# IDENTIFYING MEASURABLE CONTRIBUTORS TO STUDENTS CLINICAL CAPABILITIES IN THE FIELD OF MUSIC THERAPY

by

## James Francis McQuiston, RMT

### A THESIS

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#### ABSTRACT

# IDENTIFYING MEASURABLE CONTRIBUTORS TO STUDENTS CLINICAL CAPABILITIES IN THE FIELD OF MUSIC THERAPY

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The purpose of this study was to identify measurable contributors to students clinical capabilities. Variables included: personality profile, music achievement, work performance, empathy skills, academic achievement, teacher ratings and age.

Twenty-six senior music therapy students from Michigan State University were used for this investigation. Subjects were rated for clinical capability according to the Student Practicum Evaluation Instrument designed for this study. Variables were compared by computer statistical analysis.

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

(1) Personality profile is a measurable contributor to students clinical capabilities.

(2) Music achievement is a measurable contributorto students clinical capabilities.

(3) Work performance is a measurable contributorto students clinical capabilities.

(4) Empathy skills are measurable contributors to students clinical capabilities.

(5) Academic achievement is a measurable contributor to students clinical capabilities.

(6) Teacher ratings are measurable contributors to students clinical capabilities.

(7) Age is a measurable contributor to students clinical capabilities.

# ACKNOWLEDGMENTS

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#### CHAPTER I

### THE PROBLEM

#### Introduction

The purpose of this study was to identify contributors to students clinical capabilities in the field of music therapy. Variables include personality profile, music achievement, empathy skills, work performance, teacher ratings, academic achievement and age (see Fig. 1). This study developed from an interest in the investigation of the facilitation of student clinical skills in music therapy. The educator has an obligation to adequately prepare the student entering the field of music therapy and the clientele, for whom the music therapist is to provide activity and rehabilitation services, has the right to expect the best.

The qualifications of a music therapist have been variously described. For example, the therapist should be businesslike, impartial, healthy, cheerful, objective, disarming, tactful, persistent, flexible, patient, inventive, emotionally well balanced and self-controlled.<sup>1</sup> The therapist should also be well integrated, a leader, and have experience

<sup>&</sup>lt;sup>1</sup>Willem Van de Wall, <u>Music</u> <u>in Hospitals</u> (New York, New York: Russell Sage Foundation, 1946), pp. 80-86.



Figure 1. Contributors to Clinical Capabilities

or training in group work.<sup>2</sup> Genuine enthusiasm, resourcefulness, regularity, punctuality, organizing ability, social conformance, honesty, self-discipline, and the desire to help people should also be evident among his qualifications.<sup>3</sup> Other educators and hospital administrators have consistently pointed out the importance of the individual's personality and musicality as well as achievement in curriculum requirements for the prospective music therapist.<sup>4,5,6</sup> It should be noted that these qualifications are opinions and empirical observations, not facts of research. However, the importance of the therapist developing his clinical skills as a therapeutic agent is best described by Barnard:

> It is not the music which is the real therapeutic agent but the music therapist. It is he who molds the music to the therapeutic goal, who guides the patient in making a therapeutic experience out of the work or

<sup>4</sup>Rudolph Dreikurs, "Psychiatric Considerations of Music Therapy," in <u>Music Therapy 1957</u>, ed. by E. Thayer Gaston (Lawrence, Kansas: National Association for Music Therapy, 1958), pp. 31-36.

<sup>5</sup>E. Thayer Gaston, "Functions of the Music Therapist," in <u>Music Therapy 1953</u>, ed. by Mariana Bing (Lawrence, Kansas: National Association for Music Therapy, 1954), pp. 28-29.

<sup>&</sup>lt;sup>2</sup>Esther G. Gilliland, "Preface," <u>Music Therapy 1951</u> (Chicago, Illinois: National Association for Music Therapy, 1952), pp. vii-xvi.

<sup>&</sup>lt;sup>3</sup>Edwina Eustis, "Personality Qualifications of the Volunteer Music Therapist," in <u>Music Therapy 1952</u>, ed. by Esther G. Gilliland (Lawrence, Kansas: National Association for Music Therapy, 1953), pp. 210-211.

<sup>&</sup>lt;sup>6</sup>Wayne W. Ruppenthal, "Objectivity in Clinical Practice," in <u>Music Therapy 1957</u>, ed. by E. Thayer Gaston (Lawrence, Kansas: National Association for Music Therapy, 1958), pp. 81-84.

recreational activity with music. It is the atmosphere he creates, the relationship he establishes with the patients, the direction in which he turns their attention that makes music therapy out of musical activity.<sup>7</sup>

In respect to preparing the student in the field of music therapy, Madsen stated:

He has to know how to use his medium in order to produce desired results, and it should be obvious that any program aimed toward preparing a student for a specific vocation should include in the program that which is necessary for the student to assume the responsibilities of his work.<sup>8</sup>

It may be inferred from this statement that it should be the responsibility of the educator to prepare the student through the guidance of curriculum and provide opportunity for active observation and participation in a clinical practicum.

# Clinical Practicum

The clinical practicum at Michigan State University provides the music therapy student with an opportunity to observe music therapy sessions, and for senior students, to actively participate in conducting music therapy sessions on a one-to-one basis with clientele.

All students involved in working with the clientele are individually supervised by registered music therapists, the supervisors being master's degree candidates in music therapy.

<sup>&</sup>lt;sup>7</sup>Ruth I. Barnard, "The Philosophy and Theory of Music Therapy as an Adjuvant Therapy," in <u>Music Therapy 1952</u>, ed. by Esther G. Gilliland (Lawrence, Kansas: National Association for Music Therapy, 1953), p. 48.

<sup>&</sup>lt;sup>8</sup>Clifford K. Madsen, "A New Music Therapy Curriculum," Journal of Music Therapy, Vol. 2, No. 3 (1965), p. 83.

The senior students are assigned to clients on the basis of ability, personality, and time availability with respect to class schedules. Assignments are made in the Fall term and continue throughout the academic year. During this time period, the student meets with his client once a week for a half-hour session. However, if the clinic space is available, some students have the opportunity to meet with their clients twice a week.

Students are responsible for planning their own sessions in accordance to the individual client's needs. Also, the students are responsible for evaluating the sessions. Forms for planning and evaluating sessions may be seen in Appendices A and B, respectively.

# Music Therapy Clinic

The students at Michigan State University have a unique opportunity in that a music therapy clinic is housed on campus within the Department of Music. The clinic offers free service to the community, with the understanding that the clients will be served by practicum students under the supervision of a registered music therapist. The only requirement is one of regular attendance. Referrals are made to the clinic through the school system, special education programs, and community mental health services of East Lansing and surrounding areas.

The clinic consists of two treatment rooms: one large room with a one-way observation window and an audio system

for listening, and a smaller room for auditory observation only. A physical description of the clinic may be seen in Figure 2.

## Clinical Skills

In order to insure consistency of goals for the student, a cooperative effort was made by the supervisors to develop a Student Practicum Evaluation Instrument for use in the music therapy clinic. The instrument was based on six goals to which the students were oriented in preparation for their internship programs. Goals were designed in the form of six skills that were determined as necessities for the student in a clinical setting:

(1) To present sequentially materials and activities in a session: The student needs to be aware of presenting materials and activities in a sequence that will enable the client to understand, follow and participate in the activities.

