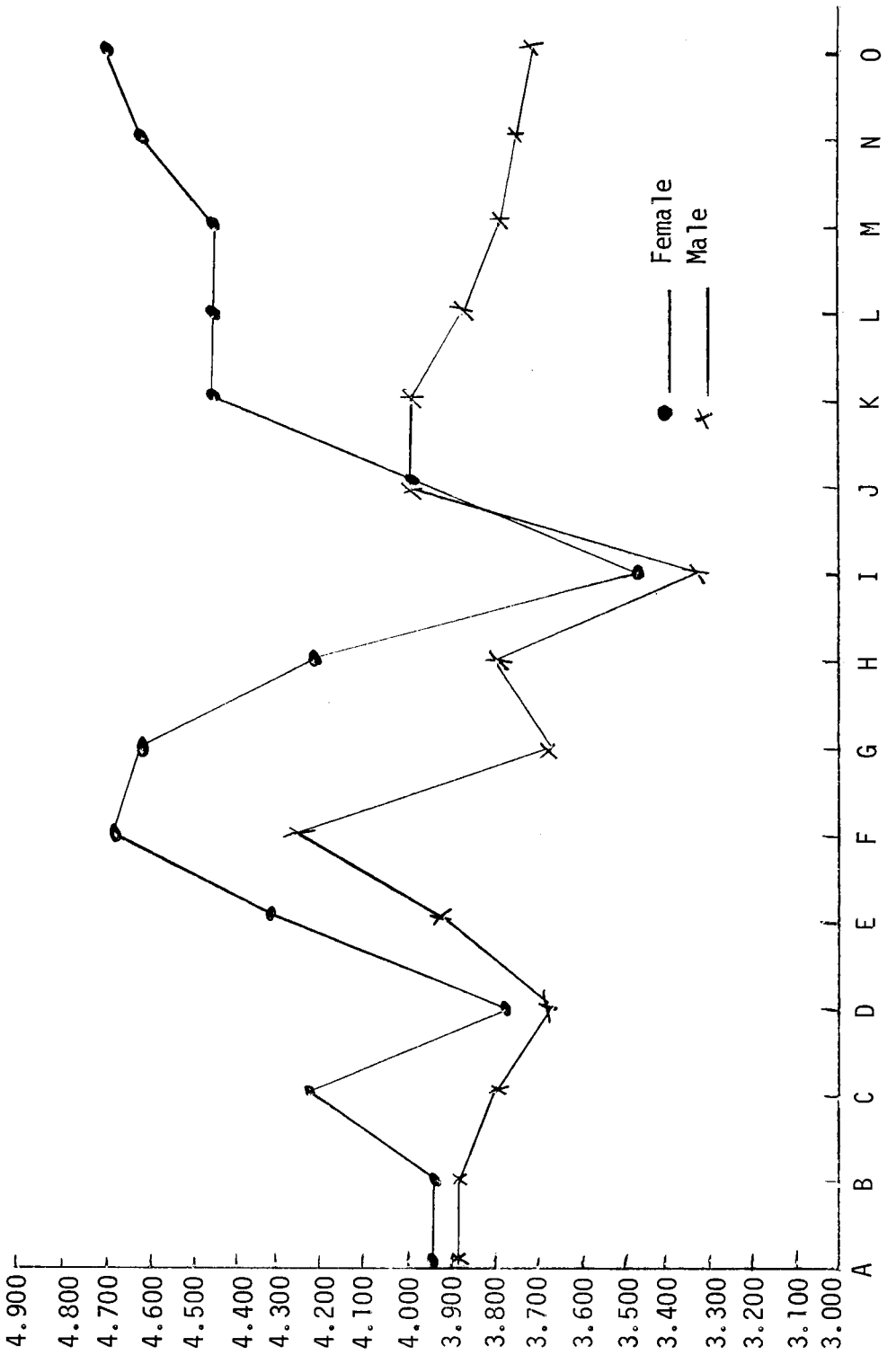


FIGURE 5. Frequency distribution of overall rating according to sex.

TABLE 92. Frequency distribution of overall rating (according to sex).

Label	Male					Female				
	Kurtosis	SD	Variance	Skewness	Means	Means	Skewness	Variance	SD	Kurtosis
O-R-A	-2.223	4.307	18.552	0.192	3.867	3.923	0.106	15.577	3.947	-1.918
O-R-B	-2.223	4.307	18.552	0.192	3.867	3.923	0.048	15.577	3.947	-2.169
O-R-C	-2.099	4.263	18.171	0.242	3.800	4.231	-0.000	17.692	4.206	-2.193
O-R-D	-1.957	4.169	17.381	0.319	3.667	3.769	0.155	15.192	3.898	-2.102
O-R-E	-2.156	4.399	19.352	0.220	3.933	4.308	0.039	18.564	4.309	-2.123
O-R-F	-2.207	4.758	22.638	0.199	4.267	4.692	-0.078	21.064	4.590	-2.233
O-R-G	-2.033	4.135	17.095	0.274	3.667	4.615	-0.097	20.256	4.501	-2.258
O-R-H	-2.182	4.246	18.029	0.212	3.800	4.231	-0.069	17.192	4.146	-2.233
O-R-I	-1.704	3.904	15.238	0.467	3.333	3.462	0.485	14.269	3.777	-1.422
O-R-J	-2.085	4.504	20.286	0.260	4.000	3.385	0.538	14.090	3.754	-1.355
O-R-K	-2.085	4.504	20.286	0.260	4.000	4.462	-0.153	18.603	4.313	-2.330
O-R-L	-2.181	4.324	18.695	0.215	3.867	4.462	-0.064	19.103	4.371	-2.203
O-R-M	-1.923	4.362	19.029	0.358	3.800	4.462	-0.046	19.269	4.390	-2.203
O-R-N	-1.549	4.050	16.400	0.550	3.400	4.615	-0.120	20.090	4.482	-2.278
O-R-O	-1.724	4.448	19.781	0.513	3.733	4.769	-0.090	21.692	4.657	-2.258

Rating According to Race

Figure 6 and Table 93 present the results of an overall rating of the effectiveness of the training according to race. The results clearly showed that white subjects (nonminority) rated the overall effectiveness of the training higher than black or minority subjects on all the items. The highest ratings occurred in items M, N, and O with mean differences of 2.214, 2.14, and 1.857, respectively. It was clear that white subjects rated the utilitarian gains of the training ($\overline{X}$ = 5.071) higher than the black subjects ($\overline{X}$ = 2.758). Additionally, white subjects stressed recommending the training to others with low self-esteem higher ($\overline{X}$ = 5.143) than the black or minority subjects ($\overline{X}$ = 3.286).

