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This is to certify that the
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Some Effects of Self-Assuredness
On Eye Contact Behavior During
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Eleanor Catherine Crispin

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Dale L. Bartlett

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SOME EFFECTS OF SELF-ASSUREDNESS ON EYE
CONTACT BEHAVIOR DURING MUSIC
THERAPY CLINIC SESSIONS

By

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ABSTRACT

SOME EFFECTS OF SELF-ASSUREDNESS ON EYE
CONTACT BEHAVIOR DURING MUSIC
THERAPY CLINIC SESSION

By

Eleanor Catherine Crispin

The purpose of this study was to determine if the self-assuredness of student therapists affects the frequency and duration of eye contact in the music therapy clinical setting. Twenty-four senior level music therapy students from Michigan State University were given the California Psychological Inventory (CPI). Using the variables of this inventory two levels of self-assuredness (high and low) were established for each of the twenty-four subjects.

During the first five-minutes of each student therapist's session duration and frequency of eye contact was tabulated. Self-assuredness, duration and frequency of eye contact were compared by computer statistical analysis.

The following conclusions were drawn based on the results of this investigation:

1. There is no significant difference between

those scoring above the mean in self-assuredness and those scoring below the mean in self-assuredness in the duration of eye contact.

2. There is no significant difference between those scoring above the mean and those scoring below the mean in self-assuredness and frequency of eye contact.

Although investigation revealed that student therapist self-assuredness was not a significant factor in the frequency or duration of eye contact in the clinical setting other pertinent data were revealed. Future researchers would be advised to:

1. investigate other measurements of self-assuredness/self-esteem,
2. collect eye contact data over a period of time.
3. record verbal exchanges.

Research should also be done to investigate other nonverbal reinforcement cues used in a clinical setting.

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CHAPTER I

PURPOSE OF THE STUDY

Statement of the Problem

The problem of this study was to investigate the relationship between two variables: (1) eye contact and (2) self-assuredness. Two specific questions were posed:

1. Does the more self-assured music therapy student initiate eye contact more often?
2. Does the more self-assured music therapy student sustain eye contact longer?

Background of the Problem

It was evidenced through the supervision of senior level music therapy students,¹ that while the interpersonal relationship was being established between senior student therapist and client, the nonverbal aspect of behavior was not always a conscious part of the encounter when dealing with the client. It became apparent, through numerous observations, that some students had increasingly better sessions with their clients. These students appeared better prepared, more confident and had greater social

¹Supervision was at Michigan State University, 1976.



presence in the clinical situation than did others. It was also noted that certain nonverbal elements were increasingly present in these sessions. Nodding, smiling, frequent eye contact, close body proximity, forward body lean and touching were exhibited.

In recent years researchers have discovered an understandable systematic language of body gestures. Within their context, these nonverbal gestures have meaning and communicate "silently real feeling."² Each culture has its own patterns of communication; although, Davis³ indicates that many nonverbal behaviors are cross cultural. As the cultural language is developed in childhood so, too, are the nuances of nonverbal behavior absorbed.

Modes of nonverbal communication are numerous: painting, mime, dance, music, symbols of ceremonies, dress and body decoration are but a few. Whatever the modality, one's entire life exposure is brought into decoding meaning, for certainly, more meaning will be gained from viewing an African tribal dance if there is prior knowledge of the culture.

Birdwhistell "estimates that no more than thirty-five percent of social meaning in any conversation is embedded

²A. Mehrabian, *Silent Messages*, (Belmont, Calif.: Wadsworth Publishing Company, 1971) 113.

³Flora Davis, "How to Read Body Language," *The Rhetoric of Nonverbal Communication, Readings*, Edited by Haig A. Bosmajian, (Illinois: Scott, Foresman and Company, Publishers, 1971) 9.



in the words that are spoken."⁴ He also says:

Communication isn't like a sending set and a receiver. It's a negotiation between two people, a creative act. It's not measured by the fact that you contribute, we're an interacting and reacting, beautifully integrated system.⁵

Vocal expression is a form of communication and is therefore important. Mehrabian⁶ reports that by filtering out the high register in the voice and allowing more dominance to low tones, listeners are able to assess the degree of liking. He "explains the emotional impact of any message as: seven percent verbal (words), thirty-eight percent vocal (tone of voice), fifty-five percent facial."⁷

Davis⁸ reports a Haggard and Issac study on subliminal cues discovered while reviewing a psychotherapy film in slow motion. Facial expressions appeared on several clients that were not visible at normal running speed. The facial expressions were evidenced when the individual was in conflict: these expressions were a facial denial of a verbal response. Subliminal, nonverbal cues are called micromomentary expressions and do not claim conscious attention; however, these cues are absorbed. It is

⁴Ray L. Birdwhistell, Kinesics and Context, (Philadelphia: University of Pennsylvania Press, 1970) 10.

⁵Birdwhistell, op cit., p. 15.

⁶Mehrabian, op cit., p. 18.

⁷Ibid.

⁸Davis, op cit., p. 18.

theorized that subliminal messages are unintentional. They may be conscious or unconscious, "but are leakage of true feelings."⁹

Studies on man/monkey eye behavior indicate that rhesus monkeys are sensitive to stares. Exline's study¹⁰ shows that a man approaching with no expression on his face but maintaining constant eye contact, alerted the monkeys to defensive tactics: they bared their teeth, moved menacingly and appeared agitated. If the experimenter approached with his eyes closed, the reaction was one of calm. If he approached with a submissive posture, and lowered eyes, there was only slight agitation. Sensitivity to stares was also demonstrated in this study by recording the animal's brain wave patterns throughout the experiment. When the experimenter, who was hidden behind a blind which had a small observation hole, stared constantly at the monkeys, significant disturbances of the animal's brain wave patterns were noted. As the brain wave patterns changed so, too, the animal's overt body expression became depressed. The causality of this phenomenon is unexplained.

Humans also are conscious of stares.¹¹ Experiments

⁹Flora Davis, Inside Intuition, (New York: McGraw-Hill Book Company, 1973) 54.

¹⁰R. Exline, "Visual Interaction--The Glances of Power and Preference," Nebraska Symposium on Motivation, Edited by J. K. Cole, (Lincoln, Nebraska: Nebraska University Press, 1971) 35.

¹¹A. Kendon, "Some Functions of Gaze-Direction in Social Interaction," Acta Psychologica, 1967, 26, pp. 22-63.

show that heart rate increases when man is stared at. It is theorized that the subject staring gives no indication about his intentions and therefore, there is no message to be interpreted by another.