(2) To use varying and appropriate music activities in a session: The student needs to use appropriate music activities in respect to the client's ability and to provide variety and interest for the client while working towards therapeutic goals.

(3) To use a form of communication that is therapeutically suited for the client: This communication may be verbal or nonverbal (i.e., body language, music). It should be appropriate for the therapeutic needs of the client.



Figure 2. Music Therapy Clinic

(4) To pace the session in respect to the client's ability: The student must structure activities and concepts in respect to the ability of the client.

(5) To have the client involved throughout the session: The student needs to affect or influence the client throughout the session by active and/or passive involvement.

(6) To make sure that nonmusic activity (when used) is appropriate for therapy: Prior to the introduction or addition of music, there are times when physical movements and/or verbal phrases are used. These activities should be appropriate for the therapy procedure.

(7) Overall evaluation of the session (this statement was added to allow for the subjective response of the super-visor).

The Student Practicum Evaluation Instrument may be seen in Appendix C.

### Statement of the Problem

The problem of this study is expressed in the following question:

What easily available measures significantly correlate with a reliable evaluation of students clinical skills?

In an effort to find easily available measures and variables for the purpose of this study, the writer communicated with the Testing Office in the Counseling Center, and the Chairman of the Music Therapy Program at Michigan State University. A decision was made on the following variables:

(1) Personality Profile; (2) Music Achievement; (3) Empathy
Skills; (4) Work Performance; (5) Teacher Ratings; (6)
Academic Achievement; and (7) Age.

## Need for the Study

Opinions of members of the music therapy profession who are concerned with professional standards and with the individuals who are considering entering the profession identify the need for a study concerning factors in the development of clinical skills.

# Purpose of the Study

In respect to the student and the educational program for music therapy at Michigan State University, a study of this type may provide some concrete information that would be useful in advising the student, and referring him to appropriate counseling agencies and courses of study that may better enable him to ascertain vocational skills.

#### Hypotheses

The hypotheses of this study are expressed in the following statement:

Variables obtained from personality profile, music achievement, empathy skills, work performance, teacher ratings, academic achievement, and age will significantly correlate with clinical skills as measured by the Student Practicum Evaluation Instrument.

### Definition of Terms

<u>Student</u>: A senior undergraduate music therapy student enrolled in the music therapy clinical practicum at Michigan State University.

<u>Supervisor</u>: A registered music therapist enrolled as a master's degree candidate in music therapy at Michigan State University.

<u>Variable</u>: A construct or property of study; a symbol to which numerals or values can be assigned.

Evaluation: An appraisal or estimate based on performance of clinical skills.

Teacher <u>Ratings</u>: Two separate numerical appraisals assigned by the instructor of the Music Therapy Techniques course at Michigan State University. The appraisals were based on achievement in course material and leadership/ participation in additionally required group activities for the multihandicapped of the community. The numerical value assigned was based on a 100 point scale.

Empathy Skills: The facilitation of emotional identification in interpersonal relationships.

#### Instruments

Edwards Personal Preference Schedule: An instrument designed for research and counseling purposes to provide quick and convenient measures of a number of relatively independent personality variables. The scale is designed in terms of Murray's fifteen manifest needs: achievement; deference; order; exhibition; autonomy; affiliation; intraception; succorance; dominance; abasement; nurturance; change; endurance; heterosexuality; and aggression.

<u>Aliferis Music Achievement Test</u>: An instrument designed to measure the music student's power of auditoryvisual discrimination of melodic, harmonic, and rhythmic elements and idioms. This seems to be the only available test at college level for music achievement.

Affective Sensitivity Scale: A media-based multiple choice test, designed and validated as a predictor of empathy skills. The scale consists of a series of personal encounters between two or more persons taken from actual interpersonal interactions. These encounters range from discussions between friends, couples, teachers, and students to physicianpatient, counseling and psychotherapeutic interactions.

Field Work Performance Report: An instrument designed for evaluation of clinical work performance. The report consists of five subcategories: data gathering; treatment planning; treatment implementation; communication skills; and professional characteristics.

#### Scope and Limitations of the Study

The development of clinical skills refers only to those specified in this study. As measured by the data gathering instruments in this study, the variables under investigation are: personality profile; music achievement; empathy skills; work performance; teacher ratings; academic achievement; and age. The dependent variable used is

clinical capability as measured by the Student Practicum Evaluation Instrument designed for the music therapy clinic at Michigan State University.

The subjects of this study were twenty-six senior music therapy students at Michigan State University, Spring term, 1977. All subjects were actively involved in the music therapy clinical practicum at the University.

#### Overview

In Chapter 2, literature pertaining to the evaluation and attributes of music therapists as well as related fields of study is reviewed. Although some of the literature does not specifically involve clinical skills per se, it does concern attributes that may contribute to the functional level of the music therapist in clinical performance.

The design of this study is described in Chapter 3, and the analysis of results obtained from the data gathered herein is presented in Chapter 4.

#### CHAPTER II

#### REVIEW OF LITERATURE

The purpose of this study was to determine and identify what easily available measures significantly correlate with a reliable evaluation of a students clinical capabilities. A survey of literature which concerns the evaluation of clinical skills and performance, and attributes of the music therapist as well as literature in related fields should serve as sources from which to draw inferences for this study.

# Music Therapy

Since the field of music therapy first became a designated profession with the establishment of the National Association for Music Therapy in 1950, there has been concern as to the clinical skills and attributes a music therapist should possess. It has been voiced consistently by some educators and hospital administrators that the individual's personality, musicality, and achievement in curriculum requirements are of importance for the prospective music therapist.<sup>9,10,11</sup>

<sup>&</sup>lt;sup>9</sup>Dreikurs, "Psychiatric Considerations of Music Therapy," pp. 31-36.

<sup>10</sup>Gaston, "Functions of the Music Therapist," pp. 28-29. 11Ruppenthal, "Objectivity in Clinical Practice," pp. 81-84.

In an effort to make some beginnings toward an objective description of music therapists, from the standpoint of psychological traits and aptitudes, a series of four studies was conducted by a research team consisting of two executive supervisors of music therapists and a consultative clinical psychologist. These studies are presented and reviewed in consecutive order.

# Study 112

The purpose of study 1 was to develop some external measure or criterion of the good versus the poor music therapist. The sample consisted of thirty music therapists: thirteen female and seventeen male. The mean age of the subjects was 42.2 years. They had been employed as music therapists for a mean of 6.4 years and the mean of their educational level was 15.6 years. Terms used in the criterion rating schedule were carefully defined and delineated by the authors. The criterion rating schedule may be seen in Table 1.

> In essence, this criterion rating schedule was evolved on the basis of those personal and social qualities which were found to be consistently high in therapists who performed well on the job, who were praised for their treatment results by colleagues and medical supervisors, and who were approved by the administration of the medical and rehabilitation settings where they worked.<sup>13</sup>

<sup>&</sup>lt;sup>12</sup>Leo Shatin, Gladys Douglas-Longmore and Wallace L. Kotter, "A Quantified Criterion for Evaluating the Music Therapist," <u>Journal of Rehabilitation</u>, Vol. 29, No. 1 (1963), pp. 18-19.