K. HYPOTHESIS SIX

> As a result of the treatment (training), there will be a significant difference between experimental subjects and control or no treatment group with respect to their posttest mean scores of the Rosenberg four-point self-esteem scale (RSS).

A one-way anova was computed to test the hypothesis that as a result of the treatment administered, there would be a significant difference between experimental and control groups with regard to their posttest mean scores. The following anova tables show that the two groups were significantly different on this scale after the experimental subjects had been trained. In light of the obtained results, hypothesis six was not rejected in this research study.

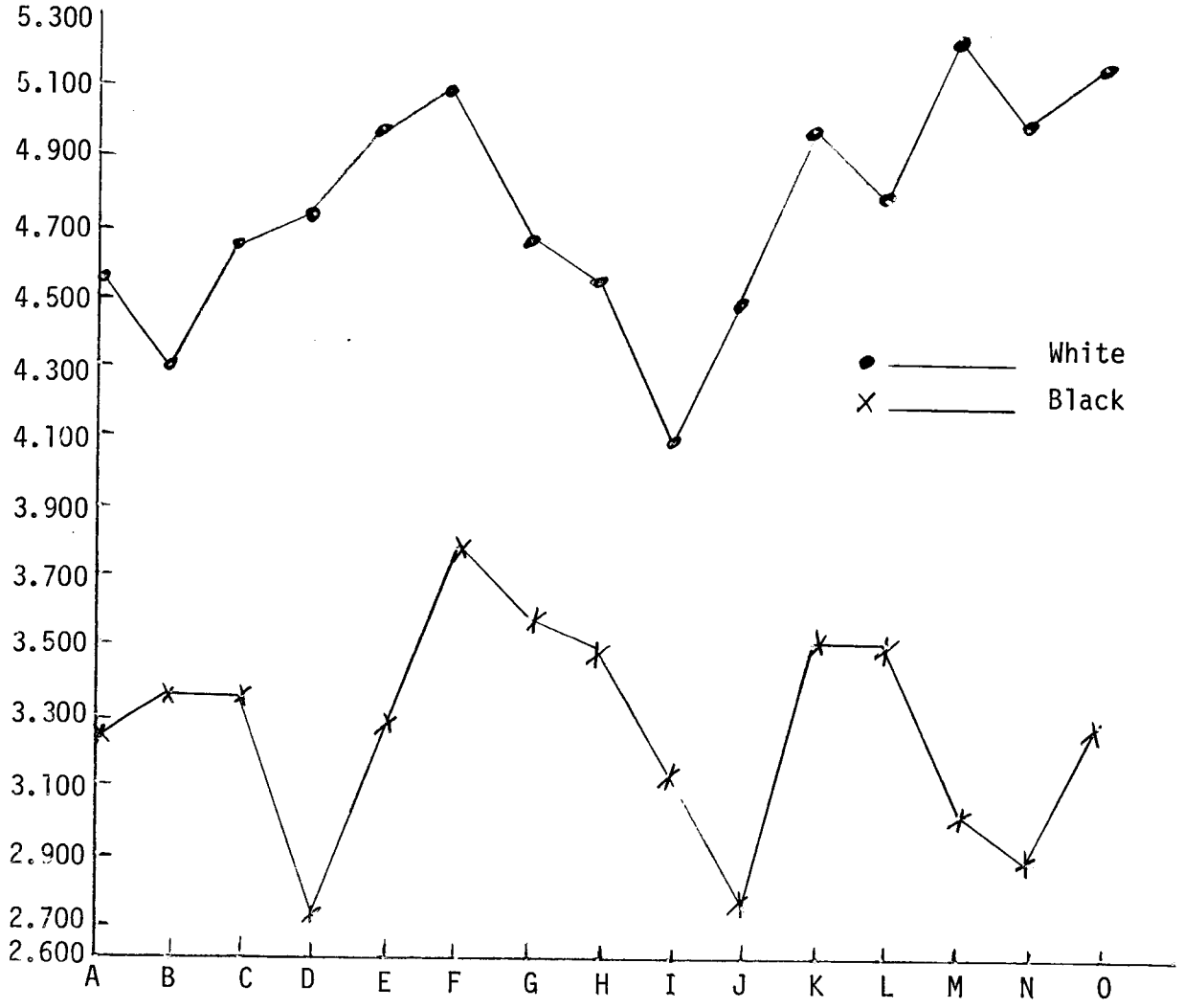


FIGURE 6. Experimental subjects' overall rating of training (according to race).

TABLE 93. Frequency distribution of overall rating (according to race).

Label	White					Black				
	Kurtosis	SD	Variance	Skewness	Means	Means	Skewness	Variance	SD	Kurtosis
O-R-A	-2.085	4.183	17.494	-0.199	4.571	3.214	0.522	15.874	3.984	-1.794
O-R-B	-2.178	4.014	16.110	-0.267	4.429	3.357	0.529	17.632	4.199	-1.878
O-R-C	-2.173	4.217	17.786	-0.254	4.643	3.357	0.527	17.324	4.162	-1.765
O-R-D	-2.127	4.322	18.681	-0.200	4.714	2.714	0.622	11.912	3.451	-1.628
O-R-E	-2.128	4.514	20.379	-0.203	4.929	3.286	0.449	16.220	4.027	-1.988
O-R-F	-2.166	4.688	21.978	-0.236	5.143	3.786	0.386	20.951	4.577	-1.081
O-R-G	-2.175	4.236	17.940	-0.234	4.643	3.571	0.455	19.033	4.363	-1.894
O-R-H	-2.124	4.201	17.648	-0.186	4.571	3.429	0.355	17.033	4.127	-2.163
O-R-I	-1.838	4.047	16.379	0.183	4.071	2.714	0.745	12.220	3.496	-1.189
O-R-J	-2.056	4.484	20.110	0.073	4.484	2.857	0.651	13.363	3.655	-1.550
O-R-K	-2.136	4.497	20.225	-0.224	4.929	3.500	0.365	17.808	4.220	-2.139
O-R-L	-2.188	4.388	19.258	-0.195	4.786	3.500	0.365	17.808	4.220	-2.139
O-R-M	-2.186	4.726	22.335	-0.268	5.214	3.000	0.465	13.538	3.679	-1.921
O-R-N	-2.176	4.599	21.148	-0.264	5.071	2.857	0.672	13.209	3.634	-1.402
O-R-O	-2.166	4.688	21.978	-0.236	5.143	3.286	0.723	18.066	4.250	-1.379

Rosenberg scale 1 is a combination of the following statements:

(1) I feel that I have a number of good qualities.