Kenton's¹² study relating eye movement and ease disclosed that upon finishing an address, the speaker, when asked a question, met the eyes of the one questioning if he felt comfortable with the question. However, when the speaker was uncomfortable with the question he did not establish eye gaze.

The relationship between what is communicated verbally and what is communicated nonverbally is, therefore, important. The understanding of these messages is necessary in order that there be effective interpretation within the communicative process and interpersonal action.

Coopersmith's¹³ study on determining types of self-esteem suggests that the behavioral expression and the individual's subjective evaluation of self-esteem are in agreement. He further states that individuals who have had more successes will tend toward more self-confidence and assurance in their behavior and perception. While those who have had fewer successes will be cautious and hesitant and/or will develop attention-seeking and

¹²Ibid.

¹³S. Coopersmith, "A Method for Determining Types of Self-Esteem," Journal of Abnormal and Social Psychology, 1959, pp. 87-94.

aggressive behaviors and perceptions.¹⁴ To date no research has been found that would indicate that self-assurance has a bearing on eye contact.

Purpose of the Study

Music therapists are engaged in many clinical-social encounters. Since most social encounters begin with eye contact it seems relevant that this should be the focus of attention. The visual component aids in gathering data, interpreting situations and obtaining visual feedback. It could be said, that eye behavior "is by far the most potent element in body language."¹⁵

It was the purpose of this study (1) to determine the level of self-assuredness of the senior music therapy students at Michigan State University by means of the California Psychological Inventory (CPI); (2) to determine if there is a significant difference in the occurrence of eye contact between subjects classified into two levels of self-assuredness; and (3) to determine if there is a significant difference in the duration of eye contact between subjects classified into two levels of self-assuredness.

Hypotheses

Two experimental hypotheses were established for this study:

¹⁴ Ibid.

¹⁵ Davis, "How to Read Body Language," op cit., p. 18.

1. There will be a difference in the initiation of eye contact between the more self-assured and the less-assured senior music therapy student.
2. The self-assured group will score higher in the sustaining time of eye contact than the less-assured group.

Need for the Study

In the area of music therapy, not only in the training but the practice as well, much emphasis has been placed on the verbal content within the clinical setting. Little emphasis if any, has been placed upon the nonverbal content of encounter. Music, art and movement activities have been stressed and play an essential part in attainment of therapeutic goals. If activities are to be of benefit then there is a need for research to determine what nonverbal cues have meaning for the perceiver and/or what nonverbal cues change perceiver behavior within specific activity sessions.

The need for finding ways to be more effective is of paramount importance. Awareness and new insight is essential in, and to, the educational process. It is hoped that this study will contribute to this goal.

Definition of Terms

Eye Contact. Eye contact will be defined as any attending look to the face.

Eye Gaze. This is another term for eye contact or

eye behavior.

Nonverbal Behavior. This is an interchangeable term with nonverbal communication. A communicative form with or without words, comprising voice tone, body movement, body proximity, touching, eye contact, gestures and other forms of silent messages.

Limitations of the Study

The subjects in this study were twenty-four senior music therapy students who attended Michigan State University, Spring Term, 1976. The senior students were completing their practicum and each was working with a client in the campus clinic. Two weeks prior to data collection the California Psychological Inventory was administered. No other testing was done.

CHAPTER II

REVIEW OF RELATED LITERATURE

The purpose of this study was to determine if a relationship does exist between self-assuredness and the use of eye contact. Experimental studies specifically related to this topic were not found. However, there is a large body of theoretical research on eye behavior as well as a large body of research on self-esteem. Therefore, a survey of pertinent literature which addresses itself to eye contact, nonverbal behavior and the evaluation of self-esteem will be reviewed. This research literature should serve as a reliable source from which inferences can be made.

Speaker Credibility and Eye Contact

The conveyance of interest and genuineness can be influenced not only by the words that are uttered, but by the amount of eye contact with an audience, group or individual. Beebe¹⁶ conducted a study directed at measuring the perceived credibility of a speaker based on eye contact. The speaker was filmed while delivering three seven-minute

¹⁶Steven A. Beebe, "Eye Contact: A Nonverbal Determinant of Speaker Credibility," Speech Teacher, 23: pp. 22-26, 1974.

informative speeches, one speech with no eye contact, one with moderate eye contact and another with high eye contact. Prior to the implementation of the study, a panel of three speech instructors rated the subjects on fifteen semantic scales, of which factors of honesty-dishonest, friendly-unfriendly and kind-cruel were applied to measure speaker credibility. The speaker was then rated by forty-six students in an introductory speech course; these students were given no prior instruction. Upon the conclusion of the seven-minute speech the students were asked to rate the perceived credibility of the speaker. It was found that the speaker was perceived more honest in the high eye contact delivery and that the honesty factor was a significant contribution. An increase in the amount of eye contact generated by a speaker in a live public-speaking situation heightens the listener's perception.

Behavioral Clusters

Vocal intonation, facial expression and eye contact determine the impact of a message. If the voice conveys a message that contradicts the words the vocal message will be the determined message if eye contact is not available.¹⁷ Eye contact does not exist alone, but in a cluster of nonverbal behaviors that are present in a global

¹⁷M. Argyle, M. Laljee, and M. Cook, "The Effects of Visibility on Interaction in a Dyad," Human Relations, 21: pp. 3-17, 1968.

communicative cue system. Mehrabian¹⁸ discovered that specific behaviors clustered and he was, therefore, able to establish the following definitive categories of behavior.

Behaviors indicating positive feelings of liking and preference are called affiliative¹⁹ and include the following:

a frequency of declarative statements, percentage of waiting that was spent looking in the direction of the partner, frequency of head nods and hand gestures, and the pleasant versus unpleasant quality of what was said.²⁰

Responsive behaviors include:

the total expressive quality of voice tone, positive and negative vocal expressions, speech volume, speech rate measured in number of words per minute and positive and negative facial expressions.²¹

Behavior in the dominant-submissive dimension:

include all the relaxation cues, reclining or sideways lean while seated, as well as an asymmetrical placement of the arms and legs.²²

Ingratiating behavior and affiliative behavior share the same positive cue clusters. "Frequent questioning, smiling and other pleasant vocal and facial expression"²³ are noted, as well as agreeable verbalization. However,

¹⁸A. Mehrabian, *Silent Messages*, op cit., p. 23.

¹⁹Argyle and Dean refer to these behaviors as intimate.

²⁰A. Mehrabian, *Silent Messages*, op cit., p. 23.

²¹Ibid.

²²Ibid.