		Possible Score	Subject's Score
Personality: (55%) Technical Ability: (30%)	Friendliness Responsibility Ability to communicate Adaptability Initiative Versatility: Piano Voice Guitar, accordion or any other single instrument All orch. and band instruments Will work with all types of patients Will work with all types of patients Theory Programs and Shows Some instruments or groups of instruments (brass, string, fretted)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
Other: (15%)	knythm groups or other special groups (folk dancing, eurhythmics, etc.) Music appreciation and ward programs Good health Good grooming	01 01 05 05	
	TOTAL SCORE	100 100	
*Taken from:	Leo Shatin, Gladys Douglas-Longmore and Wallac Criterion for Evaluating the Music Therapist," Vol. 29, No. 1 (1963), p. 19.	e L. Kotter, "A ( <u>Journal of Reha</u> t	Quantified bilitation,

Criterion Rating Schedule\* Table l.

The initial ratings of the subjects were made jointly by the two supervisors. After a twelve-month interim, allowing for changes in work attitudes and performance, the subjects were rated independently by each supervisor. Reliability was assessed by rank order correlation computed between the two independent ratings. The interobserver reliability was reported as rho = .96, significant at the .001 level of probability. When correlating the two independent ratings with the twelve-month earlier joint ratings, observer A was reported to have a correlation of rho = .88 (p = .01), and observer B to have a correlation of rho = .90 (p = .01). It is apparent that the supervisors were consistently employing the same rating criteria, and despite the twelve-month interim, the ratings showed considerable stability.

# Study 2<sup>14</sup>

The purpose of study 2 was to determine, through the use of a selected battery of psychological tests, whether there are specific or designated psychological traits of music therapists. Designed as a comparative study, group 1 consisted of the same subjects in study 1. The contrast group consisted of nineteen music specialists (seven male and twelve female). The music specialists are designated as musician entertainers working in a hospital setting.

<sup>&</sup>lt;sup>14</sup>L. Shatin, G. Douglas-Longmore and W. L. Kotter, "A Psychological Study of the Music Therapist in Rehabilitation," <u>Journal of General Psychology</u>, Vol. 71 (1964), pp. 193-205.

Mean age of the music specialists was 39.3 years. Their mean educational level was 15.5 years and they had been working as music specialists for a mean of 6.6 years.

Psychological tests administered to both groups were: (a) Otis Self-Administering Test of Mental Ability (Higher Form A); (b) Kuder Preference Record (Vocational Form BB); (c) Social Intelligence Test (George Washington University Series, Revised Form, Second Edition); and (d) Psycho-Somatic Inventory (McFarland & Seitz). Results of the testing between therapists and specialists are as follows:

(a) Otis Self-Administering Test of Mental Ability: Mean Otis of the therapists was reported to be IQ = 107and specialists IQ = 109.5. By means of statistical testing there was no significant differences between the two groups.

(b) Kuder Preference Record: There was no difinitive differences among the groups. The therapists ranked their four highest interests as Musical, Social Service, Artistic, and Literary areas, consecutively. Lowest interest was in Computational, Mechanical, and Clerical areas. The specialists placed Social Service at the fourth rather than the second rank. Scientific area was placed among their lowest interests. Aside from the two group comparison, the mean Kuder scores of the therapists were contrasted with a group of musician/teachers from the Kuder manual of norms. Findings were that Social Service interest was substantially higher for therapists, being a prominent differentiator

between the two groups. Therapists were also more scientifically inclined. Other than this, the profiles were similar with very little interest in Computational, Mechanical, and Clerical areas.

(c) Social Intelligence Test: Using the scores of 1,275 employed adults from the Middle Atlantic area of the United States, the percentile ranks of both the therapists and the specialists were within average limits (52nd and 57th, respectively).

> Music therapists revealed no unusual abilities (such as are measured by this test) when compared with music specialists (performers) or with employed (white-collar) adults in general.<sup>15</sup>

The results of this test were nonsignificant.

(d) Psycho-Somatic Inventory: Group mean scores for the therapists were within the normal limits for this test: 47th+ percentile for physiological complaints, 58th+ percentile for psychological complaints, and 53rd+ percentile for both types of complaints combined. There were no statistically significant differences between the male and female therapists. The scores for the music specialists were similar to those of the therapists, but because the differences were so minute and the variances were so great, the differences were nonsignificant.

Regarding External Criterion and Psychological Tests, therapists were rated jointly according to the criterion

<sup>&</sup>lt;sup>15</sup>Ibid., p. 201.

rating schedule. They were rated by two supervisors for their therapeutic adequacy in rehabilitation techniques. After the ratings were compiled, they were ranked from high to low adequacy within the group. Rank-order correlations were then made between the various psychological test scores and rank standing on the criterion rating schedule. Results are as follows:

(a) Otis Intelligence Scores: Scores for this test were not correlated with rank standing for the criterion rating schedule. The functional performance of the music therapists relies upon other qualities than the academictype Intelligence Quotient.

(b) Kuder Preference Record: Each interest area in the inventory was analyzed separately. The area of musical interest was inversely correlated with the criterion rating schedule (rho = -.35, p = .05). In other areas such as Social Service and Mechanical interest, there were a negative correlations, however these did not attain statistical significance.

(c) Social Intelligence Test: The scores for this test significantly correlated with the criterion rating schedule (rho = .33, p = .05). Subtest analysis revealed positive but nonsignificant correlations. The subtest correlations were reported as follows:

> Judgment in social situations, rho = .18; Recognition of mental state, rho = .27; Memory for names and faces, rho = .23;

Observation of human behavior, rho = .28; Sense of humor, rho = .06; Total score (percentiles), rho = .33.16

(d) Psycho-Somatic Inventory: The scores for this inventory were uncorrelated with the criterion rating schedule. However, separate analysis by sex yielded an inverse correlation for female therapists (N = 13, rho = -.55, p = .02). In reference to this the authors stated:

This meant that the number of somatic and psychological complaints tended to be greater for those women who received higher rankings on the criterion of competence. This was an unexpected relationship, and even more surprising was its limitation by sex to female therapists. It may be hypothesized that the female therapists who (within limits) have inner problems of adjustment are more empathetic with and understanding of the patients with whom they work--or, alternatively, that the female therapists who admit to inner tensions are less defensive or less on guard, so that they can form interpersonal relationships more readily.<sup>17</sup>

As tested by rank-order correlation and chi squares respectively, age and sex were unrelated to the criterion rating schedule.

> There is no reason therefore, to believe that the sex of the therapist makes a difference in his overall competence or that age alone of the therapist will influence the quality of his rehabilitation performance.<sup>18</sup>

16Ibid., p. 202.
17Ibid., p. 203.
18Ibid.

# Study 319

This study was developed in an attempt to establish a pattern of personality traits of music therapists as measured by the Sixteen Personality Factor Questionnaire. The therapists' (who employ music as a treatment modality) group test profile was compared to that of a musician/ performers group (who play music solely as a performing art) to ascertain any differences in personality traits between the two groups.

The subjects consisted of thirty-one music therapists (seventeen male and fourteen female) and twenty-three musician/performers (nine male and fourteen female). Mean age of the combined groups was 44.1 years. The Sixteen Personality Factor Questionnaire was administered to both groups and scored according to the test instructions. Computations were based on sten scores (standard ten scores) which were derived from the norms for the general adult population corrected for sex.