(2) I feel that I'm a person of worth, at least on an equal plane with others.

(3) All in all, I am inclined to feel that I am a failure.

The facts presented in Table 94 showed that while the obtained F-value (F = 3.283) was not significant at .05 level of confidence, the obtained probability level (p = .082) was a significant trend in the direction of statistical significance. The results led to the objective conclusion that the training had a measurable influence on the experimental subjects as they responded to the posttest instrument. Hypothesis six was not rejected on this scale.

TABLE 94. ANOVA: comparison of experimental and control subjects on Rosenberg scale 1.

Source of Variation	df	Mean Squares	F	P
Between groups	1	.310	3.283	.082*
Within groups	26	.094		
TOTAL	27	.404		

*F value of 3.283 showed a trend toward significance.

Rosenberg scale 2 is made up of the following statements:

(1) I am able to do things as well as most other people.

(2) I feel I do not have much to be proud of.

Because F value (F = 7.058) was significantly below the predicted .05 level (P = .014), as shown in Table 95, it was concluded that the experimental subjects were significantly better than the control subjects with regard to how they reacted to these statements. Hypothesis six was not rejected.

TABLE 95. ANOVA: comparison of experimental and control subjects on Rosenberg scale 2.

Source of Variation	df	Mean Squares	F	P
Between groups	1	.744	7.058	.014*
Within groups	26	.105		
TOTAL	27	.849		

*F was significant at .05 level of confidence.

Rosenberg self-esteem 3 makes the following statement: "On the whole, I am satisfied with myself." Hypothesis six was not rejected because an obtained F-value of 6.148 was found to be significant at .05 level (P = .020), as shown in Table 96. The implication was that the experimental subjects performed significantly better than the control subjects on this scale.

According to the scale, subjects were expected to react to the statement, "I wish I could have more respect for myself." It was hypothesized that experimental subjects would differ from the control subjects on their posttest scores. The data presented in Table 97 show that an F-value of 4.259 was significant at .05 confidence level

TABLE 96. ANOVA: comparison of experimental and control subjects on Rosenberg scale 3.

Source of Variation	df	Mean Squares	F	P
Between groups	1	.725	6.148	.020*
Within groups	26	.118		
TOTAL	27	.843		

*F was found to be significant at .05 level of confidence.

TABLE 97. ANOVA: comparison of experimental and control subjects on Rosenberg scale 4.

Source of Variation	df	Mean Squares	F	P
Between groups	1	.888	4.259	.050*
Within groups	26	.209		
TOTAL	27	1.097		

*F was found to be significant at .05 level of confidence.

(p = .050). On the basis of this significant F-value, it was concluded that hypothesis six could not be rejected on Rosenberg scale 4.

Rosenberg scale 5 states: "I take a positive attitude toward myself." Both experimental and control subjects reacted to this statement both before and after the training. The results presented in Table 98 show that there was a significant difference between the experimental and control subjects' reaction to the statement after the training. F was significant at .005 level of confidence; this result was below the predicted .05 level. Hence, hypothesis six could not be rejected on this scale.

TABLE 98. ANOVA: comparison of experimental and control subjects on Rosenberg scale 5.

Source of Variation	df	Mean Squares	F	P
Between groups	1	1.286	9.423	.005*
Within groups	26	0.136		
TOTAL	27	1.422		

*F was significant at .05 confidence level.

Rosenberg scale 6 is a combination of:

(1) At times, I think I am no good at all.

(2) I certainly feel useless at times.

The obtained F-value showed that the main effects F-value of 10.133 reached significance at .004 confidence level (Table 99); therefore, it was concluded that experimental subjects were different from the

TABLE 99. ANOVA: comparison of experimental and control subjects on Rosenberg scale 6.

Source of Variation	df	Mean Squares	F	P
Between groups	1	1.592	10.133	.004*
Within groups	26	0.157		
TOTAL	27	1.749		

*F was significant at .05 level of confidence.

control subjects on this scale. Consequently, hypothesis six was not rejected.

Conclusion

The results of the Rosenberg Four-Point Self-Esteem scale show that the experimental subjects were influenced by the type of training they received to the degree that they had a better perception of their self-esteem. All the F-values were significant at the predetermined confidence level, thereby supporting the fact that hypothesis six could not be rejected.

CHAPTER V

SUMMARY, CONCLUSIONS, AND SUGGESTIONS FOR SUBSEQUENT STUDY

The purpose of Chapter V is to present an overall summary of the study, make objective conclusions concerning the results, and outline workable recommendations for subsequent study.

A. SUMMARY

The present study was conducted (1) to determine whether there was a positive relationship between subjects' sex, race, and group affiliation, and their ability to judge facial affect pictures, and (2) to teach subjects the skills needed in building positive self-esteem through the usage of nonverbal facial behaviors such as happy, sad, fear, surprise, disgust, anger, and neutral. Announcements concerning this study were made in various classes at The University of Tennessee, Knoxville in Winter and Spring quarters, 1978. Informed Consent Forms were either given out in the classes or mailed to graduate and undergraduate students to volunteer to participate in the study. The subjects who actually participated were randomly selected from those who responded to the announcements or returned the Informed Consent Forms. Subjects were randomly selected into four groups with seven subjects in each group. Subjects who scored high on the pretest scores of the Tennessee Self-Concept Scale (TSCS) were grouped into one place, and

those who scored low were likewise placed into one group. Seven subjects were randomly selected from the "high" group to form the high experimental subjects and seven subjects were also randomly selected to form the high control. From the "low group," seven subjects were randomly selected into the low experimental and seven into the low control group. All others who were not selected into any group were asked to leave.

The experimental subjects (high and low) were exposed to a series of training sessions which lasted seven consecutive sessions. An eclectic counseling psychology model was used with the primary purpose of exposing subjects to different counseling techniques and thereby making the training more meaningful to all the subjects irrespective of age, sex, race, or group affiliation. The independent variable was "positive self-esteem training using nonverbal communication cues: facial behaviors." The dependent variables were subjects' responses to the Tennessee Self-Concept Scale (TSCS), Multiple Affect Adjective Checklist (MAACL), Rosenberg Four-Point Self-Esteem Scale (RSS), and Facial Affect Pictures (FAP).