²³Ibid.

ingratiating behaviors "are conducive to a strained and uncomfortable interaction since the positiveness is excessive and demands reciprocation."²⁴

Eye Function

A major function of eye behavior is a continual evaluation of personal reception within social situations. This behavior is called feedback or monitoring and can be either conscious or unconscious. Motivation for seeking information may vary; however, if verbal feedback is relevant to a subject's concerns or needs eye contact may diminish as the subject is satisfied and may seek no further reinforcement.²⁵

Personalities differ in the amount of eye contact needed. If a dependent individual's social reinforcement is restricted the subject will seek that approval and spend more time in visual search of another's face for other cue approval. A dominant person on the other hand does not engage in eye contact as often for feedback.²⁶

Listening requires looking at the speaker; and a speaker in turn may demand this attention. Often parents and teachers are heard to say, "I'm speaking to you. Look

²⁴ Ibid.

²⁵ M. Argyle and Janet Dean, "Eye-Contact, Distance and Affiliation," Sociometry, 28: p. 289, 1965.

²⁶ R. Exline and D. Messick "The Effects of Dependency and Social Reinforcement upon Visual Behavior During an Interview," British Journal of Social and Clinical Psychology, 6: pp. 256-266, 1967.



at me." Here eye contact is witness to the speaker that he is being received and is in communication. Argyle and Dean²⁷ report that there "is more eye contact when the subject is listening than when he is speaking, the ratio to be 3:1."²⁸ They go on to state that if a discussion is of a personal nature there will be less eye contact than if the subject matter is less personal.

Eye behavior has many functions. Some of the noted functions of eye contact are:

- When speech has ended the eyes can be a signaling device that someone else may speak.
- People tend to look more at individuals they like than those whom they dislike.
- People in general tend to look up at the end of a sentence or long phrase therein.
- Eyes can be disturbing and interfere with thought causing an individual who is starting a sentence or is in deep thought to look away.

The majority of encoding of these cues is at an unconscious level. The decoding of the message can either be conscious or intuitive within this silent communicative process.

²⁷Argyle and Dean, op cit., p. 289.

²⁸Ibid.

Eyes and Body Proximity

Hall²⁹ in a study of distance, body proximity and its effects on looking discovered that most Americans prefer to stand no closer than eighteen to twenty inches "when talking to a stranger of the same sex. If they have to stand closer than this preferred distance they will turn and face each other at right angles, or stand side-to-side."³⁰

Steinzor³¹ while conducting studies on group behavior, noted that a group comprised of ten "were least likely to address those two or three places away."³² If people were sitting in a large hall conversing they would move to a preferred distance of not more than five and one-half feet apart in order to maintain the group structure. He went on to report that eye gaze is reduced or virtually eliminated in crowded facilities. Elevators, crowded buses and restaurants are not conducive to high eye contact. This is in accord with Goffman's³³ findings on strangers who are approaching one another on pavement. Eye contact is common but "civil inattention is given

²⁹E. T. Hall, "The Anthropology of Manners," Scientific American, 192: p. 85, April, 1955.

³⁰Ibid.

³¹Bernard Steinzor, "The Spatial Factor in Face to Face Discussion Groups," Journal of Social Psychology, 45: p. 552, October, 1950.

³²Steinzor, op cit., p. 552.

³³E. Goffman, Behavior in Public Places, (London: Free Press of Glencoe, 1963) p. 96.



when the stranger gets to a distance of eight feet."³⁴
 If eye contact is maintained a verbal or nonverbal response is indicated.

While studying eye behavior Gibson and Pick³⁵ contrived a situation in which a confederate and subject would interact in conversation while an observer counted eye contacts. Both persons were seated at a table. During the course of the three-minute conversation the confederate continually gazed at the subject. The author reports that the subject was totally unaware that he was being stared at throughout the experiment. The results of this experiment show that the "length of the glance increased with distance, from 5.5 seconds at two feet to 8.8 seconds at six feet and 9.6 seconds at ten feet."³⁶ In other words, if the encounter is at a distance of two feet then the eye contact established at this distance will remain, whether the chairs move apart to six feet or ten feet. If eight feet is the first condition then the established eye contact would remain whether the chairs were moved to two feet or ten feet. Furthermore, there is less eye contact with mixed-sex pairs, than with same-sex pairs. "The record length of glances at two feet for male/female pairs was 3.7 seconds and for the same-sex pairs at two

³⁴ Ibid.

³⁵ J. J. Gibson and A. D. Pick, "Perception of Another Person's Looking Behavior, American Journal of Psychology, 76: p. 386, September, 1963.

³⁶ Ibid.

feet the glance time was 7.2 seconds."³⁷ It was also discovered that "the social relationship established in the first condition persisted in the later ones."³⁸

Self-Esteem

Evaluation of personal achievement comes not only from self-concept but also incorporates the expectations of others. Self-evaluation in performance is affected by the extent of the individual's self-esteem. People have ideal and actual concepts of themselves. When the actual and ideal concepts coincide self-esteem will be at its apex. If however, these concepts do not coincide then low self-esteem emerges. Individuals with low self-esteem have need to protect themselves from self-evaluation that is negative. Stotland, et al.,³⁹ say that,

Persons with high self-esteem may have learned to overlook their objective failures and concentrate upon their success in building their concept of themselves, or they may consistently act in accordance with their ideals.⁴⁰

On the other hand, individuals with low self-esteem, "are more likely to evaluate an objective failure as a very

³⁷Gibson and Pick, op cit., p. 385.

³⁸Ibid.

³⁹E. Stotland, S. Thorley, E. Thomas, A. Cohen, and A. Zander, "The Effects of Group Expectations and Self-Esteem Upon Self-Evaluation, Journal of Abnormal and Social Psychology, 54: Jan-May, 1957.

⁴⁰Stotland, et al., op cit., p. 201.

poor performance and a success as a small success."⁴¹

Franks and Marolla⁴² view self-esteem as a dual process. The first is appraisal from within the immediate social environment, from those individuals deemed significant. The second is internalized perception of self on environment--a feeling of competence. They go on to quote Silverbey:

Throughout life self-esteem has two sources: an inner source, the degree of effectiveness of one's own aggression; and an outer external source, the opinions of others about oneself. Both are important, but the former is the steadier and more dependable one; the latter is always more uncertain. Unhappy and insecure is the man who, lacking an adequate inner source for self-esteem, must depend for this almost wholly upon external sources. It is the condition seen by psychotherapists almost universally among his patients.⁴³

Inner self-esteem is earned. It makes things happen in the face of obstacles and is self-actualized by the "feelings of one's own capacity, competence and potency."⁴⁴ Cognitive assessment can be made of the outside environment and one's self as an active agent within that condition. This then adds to the feeling of worth. Self-esteem derived totally from the outside is vivified perception of others. It is in constant need of reinforcement and

⁴¹Ibid.