Results show that two traits, Sober-Lively (Factor F) and Expedient-Conscientious (Factor G), were significantly different (p = .05) for the therapists and musician/ performers. Although statistically nonsignificant, a third trait, Trusting-Suspicious (Factor L), showed a tendency toward such differentiation. The authors state:

<sup>&</sup>lt;sup>19</sup>L. Shatin, G. Douglas-Longmore, and W. L. Kotter, "Personality Traits of Music Therapists," <u>Psychological</u> <u>Reports</u>, Vol. 23 (1968), pp. 573-574.

These findings suggest that the music therapists are more sober and prudent, more conscientious, and tend to be more trusting than their musician/performer counterparts. However, it must be emphasized that the differences lie within the central area of the profile and therefore require further verification before they may be accepted as definitive.<sup>20</sup>

Comparing the mean test profile in stens for music therapists vis-a-vis the mean test profile for the general adult population, it was suggested that the therapists are substantially more intelligent (Factor B), more tender-minded or sensitive (Factor I), more conscientious (Factor G), more trusting (Factor L) and placid (Factor O), and more self-sufficient or resourceful (Factor Q2) than the general adult population.

In a similar comparison of the musician/performers with the trait norms for the general adult population, the results suggest that the musician/performers are substantially more intelligent (Factor B), more lively or happy-go-lucky (Factor H), more tender-minded or sensitive (Factor I), and more self-sufficient or resourceful (Factor Q2) than the general adult population.

# Study 4<sup>21</sup>

The purpose of study 4 was to determine the difference (if any) in personality profile of more successful music therapists versus less successful music therapists.

<sup>&</sup>lt;sup>20</sup>Ibid.

<sup>&</sup>lt;sup>21</sup>L. Shatin, G. Douglas-Longmore, and W. L. Kotter, "Personality Profile of Successful Music Therapists," <u>Journal</u> of Music Therapy (December 1968), pp. 111-113.

Subjects consisted of thirty-one music therapists (seventeen male and fourteen female). The mean age was 39.3 years. Educational levels ranged from high school graduates with music conservatory training to college graduates.

Instruments used were: (a) the Sixteen Personality Factor Questionnaire (Form A), an objective test derived by factorial methods which was administered to yield a pattern of sixteen trait scores for each music therapist; (b) a quantified criterion rating schedule which was used to evaluate the competence of each music therapist; (c) coding methods to insure confidentiality of findings.

The subjects were divided into two groups by means of the criterion rating schedule. The ten highest-rated therapists were placed in one group and the ten lowest-rated therapists were placed in a second group. These two groups were then contrasted as extreme groups on the Sixteen Personality Factor Questionnaire. Significance (t) tests were employed between the mean standard scores of the groups for each trait.

Findings indicated that one trait was statistically significant in favor of the ten highest-rated therapists (Outgoingness, Factor A). Other then this one factor, there were no significant differences in the trait means. Rank order correlations were conducted for the entire group of music therapists (N = 31) between each of the trait scores and the criterion rating for each therapist. Correlations were nonsignificant.

#### Discussion

In the previously cited literature the authors were investigating pertinent questions as to the evaluation, psychological profile, personality profile, and personality traits of the music therapist. Pioneering such research, their studies contributed to some marked beginnings in the field of music therapy. The criterion rating schedule in study 1 was a workable evaluation for the authors' needs.<sup>22</sup> However, one may question the weighting of specific categories contained therein: Personality (55%); Technical Ability (30%); and Other (15%). According to assigned values, the individual's personality is the most prominent factor in the evaluation of the music therapist. This phenomenon raises a question for further investigation: Should an individual's personality outweigh his technical ability as a music therapist?

A second study was conducted to delineate the psychological profile of thirty music therapists through the use of tests for intelligence, occupational interest, social intelligence, and psycho-somatic symptoms.<sup>23</sup> In contrast with a group of nineteen musicians and published test norms, results revealed that:

<sup>&</sup>lt;sup>22</sup>L. Shatin, G. Douglas-Longmore, and W. L. Kotter, "A Quantified Criterion for Evaluating the Music Therapist," pp. 18-19.

Group mean intelligence of music therapists was high average, their psychic and somatic symptoms were within healthy ranges, and their social intelligence was equivalent to that of the employed adult. Their interest profile had certain dissimilarities from that of musicians/teachers. Correlational study between test scores and an external criterion of therapeutic adequacy in rehabilitation work indicated that excessively high interest in music per se was incompatible with the task of the music therapist.<sup>24</sup>

In a third study, a group of thirty-one music therapists (seventeen male and fourteen female) were contrasted with a group of twenty-three musicians/performers (nine male and fourteen female) by use of the Sixteen Personality Factor Questionnaire, to ascertain any differences in personality traits.<sup>25</sup> The music therapists proved to be more sober and prudent, and more conscientious. They also tended to be more trusting than the musician/performers. Comparing individual test results of the therapists with test norms suggests that this group of music therapists is substantially more intelligent (Factor B), more tender-minded or sensitive (Factor I) and placid (Factor O), and more selfsufficient or resourceful (Factor Q2) than the general adult population. Now that some of the personality traits of music therapists have been delineated, another step should be taken to investigate what (if any) implications these traits may have on the clinical capabilities and performance of the music therapist.

<sup>&</sup>lt;sup>24</sup>Ibid., p. 204-205.

<sup>&</sup>lt;sup>25</sup>L. Shatin, G. Douglas-Longmore, and W. L. Kotter, "Personality Traits of Music Therapists," pp. 573-574.

The last of this series of studies was an attempt to delineate the personality profile of successful music therapists in comparison to less successful (although still adequate) music therapists.<sup>26</sup> Thirty-one therapists were rated for competence by means of the criterion rating The ten highest-rated therapists and the ten schedule. lowest-rated therapists were then placed in two groups, respectively. The groups were then contrasted as extremes on the Sixteen Personality Factor Questionnaire. The use of t tests yielded only one factor to be statistically significant. The more successful therapists proved to be more Outgoing (Factor A). The authors point out that because the group size was so limited, it may account for the presence of only one significant difference in traits. It was also stated that:

Perhaps this test did not tap the personality's roots of competency in music therapy; or perhaps large groups and more sophisticated methods of statistical analysis were required, or perhaps the range of talent was too narrow.<sup>27</sup>

On the premise herein, it may be inferred that a successful music therapist is very outgoing or possesses a highly de-veloped personality trait of outgoingness.

Reviewing the criterion rating schedule and its weighted categories one may ask: How does outgoingness (as a personality trait) relate to the specific area of technical

<sup>&</sup>lt;sup>26</sup>L. Shatin, G. Douglas-Longmore, and W. L. Kotter, "Personality Profile of Successful Music Therapists," pp. 111-113.
abilities or clinical skills? In order to point the reader in the direction of this study, the following statement is presented in the form of a summarizing question: What aspects of personality affect the facilitation of clinical skills?