Six hypotheses were formulated and various statistical procedures were carried out to analyze and test the data collected at .05 level of significance. The experimental subjects met for training sessions seven times and each session lasted for one hour. An eclectic counseling psychology approach was used with the experimental subjects. The control subjects did not receive any training but did take the pre- and post-tests with the experimental subjects. The results of the one-way anova test computed to test hypothesis one failed to confirm that

hypothesis; however, the subsequent two-way anova test that was computed showed that there were significant interaction effects on certain of the TSCS subscales. Significant interaction effects were found to have existed between experimental and control subjects on the following scales: column A, distribution scores 5, and number of deviant signs. Additionally, there were noticeable trends toward significant interactions on distribution scores 2, defensive positive scale, and neurosis scale. It was felt that both the significant interaction effects and the trend toward significance could have occurred by chance; therefore, hypothesis one was rejected.

In testing hypothesis two, using the TSCS as a dependent variable, the simple anova test results showed that high experimental subjects were not significantly different from the low experimental subjects. None of the subscale F-values were found to reach statistical significance at .05 level. The same result of nonsignificance was obtained on the MAACL subscales. Even though the results showed that the training did not influence either high experimental or low experimental subjects to express "anxiety," "depression," or "hostility" differently, the underlying reason was attributed to chance. The results obtained by testing hypothesis three showed that the hypothesis could be rejected on all but three of the twenty-nine TSCS subscales. The results showed that there were significant trends on male and female subjects' self-criticism scores, number of deviant signs, and defensive positive scores. On these subscales of the TSCS, hypothesis three was also not rejected because the trend was attributed to error chance. It was concluded that female experimental subjects showed more low

self-esteem traits than the male experimental subjects only by chance. The three F-values obtained from the MAACL on anxiety, depression, and hostility, did not reach significance at the established .05 confidence level. As a result, hypothesis three was not rejected.

The two-tailed t-test that was computed for significant mean differences between male and female experimental subjects on the Facial Affect Pictures (FAP) showed nonsignificant F-values on happy, sad, surprise, disgust, and neutral facial affects. Regardless of the trends which the results on fear and anger facial showed, hypothesis three was considered not rejected. Hypothesis four stated that minority experimental subjects would not show more low self-esteem traits than nonminority subjects at the end of the training sessions. Hypothesis four could not be rejected on the MAACL subscales because each of the obtained F-values did not reach statistical significance at the .05 level. Each of the obtained results of the Fisher's Exact test on the Rosenberg scale showed that there was no significant difference between the minority and nonminority experimental subjects on the six subscales which constituted the Rosenberg scale. The conclusion was reached that minority experimental subjects were not significantly different from the nonminority experimental subjects with respect to their level of self-esteem after the training sessions.

Hypothesis five stated that, at the end of the training sessions, the experimental subjects would be able to judge facial affect pictures better than the control subjects. The hypothesis was rejected. Regardless of the impact of the training, there was no significant difference between the experimental and control subjects in their

ability to judge facial behaviors. Hypothesis six stated that there would be a significant posttest mean score difference between experimental and control subjects on the Rosenberg scale. This hypothesis was upheld on all the six scales, and the significant posttest difference which occurred was attributed to the overall effectiveness of the training.

B. CONCLUSIONS

The following conclusions were made in light of the results that were obtained on the various dependent variables.

1. The training was effective in helping experimental subjects develop or maintain positive self-esteem stance on certain of the Tennessee Self-Concept Scale items, particularly items reported in the two-way anova of hypothesis one (Row 2; Col. A; Dist. 2, 5; DP, PS; N; PI; and NDS).

2. The series of training sessions based on an eclectic counseling model was effective in raising the self-esteem of low self-esteem experimental subjects to the degree that there was virtually no significant difference between them and the high self-esteem experimental subjects on the TSCS.

3. The training helped both high and low self-esteem experimental subjects to understand the possible causes for feelings of anxiety, depression, and hostility in that both groups rated themselves low on the Multiple Affect Adjective Checklist.

4. Subjects' sex was not a significant factor on how they responded to items on the TSCS, MAACL, and their ability to judge facial affect pictures.

5. While minority subjects showed more low self-esteem traits than nonminority subjects on certain of the TSCS subscales, they rated themselves as high as nonminority subjects on the MAACL and RSS. Therefore, it was concluded that the issue of race or ethnicity had no significant bearing on how subjects rated their self-esteem.

6. No significant difference was found between high and low, male and female, and experimental/control subjects in the judging of facial affect pictures. It was concluded that the ability to rate or judge facial affect pictures was independent of subjects' race, sex, or group affiliation. While statistical significance did not occur, experimental and control subjects actually showed unique differences in the way each of the 110 slides used in the study were judged. An intra- and inter-group comparison of subjects' judging of facial affect pictures showed that male subjects were strongest in their ability to recognize neutral facial emotions, but showed lack of ability in recognizing surprise. Female subjects showed very strong ability in judging anger, and sadness, but were weak in their ability to recognize disgust facial affect.

7. Female experimental subjects perceived that they benefited more from the training sessions than the male experimental subjects. This was demonstrated by their rating of the overall effectiveness of the training as compared with the male subjects' overall rating.

8. White experimental subjects rated the overall effectiveness of the training much higher than the black experimental subjects. Though sex or race did not influence subjects' responses to the TSCS, MAACL, RSS, or the Facial Affect Pictures (FAP), subjects' race tended

to influence the way they rated the effectiveness of the training sessions.

9. In light of the results of the RSS, it was concluded that the training was effective in keeping the experimental subjects higher on the self-esteem scale than the control subjects.

C. DISCUSSION AND IMPLICATIONS

The results of the present research study supported the assumptions that (1) the ability to judge facial emotions is universal (Abelson, 1962; Davis, 1962; Ekman and Friesen, 1971, 1972; Frijda, 1963, 1971; Osgood, 1966; Schlosberg, 1952, 1954), and (2) ability to judge facial emotions is not solely dependent upon subjects' sex (Gladstone, 1962; Hanawalt, 1942; Howard et al., 1974; Hsstorf, 1966; Hess et al., 1965; Liebman, 1970). The results of the study also confirmed the position held by McGuire (1968) that watching and judging facial behaviors of other people has a significant impact on how people accept or reject themselves within the domains of self-esteem. This fact was attested to in light of low experimental subjects' perception of themselves which led them to rate themselves high after they had seen and reacted to the different sets of slides that were projected on the screen. The results further confirmed the position held by Ekman and Friesen (1971) that primary affects: happiness, anger, fear, sadness, surprise, disgust, etc., are very easily conveyed the same way by different people in different cultures; therefore, race cannot be a distinguishing factor in how people identify these primary facial affects. This statement has been attested to by the results of this,

in that subjects' race, did not influence them to rate themselves either higher or lower than others in the study.