⁴²D. Franks and J. Marolla, Efficacious Action and Social Approval as Interacting Dimensions of Self-Esteem: A Tentative Formulation Through Construct Validation, "Sociometry, 39: pp. 324-344, 1976.

⁴³Ibid.

⁴⁴Ibid.



becomes a mirror of others' values rather than one's inner values. Validation sought from those deemed significant is but one condition of maintaining self-esteem.



CHAPTER III

DESIGN OF THE STUDY

Method

The intent of this study was directed toward the belief that the more self-assured senior music therapy student would initiate eye contact more often than the less-assured student therapist. Twenty-four senior music therapy students were selected for this study. Data were collected during Spring term, 1976 in the music therapy clinic at Michigan State University.

The California Psychological Inventory (CPI) was administered to all students prior to eye contact tabulation. The results of the inventory determined the classification of two groups: (1) more self-assured (2) less self-assured. Eye contact behavior was recorded electronically on a Rustrak Counter.

Subjects

Out of forty subjects, twenty-four were selected from the senior class in music therapy at Michigan State University. Selection was based on schedule availability. These twenty-four students held their sessions in the observation room, thus, allowing eye contact data to be collected.

Of the twenty-four subjects, four were male. All subjects had been working with a client in the campus clinic for a minimum of three months prior to data collection. Students' clients had varying disabilities. Some were emotionally disturbed, mentally retarded, learning disabled, hearing impaired or had speech impairments. The clients ranged in age from three to thirty-six. Students also had been required to work with small groups of retarded citizens living in the community of East Lansing. These small group activities included teaching songs and social dancing. The subjects were used to being critiqued at these functions as well as in the clinic by a supervisor and student therapist.

As data were being collected some students were aware that behaviors were being recorded in the clinic; others were unaware. If they asked, the students were told that client behaviors were being counted. This was plausible, since it was characteristic practice for sessions working on modifying client behaviors.

Setting

The tabulation of eye contact took place in the main observation room of the music therapy clinic. This room is approximately 12 feet by 15 feet, is carpeted, has one entrance, is wired for sound and has a one-way observation window. Furnishings include an upright piano, a table, two chairs, a chalk board and a storage cabinet. Entrance

1884

1885

to the session room is through an adjacent room which houses the electrical equipment and apparatus for the psychology of music laboratory. The laboratory door opens to a hall.

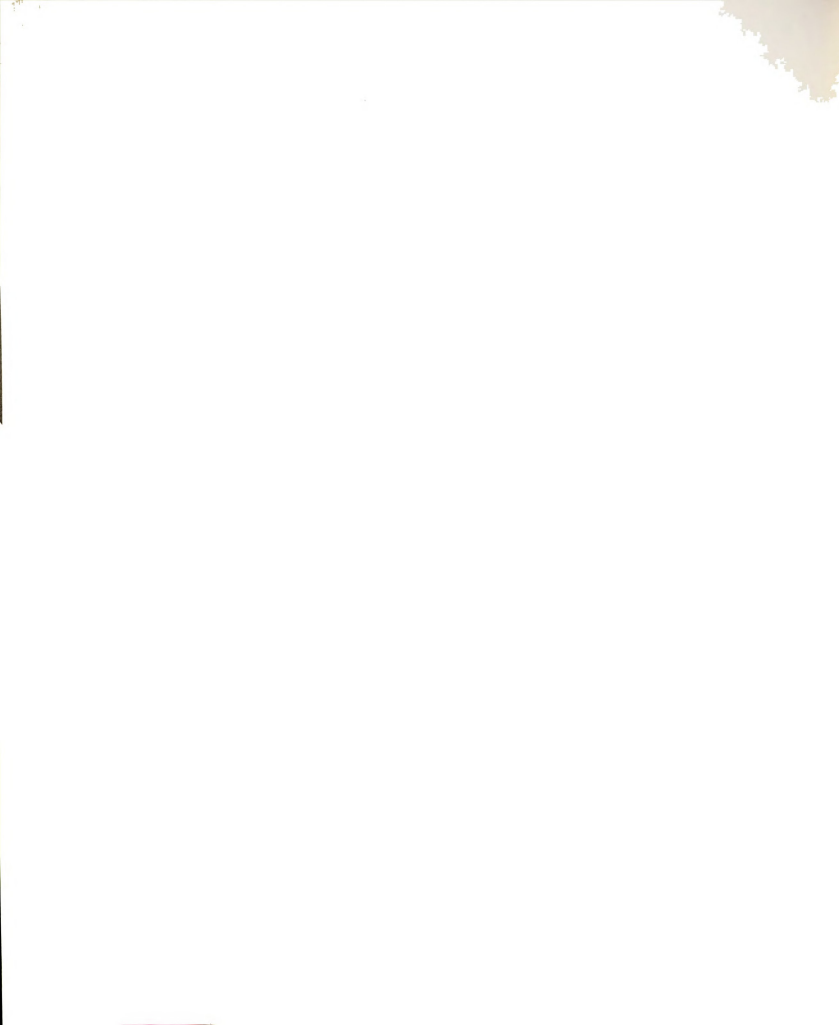
The majority of subjects would greet clients at the observation room door; however, on a few occasions clients were met at the hall door as they arrived early, and the preceeding session was still in progress. Tabulation of therapist initiated eye contact began when both persons were in the room.

Data Gathering Procedure

Once the client and therapist were in the session room the therapist's initiation and sustaining time of eye contact were tabulated; eye contact being defined for this study as any attending look given by the therapist toward the client's face. Tabulation was done electronically on a Rustrak Counter. Depressing the button would move the stylus from a median line to the right. The stylus would stay in this position until pressure on the button was released. Since the paper was marked with grid lines the number of eye contacts in seconds could be tabulated.

The student therapist was given no instruction but proceeded with his/her plans for the allotted thirty minutes.

The first five minutes of the meeting was recorded. This period allowed enough time to establish a feeling of



interest and set a tone for the session. One five-minute tabulation was obtained for each of the twenty-four cases.