# Related Fields of Study

# Occupational Therapy

Englehart (1957) conducted a study on the relationship between college grades and on-the-job performance during clinical training of occupational therapy students. He used a sample of 104 college graduates as subjects. A total of seven course grades were reported for each subject: O.T. Crafts, O.T. Laboratory, Social Recreation, Biological Sciences, Medical Information, Sociology, and O.T. Theory. No attempt was made to estimate the reliability or validity of the grades used in the study. Ratings were reported in the four fields of performance (i.e., Tuberculosis, Psychiatry, Orthopedics, and Pediatrics) according to the occupational therapy student clinical training report. In addition to academic achievement and clinical performance, the registration examination of the American Occupational Therapy Association was also used. Pearson product-moment correlations were computed for the data. Grades were found to be a significant (p = .01) predictor of on-the-job performance in orthopedics. College grades which predict performance on the registration exam were significant

(p = .01) for all but two courses: O.T. Crafts and Social Recreation.

A study conducted by Anderson and Jantzen (1965) investigated the prediction of clinical performance in terms of ratings and achievement measures. The sample consisted of twenty-eight college students who graduated between 1961 and 1964. Ratings were reported according to the Report on Performance in Student Affiliation (RPSA). Grades were reported for eight courses at the freshman and sophomore levels: American Institutions, Physical Sciences, English, Mathematics, Humanities, Biology and Psychology. In addition to course grades, the Florida Placement Examination (FPE) scores were available for eighteen of the subjects. Pearson product-moment correlations were computed for the data. Correlations between course grades and the clinical rating scale (RPSA) were not significant. Correlations between the FPE and the clinical rating scale were also nonsignificant.

Lind (1970) conducted an exploratory study of predictive factors for success in the clinical affiliation experience. Three instruments were used: The Allport-Vernon-Lindzey Study of Values, the Edwards Personal Preference Schedule, and the Strong Vocational Interest Blank. In addition, cumulative grade point average was reported at the beginning of the junior year after completion of sixty semester hours. The Report of Performance in Student Affiliation was also used. Subjects consisted of two groups: twenty-five graduates and fifty undergraduates. Multiple regression equations were computed on the data of the twenty-five

graduates to identify those variables that would predict clinical success. Criteria for equations were the scores derived from the Report of Performance in Student Affiliation. Predictive equations found through the multiple regression in the four clinical areas were significant at the .05 level of probability.

#### Human Interaction

The phenomenon of human interaction, in the form of interpersonal communication skills and empathy skills, has recently become an object of investigation in respect to the facilitation of skills in counseling and therapy.

Kagan et al. (1969) conducted a study on human interaction by means of interpersonal process recall. The process used stimulated recall of videotaped interactions to facilitate therapy and counselor training. The researchers found that videotape was a useful technique for gaining knowledge about underlying thought and feeling in human interaction. The process proved valuable in a variety of therapeutic and training situations directed toward helping people change certain interpersonal behaviors. The study focused on the role of the interrogator in the interpersonal process recall system.

Another study by Archer et al. (1972) describes the use and documentation of the interpersonal process recall in terms of physiological feedback. This approach gave added support to previous findings and enhanced the variety of

applications in which the interpersonal process recall could be used (i.e., therapy, counseling, education, and research).

In an open letter to colleagues, Kagan (1975) discusses the development and revised version of a measure of empathy. This measuring instrument is called the Affective Sensitivity Scale. The scale is a media-based multiple choice test, designated and validated as a predictor of empathy skills.

#### Discussion

In the previously cited literature, it has been shown that academic achievement and work performance are significant contributors to clinical performance. In addition, personality profile, as measured by the Edwards Personal Preference Schedule, was shown to be a predictive factor in clinical affiliation experience. Further, investigation of interpersonal communication skills classified as empathy skills, has been shown to be a contributor in the facilitation of clinical capability in therapy and counseling situations.

It is the objective of this experimenter to investigate the aforementioned variables (i.e., academic achievement, work performance, personality profile and empathy skills) in addition to music achievement, teacher ratings and age to determine and identify measurable contributors to students clinical capability in music therapy.

#### CHAPTER III

#### DESIGN OF THE STUDY

#### Method

Twenty-six senior music therapy students were evaluated for their clinical capability according to the Student Practicum Evaluation Instrument (see Appendix C). In addition, a selected battery of tests and measures was administered to all subjects. The measures included: personality profile; music achievement; work performance; empathy skills; academic achievement; teacher ratings and Scores were recorded from these measures for each age. subject and computed in multiple regression analyses to determine the power and effect of each variable as a contributing factor to clinical capability. In addition, the scores were also computed in a discriminant function analysis to statistically distinguish three levels of clinical capability established for the sample.

# Subjects

Subjects for this study were drawn from the senior undergraduate class of music therapy students at Michigan State University, Spring term, 1977. They ranged in age from

twenty to thirty-five years with the mean age being twentythree years, SD = 3.76. Two of the subjects were Afro-American and twenty-four were Caucasian; no other race nor ethnic group was represented. Two of the subjects were guest students from Wayne State University and were enrolled only for Music Therapy Techniques courses at Michigan State University. Also, there were three subjects who had previously received bachelor degrees in music education or performance and were enrolled specifically for equivalency courses in music therapy. All subjects were actively involved in student practicum at the music therapy clinic on campus and when working with clientele, were under the supervision of registered music therapists.

## Supervisors

Supervisors consisted of five (two male and three female) registered music therapists who were master's candidates at Michigan State University, Spring term, 1977. Mean age of the supervisors was 27.6 years, SD = 8.56. The supervisors came from various regions of the United States and their clinical experience included the following areas: deaf-blind, mental retardation, psychiatric patients and multihandicapped individuals. The mean for clinical experience was 2.45 years, SD = 1.53.

# Setting

The physical setting for video-taping was the large treatment room in the music therapy clinic as described

under <u>Music Therapy Clinic</u>. It should be noted that because two of the clients were not able to come to the University campus, the setting for two of the subjects was at Forrest Road School. The setting at Forrest Road School was as similar as possible to that of the music therapy clinic. The rooms used in both situations contained a piano and bench, a table, and two chairs. However, each subject had at his disposal additional instruments and materials necessary for conducting the therapy session in a manner suited for his individual client.

All testing of the subjects occurred in classroom settings in the Department of Music at Michigan State University. The door to the room was closed during testing to prevent interruption and to eliminate extraneous noise.

# Required Task

The task subjects performed to indicate clinical capability was a one-to-one music therapy session with assigned clientele. The task itself varied from subject to subject because of the individual functioning level or handicap of the client. However, for the purposes of this study, it was assumed that this would not affect the criteria of designated clinical skills under observation.

Subjects were informed of the clinical skills being evaluated only through the orientation they had previously received for two academic terms. No mention was made as to

what specific things the supervisors were evaluating at the time of experimentation.

#### Instruments

# Measures for Independent Variables

The instruments used for data collection of the independent variables are as follows:

Edwards Personal Preference Schedule: This instrument was used to yield a personality profile for each subject. Reliability estimates for test-retest, based on a threeweek interval, range from .55 to .87, with a median of .78.<sup>28</sup> Split-half reliability coefficients reported in the manual range from .60 to .87, with a median of .78.<sup>29</sup>

The schedule is an ipsative measure (forced choice); therefore, it will not be included in the main data analyses. However, it will be included in a separate discriminant function analysis for comparison of personality characteristics by level of clinical capability.