The nature of the subjects who participated in the study is something that should be evaluated. First, the subjects were University students who might not have had significantly low self-esteem prior to experiencing the training. Second, the fact that these subjects were volunteers may have ruled out the possibility of including people who actually had low self-esteem. However, in light of the nomothetic description of the results, it was justifiably stressed that female experimental subjects perceived themselves as having benefited more than the male experimental subjects from the training sessions. The question which could be raised in this regard was "are the female subjects' self perception of the effectiveness of the training based upon emotional feelings toward the experimenter or not?" Few of the obtained F-values showed noticeable trends toward statistical significance. However, since the occurrence of these trends could have been due to chance, the trends were not considered in rejecting or not rejecting the involved hypothesis. The question could have been raised as to whether each of these trends showed that the two groups of subjects were significantly different before the training. With regard to the overall rating of the effectiveness of the training sessions, female experimental subjects rated the training higher than the male experimental subjects on nearly all of the variables. It was actually not certain why they did; however, the question was raised "Were the female experimental subjects more sympathetic toward the experimenter than the male subjects as they were rating the training?" One implication that

could be drawn is that nonminority experimental subjects rated the effectiveness of the training higher than the minority experimental subjects because nonminority subjects better understood the foreign accent in which the instructions were given than did the minority experimental subjects. In view of the fact that the study was conducted by a foreign student who had also experienced the low self-esteem syndrome, the results of the present study could be applied in working with foreign students who usually find it extremely difficult to adjust to the American way of life. Since the matter of "accent" was not controlled in the study, the question could be raised "To what degree, if any, did the experimenter's foreign dialect influence the experimental subjects' scores?"

D. SUGGESTIONS FOR FURTHER STUDY

In light of the findings in this study, and in the event that the study may subsequently be replicated, the following precautions and suggestions were made. First, the population of the study was narrow and not altogether representative of the numerous people who may be experiencing the agonizing effects of low self-esteem in nonacademic settings. To make subsequent replication studies more representative of high and low self-esteem individuals, subjects may be selected from nonacademic settings, or a combination of both. Second, the present study employed an eclectic counseling psychology model as opposed to a single-theory model such as behavioral (Krumboltz and Thoresen, 1961), client-centered therapy (Rogers, 1951), Gestalt therapy (Perls, 1969), rational-emotive therapy (Ellis, 1973), reality therapy (Glasser, 1965),

etc. Usually, an eclectic model is a combination of two or more single-theory models. Some problems that are associated with such eclecticism are lack of experience on the part of the counseling psychologist, too little or too much emphasis of the model, or the inability of the client to cope with the multiplcity of eclecticism. Third, the present study was conducted by an experimenter who felt most comfortable using the democratic leadership style to get ideas across to the subjects in an easily understandable fashion. Depending on the situation and the presenting problem, subsequent studies might consider the matter of the leadership role as this could have influenced the results of the present study. Fourth, the results of the study showed that the Rosenberg Four-Point Self-Esteem Scale (RSS), and Multiple Affect Adjective Checklist (MAACL) were more sensitive in measuring change in subjects than was the Tennessee Self-Concept Scale (TSCS). In light of this, and since volunteers may not show any signs of psychosis, neurosis, or other maladjustments as the TSCS tends to indicate, these subscales may be excluded in future studies. Fifth, although the data presented in the study showed that race, sex, or group affiliation did not significantly influence the way the subjects responded during the training, nomothetic analysis of the same data showed that these variables had some bearing on the way subjects responded. Therefore, it is recommended that future researchers control for these characteristics. Sixth, the verbal and nonverbal interaction between the experimenter and the subjects was not monitored or adequately controlled for when this study was in progress. Because such variables might have affected the results of the study, trained

observers may be employed in future studies to monitor such interactions with a view to assessing the degree to which they might influence the results. Finally, in light of the fact that no followup study was conducted in this study, and because this might have shed some light on the effectiveness of the training, it is suggested that future studies examine the advisability of conducting a followup study. It is felt that such followup studies would help to determine the degree to which subjects still use the skills after the training.

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APPENDICES

APPENDIX A

INFORMED CONSENT FORM

You are cordially invited to volunteer to participate in a specialized training titled "Positive Self-Esteem Training Using Nonverbal Communication Cues: Facial Behaviors." The training will involve the following interesting exercises:

1. Mini-lectures on the nonverbal usage of facial behaviors.
2. Mini-workshops--cutting or construction of figures to show different types of emotions that may be conveyed nonverbally through facial behaviors.
3. Slide presentations showing various emotions the face is capable of conveying.
4. Pretest and posttest activities using three different types of testing instruments.
5. Video taping of participants' facial behaviors for simple analysis by the participants themselves.
6. Group participation to discuss the nonverbal roles of facial behaviors in interpersonal communication.

Given the appropriate exercises as outlined above, it is assumed that upon the completion of this specialized training the participants will be able to do the following.

1. Construct figures to show different types of emotions that can be conveyed nonverbally through the facial behaviors.
2. Analyze their own facial behaviors and accurately differentiate among various types of facial emotions.

Whatever is said or shared in group will be treated with the highest degree of confidentiality. In order to guarantee anonymity, participants will be identified by numbers or pseudonyms. The videotape will be done by the experimenter. The video tape will be analyzed by the subjects and subsequently, the tapes will be erased immediately after the training is over. While still being analyzed by the subjects, the materials will be kept away from nonparticipants; this is to guarantee the confidentiality of the contents on the tapes.

If you would like to participate in the specialized training, it will be appreciated if you will sign the space below and mail it back to me in the enclosed stamped addressed envelope. If you have any

questions, please call me either at 974-5146 (office), or 524-4298 (home). The organizational meeting will be held at

_____ in Room _____

Claxton Educational Building on _____ 1978.

I have read and understood the contents of the Informed Consent Form. I would like to participate in the training and, to attest to this, my signature is hereby appended.

_____
Signature

_____
Date

APPENDIX B

TENNESSEE SELF-CONCEPT SCALE

INSTRUCTIONS

On the top line of the separate answer sheet, fill in your name and the other information except for the time information in the last three boxes. You will fill these boxes in later. Write only on the answer sheet. Do not put any marks in this booklet.