Experimental Procedure

Tests. The California Psychological Inventory (CPI) was administered to all twenty-four senior student therapists. "This test was chosen as it is used with non-psychiatrically disturbed subjects."⁴⁵ The test addresses itself to personality characteristics important for social living. It is comprised of eighteen variables which are divided into four categories. The variables are: dominance, capacity for status, sociability, social presence, self-acceptance, sense of well-being, responsibility, socialization, self-control, tolerance, good impression, community, achievement via conformance, achievement via independence, intellectual efficiency, psychological-mindedness and flexibility. Variables one thru six form category one which measures poise, ascendancy, self-assurance and interpersonal adequacy. Variables seven thru twelve form category two measuring socialization, maturity, responsibility, and interpersonal structuring of values. Variables thirteen thru fifteen measure achievement potential and intellectual efficiency, forming category three. And variables sixteen and seventeen measure intellectual

⁴⁵Harrison G. Gough, PhD., California Psychological Inventory Administration Scoring Interpretation (California: Consulting Psychologists Press, Inc., 1957) 5.

and interest modes forming the fourth category.⁴⁶

The California Psychological Inventory, (CPI) consists of 480 items. Twelve are duplicates. One hundred seventy-eight of these items are taken from the Minnesota Multiphasic Personality Inventory, (MMPI), inventory pool. Thirty-five more MMPI items were revised slightly for the CPI (188, 189, 481). All items are presented with true false format (of the eighteen original CPI scales three, good impression, sense of well-being, communality) were developed mainly as potential indicators of response validity.⁴⁷

All tests were pre-coded to assure confidentiality.

Scoring was by hand with the use of overlays.

Materials. The materials used in this study included the California Psychological Inventory⁴⁸ and an overlay scoring sheet. Other materials were the Rustrak automatic counter, Model 92 and the grid paper upon which data were recorded.

Dependent Variable

The dependent variable was eye contact as measured by the number of initiations and length of sustaining time.

Statistical Treatment

Means and standard deviations of the scores for frequency and duration of eye contact were computed for those

⁴⁶ Ibid.

⁴⁷ Oscar Krisen Buros, Edited, The Seventh Mental Measurements Yearbook, V. I. (New Jersey: The Gryphon Press, 1972) 49.

⁴⁸ See experimental procedures of this chapter.

scoring high in self-assuredness and those scoring low in self-assuredness (see Table 1). A one-way analysis of variance was used to analyze these data. The CPI scores for all subjects were intracorrelated and tested for significance. Variables one through six, those comprising the level of self-assuredness, were also correlated with the dependent variable and tested for significance.

CHAPTER IV

PRESENTATION OF RESULTS

The purpose of this study was to determine if the more self-assured music therapy student would initiate eye contact more often and sustain it longer than the less self-assured student.

Two experimental hypotheses were established for this study.

1. There will be a difference in the initiation of eye contact between the more self-assured and the less self-assured senior music therapy student.
2. There will be a difference in the duration of eye contact between the more self-assured and the less self-assured senior music therapy student.

Twenty-four senior music therapy students were the subjects in the study. Eye contact behaviors were recorded of these subjects during clinic sessions, which proceeded normally and in which no special direction or requests were given to the subjects. Tabulation of eye contact was performed during the first five minutes of each student's session.



Data Analysis

All computations for analyzing the data in this study were done at Michigan State University Computer Center using the Control Data Computer No. 6500 and appropriate SPSS programs. Analyses consisted of one-way analysis of variance for each of three variables: (1) frequency of eye contact; (2) duration of eye contact; and (3) eye contact index (described on page 28). A .05 level of confidence was established for these analyses.

Table 1 includes descriptive data for variables frequency and duration under groups classified as more self-assured and less self-assured.

Table 1. Mean and Standard Deviation Scores for More Self-Assured and Less Self-Assured on the Two Dependent Variables

	Self-Assured above the $\bar{x}$	Less-Assured below the $\bar{x}$
Initiation of Eye Contact	$\bar{X} = 23.8182$ SD = 9.8165	$\bar{X} = 20.9231$ SD = 7.6970
Duration of Eye Contact	$\bar{X} = 148.4418$ SD = 67.7508	$\bar{X} = 149.9885$ SD = 66.8822

Results

Frequency of Eye Contact. The first analysis deals with descriptive data found in Table 1 concerning the frequency of eye contact. Table 2 includes a summary of the

analysis of variance. Stated in null form, the hypothesis tested was:

Hypothesis 1: There will be no difference in the frequency of eye contact according to levels of self-assuredness.

Table 2. Analysis of Variance of Mean Scores of Frequency of Eye Contact by Self-Assuredness

Source of Variation	Standard Deviation	Degrees of Freedom	Mean Square	F	P
Between Groups	49.9400	1	49.940	.6561	<.426
Within Group	1674.5594	22	76.1163		
Total	1724.4994	23			

The results of the analysis of variance indicate the null cannot be rejected. There is no significant difference between frequency of eye contact and self-assuredness level.

Duration of Eye Contact. The second analysis deals with descriptive data found in Table 1 concerning the duration of eye contact. Table 3 includes a summary of the analysis of variance. Stated in null form, the hypothesis tested was:

Hypothesis 2: There will be no difference in the duration of eye contact according to levels of self-assuredness.



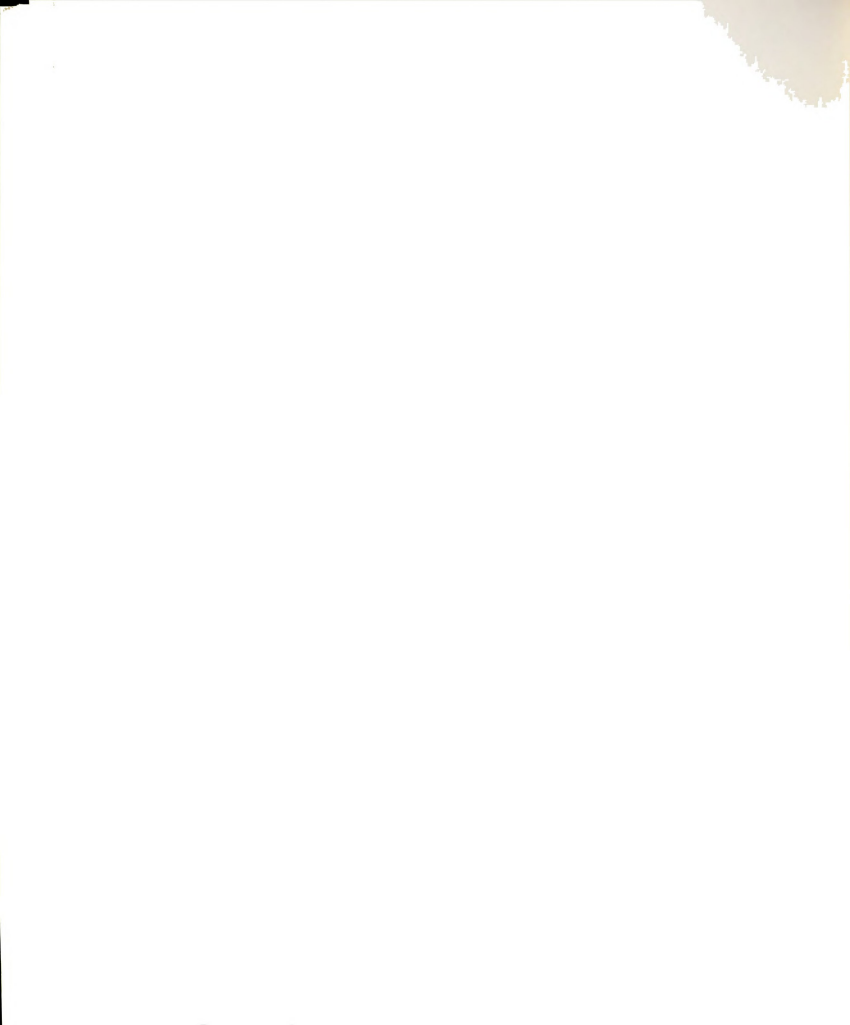
Table 3. Analysis of Eye Contact Duration for Self-Assuredness Groups