<u>Aliferis Music Achievement Test</u>: This instrument was used to yield a measure of music achievement in respect to auditory-visual discrimination of melodic, harmonic, and rhythmic elements and idioms. Reliability estimates are: melodic section, .90; harmonic section, .84; and rhythmic

<sup>&</sup>lt;sup>28</sup>Lawrence J. Stricker, "Tests and Reviews," in <u>The</u> <u>Sixth Mental Measurements Yearbook</u>, ed. by Oscar Krisen Buros (Highland Park, N.J.: The Gryphon Press, 1965), p. 202.

<sup>&</sup>lt;sup>29</sup>Allen L. Edwards, <u>Manual: Edwards Personal Preference</u> Schedule (New York, N.Y.: Psychological Corp., 1959), p. 19.

section, .69.<sup>30</sup> Reliability for the test taken as a unit is reported to be .92.<sup>31</sup>

<u>Field Work Performance Report</u>: This instrument was used to yield a profile of clinical capability. Reliability is reported to be .97.<sup>32</sup>

Because of the similarity between this instrument and the dependent variable, it will not be included in the main data analyses. However, it will be included in a separate discriminant analysis for comparison to the dependent variable.

Affective Sensitivity Scale: This instrument was used to obtain a measure of empathy skills. Reliability of test-retest, based on a one-week interval is .64. Reliability for the total scale based on the computation of Chronbach's Alpha is .74.<sup>33</sup>

<u>Teacher Ratings</u>: This rating was incorporated specifically for this study. The rating was used to yield two separate scores for each subject in respect to the Music

<sup>&</sup>lt;sup>30</sup>Paul R. Farnsworth, "Tests and Reviews: Fine Arts-Music," in <u>The Sixth Mental Measurements</u> <u>Yearbook</u>, ed. by Oscar Krisen Buros (Highland Park, N.J.: The Gryphon Press, 1965), p. 620.

<sup>&</sup>lt;sup>31</sup>Ibid.

<sup>&</sup>lt;sup>32</sup>L. M. Crocker et al., "A Performance Rating Scale for Evaluating Clinical Competence of Occupational Therapy Students," <u>American Journal of Occupational Therapy</u>, Vol. 29, No. 2 (February 1975), p. 81.

<sup>&</sup>lt;sup>33</sup>Donald W. Werner, "The Structure, Reliability and Validity of the Affective Sensitivity Scale (Form D); A Measure of a Component of Empathy," (unpublished Ph.D. dissertation, Michigan State University, 1977), p. 115.

Therapy Techniques course at Michigan State University. One score reflected the comprehension of course material and the other score reflected leadership/participation qualities of the subject in additionally required group activities for the multihandicapped of the community. No attempt was made to establish the reliability of the ratings.

<u>Academic Achievement</u>: The cumulative grade point average was used for each subject. No attempt was made to establish the reliability of the grades.

### Measure for Dependent Variable

The measure used for clinical capability was the Student Practicum Evaluation Instrument. This instrument was designed specifically for the clinical practicum at Michigan State University.

In order to establish content validity for the instrument, a questionnaire was mailed to colleges and universities with music therapy curriculums approved by the National Association for Music Therapy. It was decided by the researcher, that the positive response of 75 percent of the total questionnaires mailed would establish content validity. Forty-three questionnaires were returned (84.3%). Of the returns, 97.6 percent were in agreement with the researcher in respect to the six goals to be used in clinical practicum for undergraduate senior music therapy students. On the basis of the total number of questionnaires mailed (51), this accounted for 82.3 percent in affirmative response. Therefore, content validity was established. The questionnaire may be seen in Appendix D.

A reliability test was computed to determine consistent application of the Student Practicum Evaluation Instrument by the supervisors. Reliability was reported in terms of Chronbach's Alpha being equal to .96.

## Experimental Procedure

This research is a study of interrelationship between variables. The study is designed in terms of multiple regression and discriminant function analysis. Multiple Regression

The multiple regression is expressed in the following equations:

If  $X_1, X_2, ... X_{27}$  then Y

more specifically:

 $Y' = a + b_1 X_1 + b_2 X_2 X_2$ 

whereas Y' is the predicted score of the dependent variable, a is the intercept constant, b is the regression coefficient and X is the score of the independent variables.

> Multiple regression analysis is a method for studying the effects and the magnitudes of the effects of more than one independent variable on one dependent variable using principles of correlation and regression.<sup>34</sup>

<sup>&</sup>lt;sup>34</sup>Fred N. Kerlinger, <u>Foundations</u> of <u>Behavioral</u> <u>Research</u> (New York: Holt, Rinehart and Winston, Inc., 1973), p. 603.

In essence, the multiple regression analysis will allow for the determination of how the Y scores "go back to" or "depend upon" the X scores.

Because of the small N (N = 26), stability of the regressions will not be good, however by use of this procedure, it is possible to gain insight of contributors to a student's clinical capability.

#### Discriminant Function Analysis

The discriminant function analysis is expressed in the following equation:

$$D_j = d_{j1}Z_1 + d_{j2}Z_2 + \cdots + d_{j27}Z_{27}$$

whereas D<sub>j</sub> is the score on discriminant function j, the d's are weighting coefficients, and the Z's are the standardized values of the number of discriminating variables used in the analysis. The functions are performed in such a way as to maximize the separation of the groups.

Use of the discriminant function analysis for a small sample is dubious, however it is possible to distinguish levels of clinical capability.

# Video-Taping

Each subject was video-taped during the second tenminute period of a thirty-minute music therapy session. The video equipment was readied prior to sessions to avoid any distraction of the subject or his client. Filming was done through a one-way observation window. This allowed for the "natural" response of the client to the subject.

#### Testing

There were three tests administered to all subjects: the Edwards Personal Preference Schedule; the Aliferis Music Achievement Test; and the Affective Sensitivity Scale. Because of time availability and class schedules each test was given on three different occasions: two afternoon times and one evening time. The subjects had to choose a time most convenient to them. The tests were administered according to the instructions printed in the individual test manuals.

# Scoring

Subjects received scores computed from the Student Practicum Evaluation Instrument (see Appendix C). The instrument allowed for a score ranging from 1 to 3 for each of the seven subdivisions; consequently, a total score assigned by each supervisor could range from 7 to 21. The total scores for each subject were then added together to constitute the recorded score.

Scores for all testing were recorded according to the individual test manuals.

#### Materials

The materials used in this study included a stopwatch, video-taping equipment, film projector, pencils and scoring sheets. Specifications of materials are as follows:

> Stopwatch. . . . Meylan 204BD (30 minute calibration) Videocorder. . . . Sony AV-3600 Solid State

Scoring sheets, pencils and film projector were used for testing administration and procedures.

## Independent Variables

There were 21 independent variables established for this study. The variables are a composite of five measures: music achievement; empathy skills; academic achievement; teacher ratings; and age. The listing of independent variables may be seen in Appendix E.

## Dependent Variables

The dependent variable in this study is clinical capability defined in terms of clinical skills and measured according to the Student Practicum Evaluation Instrument (see Appendix C).

## Statistical Treatment

All variables were computed in a stepwise and backward elimination multiple regression. This process was used to obtain five optimum variables as contributors to a student's clinical capability. A discriminant function analysis was computed to determine the percentage of correct classification of subjects in accordance with clinical capability.