The statements in this booklet are to help you describe yourself as you see yourself. Please respond to them as if you were describing yourself to yourself. Do not omit any item! Read each statement carefully; then select one of the five responses listed below. On your answer sheet, put a circle around the response you chose. If you want to change an answer after you have circled it, do not erase it but put an X mark through the response and then circle the response you want.

When you are ready to start, find the box on your answer sheet marked time started and record the time. When you are finished, record the time finished in the box on your answer sheet marked time finished.

As you start, be sure that your answer sheet and this booklet are lined up evenly so that the item numbers match each other.

Remember, put a circle around the response number you have chosen for each statement.

Responses-	Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
	1	2	3	4	5

You will find these response numbers repeated at the bottom of each page to help you remember them.

(Page 1)

		Item No.
1.	I have a healthy body	1
3.	I am an attractive person	3
5.	I consider myself a sloppy person	5
19.	I am a decent sort of person	19
21.	I am an honest person	21
23.	I am a bad person	23
37.	I am a cheerful person	37
39.	I am a calm and easy going person	39
41.	I am a nobody	41
55.	I have a family that would always help me in any kind of trouble	55
57.	I am a member of a happy family	57
59.	My friends have no confidence in me	59
73.	I am a friendly person	73
75.	I am popular with men	75
77.	I am not interested in what other people do	77
91.	I do not always tell the truth	91
93.	I get angry sometimes	93

Responses-	Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
	1	2	3	4	5

(Page 2)

		Item No.
2.	I like to look nice and neat all the time	2
4.	I am full of aches and pains	4
6.	I am a sick person	6
20.	I am a religious person	20
22.	I am a moral failure	22
24.	I am a morally weak person	24
38.	I have a lot of self-control	38
40.	I am a hateful person	40
42.	I am losing my mind	42
56.	I am an important person to my friends and family	56
58.	I am not loved by my family	58
60.	I feel that my family doesn't trust me	60
74.	I am popular with women	74
76.	I am mad at the whole world	76
78.	I am hard to be friendly with	78
92.	Once in a while I think of things too bad to talk about . .	92
94.	Sometimes, when I am not feeling well, I am cross	94

Responses-	Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
	1	2	3	4	5

(Page 3)

		Item No.
7.	I am neither too fat nor too thin	7
9.	I like my looks just the way they are	9
11.	I would like to change some parts of my body	11
25.	I am satisfied with my moral behavior	25
27.	I am satisfied with my relationship to God	27
29.	I ought to go to church more	29
43.	I am satisfied to be just what I am	43
45.	I am just as nice as I should be	45
47.	I despise myself	47
61.	I am satisfied with my family relationships	61
63.	I understand my family as well as I should	63
65.	I should trust my family more	65
79.	I am as sociable as I want to be	79
81.	I try to please others, but I don't overdo it	81
83.	I am no good at all from a social standpoint	83
95.	I do not like everyone I know	95
97.	Once in a while, I laugh at a dirty joke	97

Responses-	Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
	1	2	3	4	5

(Page 4)

		Item No.
8.	I am neither too tall nor too short	8
10.	I don't feel as well as I should	10
12.	I should have more sex appeal	12
26.	I am as religious as I want to be	26
28.	I wish I could be more trustworthy	28
30.	I shouldn't tell so many lies	30
44.	I am as smart as I want to be	44
46.	I am not the person I would like to be	46
48.	I wish I didn't give up as easily as I do	48
62.	I treat my parents as well as I should (use past tense if parents are not living)	62
64.	I am too sentitive to things my family say	64
66.	I should love my family more	66
80.	I am satisfied with the way I treat other people	80
82.	I should be more polite to others	82
84.	I ought to get along better with other people	84
96.	I gossip a little at times	96
98.	At times I feel like swearing	98

Responses-	Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
	1	2	3	4	5

(Page 5)

		Item No.
13.	I take good care of myself physically	13
15.	I try to be careful about my appearance	15
17.	I often act like I am "all thumbs"	17
31.	I am true to my religion in my everyday life	31
33.	I try to change when I know I'm doing things that are wrong	33
35.	I sometimes do very bad things	35
49.	I can always take care of myself in any situation	49
51.	I take the blame for things without getting mad	51
53.	I do things without thinking about them first	53
67.	I try to play fair with my friends and family	67
69.	I take a real interest in my family	69
71.	I give in to my parents. (Use past tense if parents are not living)	71
85.	I try to understand the other fellow's point of view . . .	85
87.	I get along well with other people	87
89.	I do not forgive others easily	89
99.	I would rather win than lose in a game	99

Responses-	Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
	1	2	3	4	5

(Page 6)

		Item No.
14.	I feel good most of the time	14
16.	I do poorly in sports and games	16
18.	I am a poor sleeper	18
32.	I do what is right most of the time	32
34.	I sometimes use unfair means to get ahead	34
36.	I have trouble doing the things that are right	36
50.	I solve my problems quite easily	50
52.	I change my mind a lot	52
54.	I try to run away from my problems	54
68.	I do my share of work at home	68
70.	I quarrel with my family	70
72.	I do not act like my family thinks I should	72
86.	I see good points in all the people I meet	86
88.	I do not feel at east with other people	88
90.	I find it hard to talk with strangers	90
100.	Once in a while I put off until tomorrow what I ought to do today	100

Responses-	Completely false	Mostly false	Partly false and partly true	Mostly true	Completely true
	1	2	3	4	5

APPENDIX C

MULTIPLE AFFECT ADJECTIVE CHECKLIST

DIRECTIONS: On this sheet you will find words which describe different kinds of moods and feelings. Mark an X in the boxes beside the words which describe how you feel now--today. Some of the words may found alike, but we want you to check all the words that describe your feelings. Work rapidly.