Source of Variation	Standard Deviation	Degrees of Freedom	Mean Square	F	P
Between Groups	14.253	1	14.253	.003	<.956
Within Groups	99580.413	22	4526.38		
Total	99594.666	23			

The results of the analysis of variance indicate the null cannot be rejected. Duration-eye contact is, for all practical purposes, the same for each level of self-assuredness.

Eye Contact Index. The foregoing data led the researcher to create an index of contact duration and number of contacts. It was discovered that although some students had frequent eye contact with their clients the duration of eye contact was short, while other students had eye contact less frequently with their clients but the eye contact was for a longer duration. This new variable was thought to provide an additional measure for evaluation and was derived as the quotient of duration divided by the frequency.

$$\frac{\text{Duration}}{\text{Frequency}} = \text{Eye Contact Index}$$



In categorizing the eye contact across levels of self-assuredness the following descriptive data were found.

Table 4. Descriptive Data of Eye Contact Index

	Mean	Standard Deviation
High Self-Assuredness Groups	9.038	8.342
Low Self-Assuredness Groups	8.187	5.610

Creation of the new variable, eye contact index, necessitated further analysis. The data in Table 4 were used to accomplish an analysis of variance on eye contact index by level of self-assuredness. Stated in null form the hypothesis tested was:

Hypothesis 3: There will be no difference in eye contact index according to levels of self-assuredness.

Table 5. Analysis of Variance of Eye Contact Index by Self-Assuredness Groups

Source of Variation	Standard Deviation	Degrees of Freedom	Mean Square	F	P
Between	4.320	1	4.32	.089	<.769
Within	1073.456	22	48.79		
Total	1077.776	23			



Again the hypothesis failed to be rejected. No significant difference exists between eye contact index and self-assuredness level.

Eye Contact--Correlations with Other Variables. A correlation matrix was developed in order to review relationships among the variables measured in this study. The most important variables were those used in the formation of the self-assured variable. These six variables were correlated with eye contact frequency and eye contact duration as shown in Table 6.

Table 6. Correlation Matrix for Eye Contact

	V1*	V2	V3	V4	V5	V6
Frequency	.42**	-.25	-.02	-.12	.01	.31
Duration in Seconds	-.18	.08	.10	-.04	.06	.08

*V1 Dominance, V2 Capacity for Status, V3 Sociability, V4 Social Presence, V5 Self-Acceptance, V6 Sense of Well-Being.

**Significant at the .05 level.



CHAPTER V

SUMMARY, CONCLUSIONS, DISCUSSION AND RECOMMENDATIONS

Summary

The purpose of this study was to determine if self-assuredness had any effect on the frequency of initiation of eye contact and the sustaining time of eye contact. Twenty-four senior music therapy students were observed for the first five minutes of the thirty minute session. Data were obtained during Spring of 1976 and consisted of eye contact occurrence (frequency and duration), eye contact index, and scores from the Claifornia Psychological Inventory (CPI) measures of self-assuredness. Self-assuredness was established by combining the first six variables of the CPI.⁴⁹ The scores obtained from these six measures were used to divide the therapy students into two groups; that is, those scoring above the mean in self-assuredness and those scoring below the mean in self-assuredness. This mean score, also, was correlated with

⁴⁹V1 Dominance, V2 Capacity for Status, V3 Sociability, V4 Social Presence, V5 Self-Acceptance, V6 Sense of Well-Being. These six variables comprise the measures of poise, ascendancy and self-assuredness which form class one of the CPI.

the number of eye contacts and the duration of eye contact.

These analyses were directed toward determining the following:

1. Whether self-assuredness level was a significant factor in frequency of eye contact.
2. Whether self-assuredness level was a significant fact in duration of eye contact.
3. Whether self-assuredness level was a significant factor in eye contact index.

Conclusions

The conclusions drawn from this study apply only to the sample under investigation within the conditions described. Based on the results of this study the following are concluded:

1. There is no significant difference between those scoring above the mean and those scoring below the mean in self-assuredness and the frequency of eye contact.
2. There is no significant difference between those scoring above the mean in self-assuredness and those scoring below the mean in self-assuredness in the duration of eye contact.
3. There is no significant difference between those scoring above the mean and those scoring below the mean in self-assuredness in eye contact index.

Discussion

This investigation was undertaken to determine if self-assuredness was a significant factor in therapists' frequency and duration of eye contact within a clinical setting. Examination of raw data revealed there to be no statistically significant effects; however, other results suggest points of interest.

Significant Correlation with Dominance. As described in chapter four there were significant correlations between certain variables. The number of eye contacts was correlated with variables one thru six. There proved to be a significant relationship between dominance at the .04 level with number of contacts, but no other significant correlation was evidenced with the other variables; of those the following correlations were significant: sociability, social presence, self-acceptance, sense of well-being and communality.

Table 7. Significant Correlations Between Dominance and Selected Variables

	V3*	V4	V5	V6	V12
V1	.3957	.4130	.5261	.4305	.4362

*V1 Dominance, V3 Sociability, V4 Social Presence, V5 Self-Acceptance, V6 Sense of Well-Being, V12 Communality.



Dominance characteristics are defined as:

Aggressive, confident, persistent, planful, verbally fluent; as self-reliant and independent; and as having leadership potential and initiative.⁵⁰

According to Exline and Messick⁵¹ a dominant person does not engage in eye contact as often for feedback. Although the sampling in this study is small, the above conclusion was of interest. The two students scoring two standard deviations above the mean in dominance exhibited little eye contact with their clients. Of the first five minutes (300 seconds) one student had 59 seconds of eye contact, the other 93 seconds (the average for all subjects was 150 seconds). Some determining factors other than dominant personalities for lack of eye contact could be body placement. Where was the therapist in relation to the client? Was body proximity conducive to establishing eye contact? Were there physical obstructions limiting eye behavior? What was the therapist's attitude toward the client? Was the client liked or disliked? Was there empathy?