#### CHAPTER IV

## PRESENTATION OF RESULTS

The purpose of this study was to identify measurable contributors to students clinical capabilities in the field of music therapy. Seven hypotheses were established for investigation:

(1) Personality profile as represented by the Edwards Personal Preference Schedule is a contributor to students clinical capabilities.

(2) Music achievement as represented by the AliferisMusic Achievement Test is a contributor to students clinicalcapabilities.

(3) Empathy skills as represented by the Affective Sensitivity Scale are a contributor to students clinical capabilities.

(4) Work performance as represented by the Field WorkPerformance Report of the American Occupational TherapyAssociation is a contributor to students clinical capabilities.

(5) Academic achievement as represented by the cumulative grade point average is a contributor to students clinical capabilities.

(6) (a) Comprehension of course material as represented by Teacher Ratings is a contributor to students clinical calabilities.

(b) Leadership/Participation in required class activities as represented by Teacher Ratings are contributors to students clinical capabilities.

(7) Age is a contributor to students clinical capabilities.

Twenty-six senior music therapy students were rated for clinical capabilities according to the Student Practicum Evaluation Instrument designed for this study (see Appendix C). Subjects were then rated, tested and measured in accordance with the following: Edwards Personal Preference Schedule; Aliferis Music Achievement Test; Field Work Performance Report; Teacher Ratings; Academic Achievement; and Age.

# Testing Results

## Edwards Personal Preference Schedule

Results obtained from the Edwards Personal Preference Schedule reveal the group totals to be similar to the normative sample presented in the testing manual. Means and standard deviations of the group are presented with the normative sample by variable in Table 2. It should be noted that the means of the subject group are within one standard deviation of the means of the normative sample. Differences are believed to be attributed to the small N of the subject group as compared to the large N of the normative sample.

Variable		Group Total (N=26)	Normative Sample (N=1509)
Achievement	x	14.11	14.38
	SD	4.07	4.36
Deference	x	11.50	11.80
	SD	3.33	3.71
Order	x	9.65	10.24
	SD	5.38	4.34
Exhibition	x	14.38	14.34
	SD	3.63	3.59
Autonomy	x	13.23	13.31
	SD	3.85	4.53
Affiliation	x	16.53	16.19
	SD	3.26	4.36
Intraception	x	19.34	16.72
	SD	4.36	5.01
Succorance	<del>x</del>	13.07	11.63
	SD	4.38	4.65
Dominance	x	13.34	15.83
	SD	3.70	5.02
Abasement	<del>x</del>	12.50	13.66
	SD	4.51	5.14
Nurturance	x	17.42	15.22
	SD	4.19	4.76
Change	x	18.07	16.35
	SD	5.13	4.88
Endurance	x	9.92	12.65
	SD	4.47	5.25
Heterosexuality	x	15.38	16.01
	SD	5.68	5.68
Aggression	x	11.53	11.70
	SD	4.56	4.73

Table 2.	Means and Standard Deviations for the Edwards
	Personal Preference Schedule

#### Aliferis Music Achievement Test

Results obtained reveal the percentile rank mean to be 74.6 with a standard deviation of 18.7. Scores ranged from the 24th to the 98th percentile rank. Individual raw scores for the three sections of the test (i.e., melodic, harmonic and rhythmic) are presented with the total raw scores and percentile ranks in Table 3.

#### Affective Sensitivity Scale

Results obtained reveal that the subjects responded more readily to adult, male, and dyad (two person) encounters. This is not surprising due to the facts that: most subjects worked with adult clients in the music therapy clinic; 5/6 of the subjects were female; and all subjects worked in dyad situations in the music therapy clinic. Means and standard deviations are presented by variable in Table 4. Teacher Ratings

Ratings were based on a 100 point scale. Two separate ratings were given for each subject: (1) comprehension of course material; and (2) leadership/participation in class required activities. Individual ratings, means and standard deviations are presented in Table 5.

# Work Performance

Results for work performance were obtained from use of the Field Work Performance Report of the American Occupational Therapy Association. The report consists of five areas: (1) data collection; (2) treatment planning;

Subject	Melodic Score	Harmonic Score	Rhythmic Score	Total Score	Percentile Rank
1	17	10	17	44	87
2	10	11	18	39	80
3	23	16	18	57	98
4	20	10	18	48	92
5	16	8	16	40	82
6	24	12	18	54	96
7	17	9	16	42	85
8	11	6	14	31	57
9	10	7	8	25	29
10	15	6	15	36	74
11	12	6	19	37	76
12	9	6	9	24	24
13	7	6	16	31	57
14	10	7	18	35	71
15	18	3	16	37	76
16	13	10	15	38	78
17	15	7	16	38	78
18	20	12	19	57	98
19	11	9	11	31	57
20	15	10	17	42	85
21	17	6	13	36	74
22	6	6	17	29	49
23	22	14	15	51	94
24	15	7	20	42	85
25	15	8	14	37	76
26	17	6	18	41	83
x	14.88	8.38	15.80	39.07	74.6
SD	4.65	2.94	2.95	8.33	18.7

Table 3. Individual Scores and Percentile Ranks for the Aliferis Music Achievement Test

Variable	Mean	Standard Deviation
Client	30.65	6.17
Interviewer	29.84	7.19
Adult	61.07	13.34
Child	10.65	2.78
Male	40.69	10.31
Female	31.03	5.75
Group	14.53	4.21
Dyad	57.19	11.44
Education	19.80	4.69
Health	11.53	4.16
Informal	8.15	3.05
Counseling	11.57	2.45
Psychotherapy	20.65	5.35
Total	71.73	14.49

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Table 4. Means and Standard Deviations for the Affective Sensitivity Scale

Subject	Course Material	Leadership Participation
1	70	75
2	85	80
3	75	75
4	80	70
5	85	80
6	75	80
7	85	90
8	75	75
9	75	70
10	85	75
11	70	70
12	80	75
13	80	75
14	85	85
15	80	75
16	65	70
17	80	80
18	85	90
19	75	70
20	70	70
21	70	65
22	85	85
23	90	90
24	85	75
25	85	75
26	80	80
Mean SD	79.03 6.48	76.92 6.79

Table 5.	Individual	Scores,	Means	and	Standard	Deviations
	for Teacher	r Ratings	5			

(3) treatment implementation; (4) communication skills;and (5) professional characteristics. Individual results,means and standard deviations are presented in Table 6.

# Academic Achievement

The reported score for academic achievement was the actual cumulative grade point average for each subject. Individual GPAs, means and standard deviations are presented in Table 7.

# Age

Subjects age was recorded by years as of April 30, 1977. Individual ages, the mean and standard deviation are presented in Table 8.

# Data Analysis

Three types of analyses were computed for this study. A forward stepwise and backward elimination multiple regressions were computed and compared in order to obtain five optimum variables. A discriminant function analysis was computed in order to statistically distinguish between levels of clinical capability. A .05 alpha level was established for this research.

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.