1	___	active	23	___	complaining
2	___	adventurous	24	___	contented
3	___	affectionate	25	___	contrary
4	___	afraid	26	___	cool
5	___	agitated	27	___	cooperative
6	___	agreeable	28	___	critical
7	___	aggressive	29	___	cross
8	___	alive	30	___	cruel
9	___	alone	31	___	daring
10	___	amiable	32	___	desperate
11	___	amused	33	___	destroyed
12	___	angry	34	___	devoted
13	___	annoyed	35	___	disagreeable
14	___	awful	36	___	discontented
15	___	bashful	37	___	discouraged
16	___	bitter	38	___	disgusted
17	___	blue	39	___	displeased
18	___	bored	40	___	energetic
19	___	calm	41	___	enraged
20	___	cautious	42	___	enthusiastic
21	___	cheerful	43	___	fearful
22	___	clean	44	___	fine

45 ___ fit
46 ___ forlorn
47 ___ frank
48 ___ free
49 ___ friendly
50 ___ frightened
51 ___ furious
52 ___ gay
53 ___ gentle
54 ___ glad
55 ___ gloomy
56 ___ good
57 ___ good-natured
58 ___ grim
59 ___ happy
60 ___ healthy
61 ___ hopeless
62 ___ hostile
63 ___ impatient
64 ___ incensed
65 ___ indignant
66 ___ inspired
67 ___ interested
68 ___ irritated
69 ___ jealous
70 ___ joyful
71 ___ kindly
72 ___ lonely
73 ___ lost
74 ___ loving
75 ___ low
76 ___ lucky
77 ___ mad
78 ___ mean
79 ___ meek
80 ___ merry
81 ___ mild
82 ___ miserable
83 ___ nervous
84 ___ obliging
85 ___ offended
86 ___ outraged
87 ___ panicky
88 ___ patient
89 ___ peaceful
90 ___ pleased
91 ___ pleasant
92 ___ polite
93 ___ powerful
94 ___ quiet
95 ___ reckless
96 ___ rejected
97 ___ rough
98 ___ sad
99 ___ safe
100 ___ satisfied
101 ___ secure
102 ___ shaky
103 ___ shy
104 ___ soothed
105 ___ steady
106 ___ stubborn
107 ___ stormy
108 ___ strong
109 ___ suffering
110 ___ sullen
111 ___ sunk
112 ___ sympathetic

113 ___ tame
114 ___ tender
115 ___ tense
116 ___ terrible
117 ___ terrified
118 ___ thoughtful
119 ___ timid
120 ___ tormented
121 ___ understanding
122 ___ unhappy
123 ___ unsociable
124 ___ upset
125 ___ vexed
126 ___ warm
127 ___ whole
128 ___ wild
129 ___ willful
130 ___ wilted
131 ___ worrying
132 ___ young

APPENDIX D

ROSENBERG SELF-ESTEEM SCALE

No. _____

Below is a list of statements dealing with your general feelings about yourself. If you agree with the statement, circle A. If you strongly agree, circle SA. If you disagree, circle D. If you strongly disagree, circle SD.

	1 Strongly Agree	2 Agree	3 Disagree	4 Strongly Disagree
1. On the whole, I am satisfied with myself.				
2. At times I think I am no good at all.				
3. I feel that I have a number of good qualities.				
4. I am able to do things as well as most people.				
5. I feel I do not have much to be proud of.				
6. I certainly feel useless at times.				
7. I feel that I'm a person of worth, at least on an equal plane with others.				
8. I wish I could have more respect for myself.				
9. All in all, I am inclined to feel that I am a failure.				
10. I take a positive attitude toward myself.				

APPENDIX E

EXERCISE ON SELF-AWARENESS

The purpose of this simple exercise is to make you become more aware of yourself and your self-esteem at this moment. Both your covert and overt reactions to the following statement will make such awareness possible.

1. Where am I now? _____
2. What am I doing right now? _____
3. What am I feeling right now? _____
4. What am I thinking now? _____
5. What do I want to be thinking now? _____
6. How do I want to feel about myself now? _____
7. What do I want to be doing now? _____
8. What or who is preventing from doing what I want to be doing now? _____
9. How do I feel about statement No. 8? _____
10. If I feel badly about any of these statements, what can I do to make me feel good about myself?

_____

APPENDIX F

INSTRUCTIONS BEFORE TRAINING SESSION

No. _____

Before the training session begins, you are requested to rate your own objective understanding of your facial behavior _____ as well as your ability to cope with or deal with the facial behavior.

Before I receive the specialized training, this is:

1. How much I understand the causes of my facial behavior _____. Low 1 2 3 4 5 6 7 8 9 10
2. How I can control the facial behavior before the specialized training. Low 1 2 3 4 5 6 7 8 9 10
3. The extent to which my understanding of the facial behavior and my ability to cope with or deal with it will influence my positive self-esteem. Low 1 2 3 4 5 6 7 8 9 10
4. The degree to which I can use my own understanding of the causes of my facial behavior in helping others deal with their own facial behavior. Low 1 2 3 4 5 6 7 8 9 10

APPENDIX G

EXERCISE: DEALING WITH PERSONAL FEAR

No. _____ Date _____

1. How will you define Fear ?
2. Have you ever been afraid ?
3. When last were you afraid ?
4. List three things that caused you to be afraid .
   a.
   b.
   c.
5. How many times are you afraid in:
   a. one day?
   b. one week?
   c. one month?
   d. one year?
6. How do you generally feel when you are afraid ?
7. List five types of fear that you are prone to express.
   a.
   b.
   c.
   d.
   e.
8. How does your feeling under the stupor of fear affect your overall level of self-esteem?
9. List five things you usually do to cope with your fear .
   a.
   b.
   c.
   d.
   e.
10. Fear is always a very deadly and unhealthy experience.
    True or False

	Known to Self	Not Known to Self
Known to Others	1. OPEN	2. BLIND
Not Known to Others	3. HIDDEN	4. UNKNOWN

EXERCISES:

1. What type of fear is it that is known to you and to others?

   _____

   How do you feel about this self-knowledge? _____

2. Do you have any fear which is neither known to you nor to others?

   How do you feel? Good or bad _____

   What do you want to do about the feeling?

3. Do you know of anything you are afraid of but which is not known to others? What is it? The fear of: _____

   What do you think others are saying about you? _____

4. Are you aware that there may be something that others know about you but which you don't know? _____

   What will you rather do if you become aware of this?

   _____

APPENDIX H

INSTRUCTIONS AFTER TRAINING SESSION

No. _____

On a scale of 1 to 10, indicate the degree to which you understand the possible causes of your facial behavior _____, and the extent to which you can cope or deal with the behavior as a result of the skills you've gained in this training session.