It is known that emotions play a distinctive role in the initiation of eye contact. An individual who is liked will receive more eye contact than an individual who is

⁵⁰Harrison G. Gough, op cit., p. 6.

⁵¹R. Exline and D. Messick, "The Effects of Dependency and Social Reinforcement Upon Visual Behaviour During an Interview," British Journal of Social and Clinical Psychology, 1967, 6, pp. 256-266.



disliked.⁵² Health and/or a sense of well being will have influence on eye contact. If one feels poorly, more concentration may be directed toward self and the immediate physical problem, thereby reducing eye contact initiation toward a client. The feeling of insecurity in a given situation or with a specific individual will also affect the amount of eye contact. Needless to say, many variables can affect eye behavior. However, lack of eye contact is due more to dominance rather than to the aforementioned. This conclusion is supported by Exline and Messick⁵³ who report on Strodbeck's study: "It is well-documented that interaction rate and dominance in interpersonal situations are positively related."⁵⁴

Dominant personality types are comfortable with themselves and therefore, should do well in the social setting. What dominant personalities convey and how they convey it in the clinical setting is of question. It was evidenced that eye contact is less for this personality type. Is lack of eye contact a pattern exhibited throughout the entire session? If so what other reinforcements are used to convey needed messages? And what means are used to achieve feedback?

⁵² Ibid.

⁵³ Exline and Messick, Op cit., p. 259.

⁵⁴ Ibid.



Recommendations. Due to the variety of activities used within the clinical setting it would be wise to record the verbal interaction while counting eye behavior. If an activity is one of teaching a skill such as autoharp or guitar more eye attention will be given to hand placement rather than to face, thereby limiting the duration of eye contact while supposedly increasing the frequency of eye contact. The question arises as to what other reinforcement cues are used in this type of situation. Video recording of sessions affords the opportunity to review those elements which may be missed.

The situational interaction as well can be a determining factor of eye contact. In situations where vocal response is wanted more attention will be given to the face while waiting for said response. This then could also influence duration and number of eye contacts; again, recording sessions would assist in analysis.

It has been suggested that eye contact does not exist alone but is part of a global cue system which includes body proximity, touching, vocal tone and the spoken word. It would be advantageous to note those elements that accompany eye contact so that during those clinical encounters where eye contact is deemed undesirable or impossible other forms of reinforcement can be supplanted to aid in the achievement of the therapeutic goal.

Initially, the method used to record eye contact in this study was video tape. This, however, proved

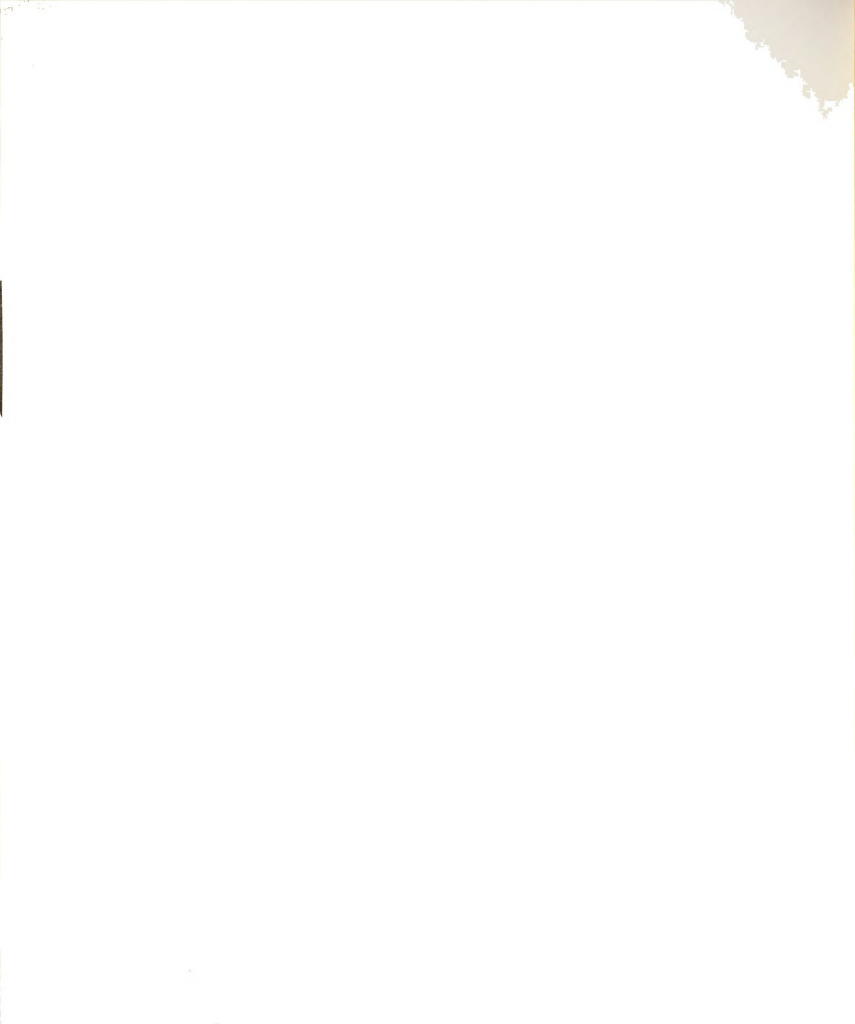
unsatisfactory as the quality of the picture during playback was poor and it was not possible to see if eye contact or facial attending was in fact taking place. Exline⁵⁵ comments on the problem of using video as a device for counting direct eye contact and developed a contrived setting whereby the subject was always directed to a chair so that eye contact could be continually observed, thereby, eliminating the need for video equipment.

Further investigation is needed in the area of self-assuredness. Since this study deals with self-assuredness the question arises as to what fosters security or the feeling of being self-assured in a clinical situation. Can this be acquired even though an individual lacks self-assurance?

Although the measurement for this study (CPI) seemed appropriate, other measures have since been discovered. Investigation into new measurements could prove beneficial.

Administration of the test could also be a determinant. Would it be better to administer the same test twice, once in the fall as the student therapist begins working with a client, tabulating data also at this time, and again duplicating the same process in the spring? Perhaps data collection should consist not only of the number of eye contacts but also the type of activity. Particular note should be given to the verbal interaction during this

⁵⁵Exline & Messick, op cit., p. 259.



tabulation time. Furthermore, data from more than one session should be gathered in order to provide a better sample of eye contact behavior over several sessions. This will establish a more meaningful student behavior pattern.

Recommendations for Future Research

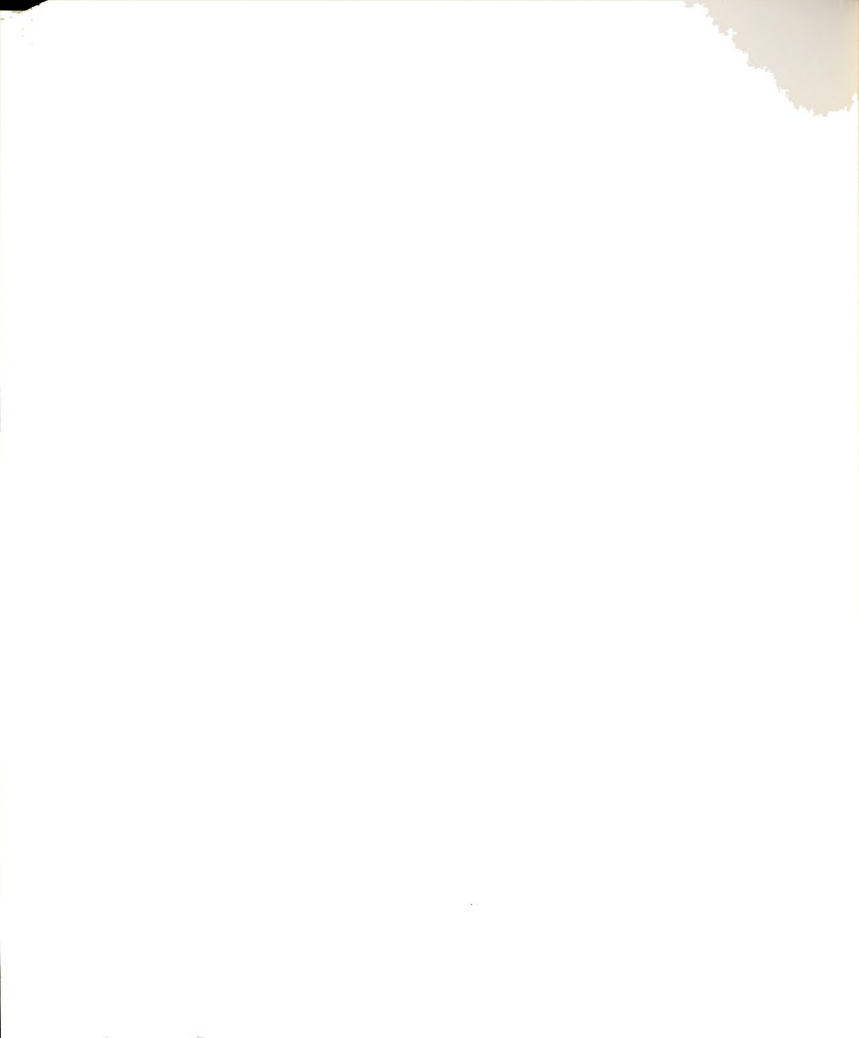
Based on the findings of this experiment it is recommended that:

1. The study be repeated with the following changes:
 - a. note the activity while counting eye behavior,
 - b. compare eye behavior in the fall and spring,
 - c. administer an appropriate measurement for self-assurance, self-attitude, self-confidence, and self-esteem.
2. Research is needed in the use of eye contact and the study of dominant personality patterns.
3. Further research is needed in the use of eye contact, verbal message and body proximity.
4. Research is needed in the area of defining what the common reinforcing nonverbal cues are.

It is strongly recommended that more research be done in the area of nonverbal communication. Music itself is a nonverbal modality used by therapists to achieve predetermined objectives. Is there a more supportive way

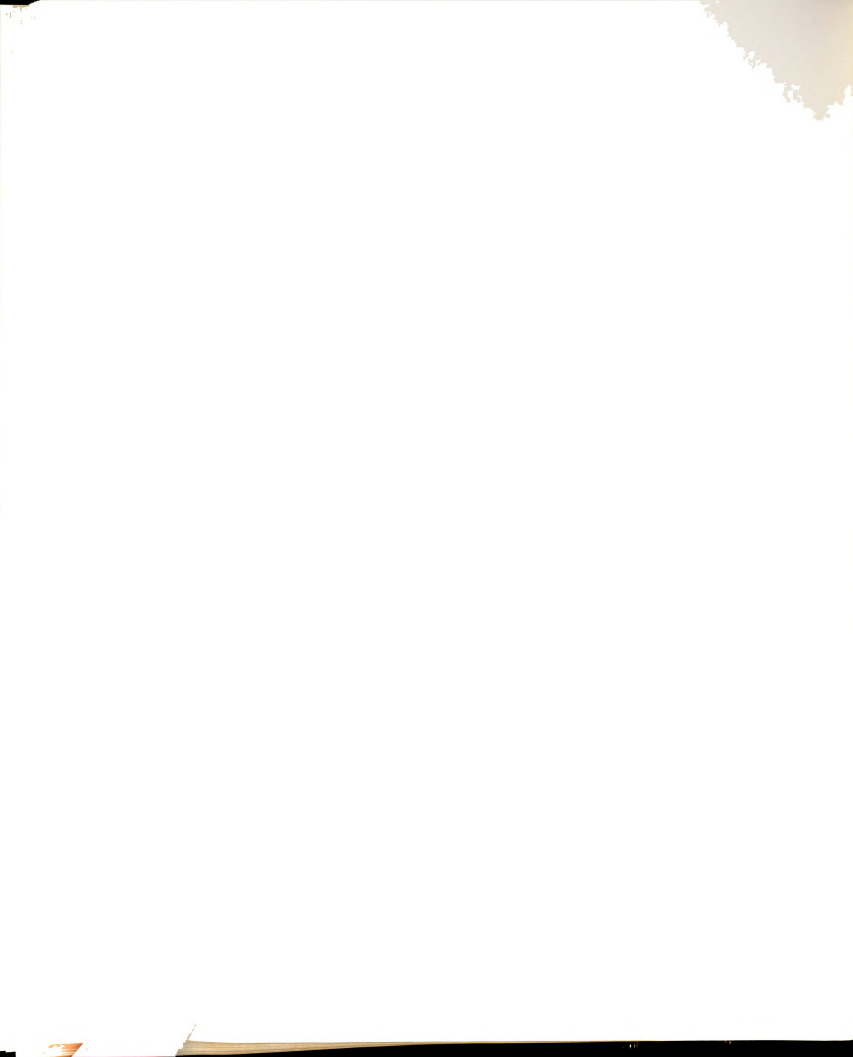
to do what we do? This question and others may find direction through further research in nonverbal communication.





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