As a result of the training, this is:

1. How I understand the causes of my facial behavior _____.
   1 2 3 4 5 6 7 8 9 10
2. How I can control the facial behavior as a result of the specialized training. 1 2 3 4 5 6 7 8 9 10
3. The extent to which my understanding of the facial behavior and my ability to cope or deal with it will influence my positive self-esteem. 1 2 3 4 5 6 7 8 9 10
4. The degree to which I can use my understanding of the causes of my facial behavior in helping others deal with their own facial behavior. 1 2 3 4 5 6 7 8 9 10

APPENDIX I

EXERCISE ON ASSESSMENT OF PERSONAL ANGER

Inasmuch as anger has been defined as the gravest of all emotions which can be conveyed nonverbally through the face, the following simple exercise is designed to help you see yourself in relation to the causes of your anger. It is felt that the exercise will help you develop skills necessary for handling this gravest of all emotions whenever it occurs.

1. How do you generally feel when you are angry? _____

2. Is your feelings helping you to maintain the type of positive self-esteem that you always want to have?

   _____

3. Do you see your anger as something to be concerned about?

   _____

4. If you consider your anger as a thing of concern, do you really want to deal with it?

   _____

5. Do you prefer to deal with it now or later? _____

6. Do you want to volunteer to discuss your anger in this group today?

   _____

APPENDIX J

OVERALL RATING OF THE EFFECTIVENESS OF THE TRAINING SESSIONS

On a scale of 1-10 (low 1, high 10), rate the following statements on the basis of how much the training sessions have helped you to understand your facial behaviors and to maintain positive self-esteem.

As a result of the training sessions, this is how much I now understand and can manage the following facial behaviors.

a. Fear 1 2 3 4 5 6 7 8 9 10

b. Sadness 1 2 3 4 5 6 7 8 9 10

c. Anger 1 2 3 4 5 6 7 8 9 10

d. Disgust 1 2 3 4 5 6 7 8 9 10

e. Surprise 1 2 3 4 5 6 7 8 9 10

f. Happiness 1 2 3 4 5 6 7 8 9 10

g. Neutral 1 2 3 4 5 6 7 8 9 10

h. As a result of the training, this is how much I can now control or manage my facial behavior:

1 2 3 4 5 6 7 8 9 10

i. My low self-esteem is now 1 2 3 4 5 6 7 8 9 10

j. My positive self-esteem is 1 2 3 4 5 6 7 8 9 10

k. My ability to cope with my self-esteem is 1 2 3 4 5 6 7 8 9 10

l. My skill in discussing my facial behaviors with others is

1 2 3 4 5 6 7 8 9 10

m. I rate the training 1 2 3 4 5 6 7 8 9 10

n. The training's utilitarian gains for me is

1 2 3 4 5 6 7 8 9 10

o. I will recommend the training to others

1 2 3 4 5 6 7 8 9 10

APPENDIX K

DISTINGUISHING CHARACTERISTICS AMONG FACIAL BEHAVIORS

1	2	3	4	5	6	7
FEAR	SADNESS	ANGER	DISGUST	SURPRISE	HAPPINESS	NEUTRAL
1. The eyebrows appear raised and straightened and drawn together so that the inner corner of the brows are closer together.	1. The inner corners of the eyebrows are raised and may be drawn together.	1. Eyebrows are drawn together and lowered.	1. The upper lid is raised.	1. The eyebrows are raised.	1. The corners of the lips are drawn back and slightly up.	1. Withholder or unexpressive facial behavior.
2. There are horizontal wrinkles across the forehead.	2. The inner corner of the upper eyelid is drawn up and the lower eyelid may appear raised.	2. The eyelids are tensed.	2. The lower lid may or may not be raised or lowered.	2. The eyes are opened wide.	2. The lips may remain together in a smile.	2. Revealer or expressive.
3. The eyes are opened and tense, the upper lid raised and the lower eyelid tense.	3. The corners of the lips are drawn down, or the lips appear to tremble.	3. The eye appears to stare in a hard fashion.	3. The nose is wrinkled.	3. The jaw drops open.	3. The lip may be parted, with the teeth and jaw together in a grin.	3. Unwitting expressor.
4. The mouth opens in fear	4. The skin below the eyebrow is triangulated with the inner corner up.	4. The lips are tightly pressed in a square shape.	4. The lower eyelids are pushed up.	4. The lips are parted.	4. Wrinkles run from the nose out and down to the area beyond the corners of the mouth.	4. Blanked expressor.
			5. The eyebrow is lowered.	5. With the lips parted, the teeth too, are parted.	5. The cheek is raised.	5. Substitute expressor.
						6. Frozen-affect expressor.
						7. Ever-ready expressor.

VITA

Joshua Olayiwola Oyekan was born in Oyo, Oyo State, Nigeria, on August 21, 1936. He attended the Nigerian Baptist Theological Seminary, Ogbomosho, Nigeria, and graduated in December, 1963 with a Diploma in Theology. Prior to that time, he trained and worked as a registered building draughtsman. From 1964-1967, while holding pastorate at a local Baptist church, he enrolled at Olivet Baptist High School in Oyo City and completed the West African School Certificate training program in December of 1967. Following his successful completion of the West African School Certificate examination in December, 1967, he enrolled at the Nigerian Baptist Theological Seminary again in August, 1968, to work toward a degree in Theology. On May 14, 1971, he was graduated with a Bachelor of Theology degree from the Seminary.

He attended William Carey College in Hattiesburg, Mississippi, from January, 1972 to May, 1973, and was awarded the Bachelor of Arts degree in Philosophy and Religion. He was admitted to The Southern Baptist Theological Seminary in Louisville, Kentucky, in June, 1973 to undertake graduate level study in Psychology of Religion and received the Master of Divinity degree from that seminary in May, 1974. In August, 1974, he enrolled at Spalding College also in Louisville, Kentucky, to pursue graduate studies in psychology, and he received the Master of Arts degree in Counseling Psychology in August, 1975.

Upon completing the Master of Arts degree program in August, he gained admission to The University of Tennessee in Knoxville to work

toward a Doctorate in Educational Psychology and Guidance. Concurrently, he secured admission to Luther Rice Seminary in Jacksonville, Florida, to undertake a Doctoral training program through the Seminary's extension program in Chattanooga, Tennessee. After successfully completing all the requirements for the degree, he was awarded the Doctor of Ministry degree with a major in Psychology of Religion in May, 1977. He completed the requirements for the Doctor of Education degree in Winter, 1979.

The author is a member of several professional organizations: Association of Black Psychologists; American Academy of Crisis Interveners; Association for Values in Religious Issues in Counseling; Pi, Tau, Chi National honors in religion; and The Nigerian Union of registered building draftsmen. He is an ordained minister of the Nigerian Baptist faith.

He is married to the former Beatrice Omobola Agoro, and they are both blessed with three children--Oyetunde, Oyekunle, and Oyeyemi.