Table 6.	Individual Sco formance Report	res, Means an t	id Standard Devia	tions for the F	ield Work Per-
Subject	Data Collection	Treatment Planning	<b>Treatment</b> Implementation	Communication Skills	Professional Characteristics
1	ω	14	20	16	20
3	24	30	70	22	50
ĸ	20	23	58	23	37
4	18	21	60	24	46
ß	14	19	49	17	33
9	24	26	69	21	47
7	19	22	53	20	44
8	18	22	53	25	45
6	16	20	52	19	42
10	22	29	63	23	46
11	25	25	68	16	42
12	19	22	62	23	44

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Subject	Data Collection	Treatment Planning	Treatment Implementation	<b>Communication</b> Skills	Professional Characteristics
13	17	22	60	12	32
14	25	24	70	24	49
15	12	17	46	15	33
16	18	21	59	21	37
17	17	20	49	13	31
18	23	25	59	21	43
19	13	19	37	12	28
20	16	19	55	20	36
21	თ	15	37	12	23
22	18	24	56	19	40
23	21	25	66	21	43
24	24	27	66	24	46

Table 6 (Continued)

Professional Characteristics	38	46	39.13 8.09
<b>Communication</b> Skills	21	24	19.30 4.49
Treatment Implementation	59	65	56.61 10.40
Treatment Planning	25	27	22.30 4.25
Data Collection	22	19	18.50 4.65
Subject	25	26	Mean SD

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Subject	Grade Point Average
1	2.83
2	3.54
3	3.65
4	2.95
5	3.22
6	3.05
7	3.46
8	2.88
9	2.95
10	3.40
11	3.24
12	2.71
13	2.61
14	3.73
15	2.71
16	2.39
17	3.50
18	3.25
19	3.33
20	2.80
21	2.74
22	3.27
23	3.98
24	3.79
25	3.72
26	3.20
Mean	3,18
SD	_ 41
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Table 7.	Individual	GPAs,	Mean	and	Standard	Deviation
	for Academi	ic Ach	ieveme	ent		

-

Subject	Chronological Age
1	24
2	20
3	21
4	22
5	25
6	22
7	21
8	20
9	27
10	22
11	21
12	23
13	22
14	22
15	21
16	23
17	21
18	22
19	35
20	21
21	22
22	22
23	35
24	21
25	21
26	22
Mean	23.00
SD	3.83

Table 8. Chronological Age of Subjects, Mean and Standard Deviation

-

Subject	Chronological Age
1	24
2	20
3	21
4	22
5	25
6	22
7	21
8	20
9	27
10	22
11	21
12	23
13	22
14	22
15	21
16	23
17	21
18	22
19	35
20	21
21	22
22	22
23	35
24	21
25	21
26	22
Mean	23.00
SD	3.83

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#### Results

# Descriptive Data

The subjects were divided into three groups signifying levels of clinical capability: Group 1 (low); Group 2 (moderate); and Group 3 (high). The descriptive statistics are presented by group classification in Table 9.

# Multiple Regression

The use of a stepwise regression was employed to obtain five optimum variables. In this procedure the computer selects the highest contributing variable in step 1. Moving down the variable list, the second variable chosen is the highest contributor to the dependent variable in combination with the preceding variable. The variables are chosen in relationship to each other. The five optimum variables are presented in Table 10.

Backward elimination regression selects the least contributing variables and eliminates them from the regression until the highest contributing variable remains. The last five variables in the regression are the optimum contributors in the equation. Backward elimination regression for the five optimum variables in presented in Table 11.

The five optimum variables are the same for both regression equations. Because of the small N (N = 26), the stability of the regressions is not good, however this procedure is useful in gaining insight to contributors to students clinical capabilities. Examination of Table 10

Table 9. Mean and by Subjec	Standard ct Group:	d Deviation s and Total	Scores on th	e Twenty-One	Independent	Variables
Variable		Group I (N=9)	Group II (N=8)	Group III (N=9)		Total (N=26)
Teacher Ratings						
Course Material	хI SD	75.00 6.61	79.37 5.63	82.77 5.06		79.03 6.48
Leadership/ Participation	sD SD	73.33 5.00	76.87 7.53	80.55 6.34		76.92 6.79
Affective Sensitiv.	ity Scale	ما				
Total Affective Sensitivity	sD SD	66.33 16.67	74.00 14.31	75.11 12.19		71.73 14.49
Client	sD SD	28.55 5.61	32.00 7.05	31.55 6.02		30.65 6.17
Interviewer	s SD SD	27.66 8.17	31.62 7.15	30.44 6.44		29.84 7.19
Adult	sD SD	56.22 15.89	62.87 13.59	64.33 10.03		61.07 13.34
Child	sD SD	10.11 1.61	11.12 2.74	10.77 3.80		10.65 2.78

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Table 9 ((

/ariable		Group I (N=9)	Group II (N=8)	Group III (N=9)	Total (N=26)
Male	s SD SD	37.11 12.56	41.25 8.97	43.77 8.88	40.69 10.31
Female	хI	29.22	32.75	31.33	31.03
	SD	5.09	7.40	4.79	5.75
Group	xI	13.55	15.00	15.11	14.53
	SD	3.87	4.24	4.80	4.12
Dyad	sD	52.77	59.00	60.00	57.19
	sD	14.13	10.73	8.63	11.44
Education	sD	18.55	21.25	19.77	19.80
	SD	4.33	4.77	5.14	4.69
Health	xI	11.22	10.87	12.44	11.53
	SD	5.06	4.39	3.20	4.16
Informal	xI	7.11	8.25	9.11	8.15
	SD	3.51	3.41	2.08	3.05
Counseling	sD	10.66	11.37	12.66	11.57
	SD	2.06	3.24	1.73	2.45
Psychotherapy	s	18.77	22.25	21.11	20.65
	SD	7.85	2.43	4.01	5.35

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Variable		Group I (N=9)	Group II (N=8)	Group III (N=9)	Total (N=26)
Age	s SD XD	23.88 4.37	22.00 2.07	23.00 4.61	23.00 3.83
Aliferis Music Achi	evement '	Test			
Melody	sD SD	14.77 3.11	14.75 5.44	15.11 5.66	14.88 4.65
Harmony	s SD SD	7.55 2.45	8.62 3.29	9.00 3.20	8.38 2.94
Rhythm	хI SD	15.44 2.18	15.75 3.49	16.22 3.38	15.80 2.95
Total Aliferis	х SD	37.77 4.57	39.12 10.13	40.33 10.12	39.07 8.33

RegressionStepwise
Multiple
rable 10.

Dependent Variable = Student Practicum Evaluation Instrument

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VARIABLE	ENTERED ON	STEP NUMBER		. COURSE MATERIA	L (Teacher Ra	ting)	
MULTIPLE R SQUARE	R .551 .304	ANOVA REGRESSION RESIDUAL	DF 1. 24.	SUM OF SQUARES 1209.199 2762.338	MEAN SQUARE 1209.109 115.097	F 10.505	SIGNIFICANCE .003
VARIABLE	ENTERED ON	STEP NUMBER		. PSYCHOTHERAPY	(Affective Se	nsitivi	ty Scale)
MULTIPLE R SQUARE	R .606 .367	ANOVA REGRESSION RESIDUAL	DF 2. 23.	SUM OF SQUARES 1460.953 2510.585	MEAN SQUARE 730.476 109.155	F 6.692	SIGNIFICANCE .005
VARIABLE	ENTERED ON	STEP NUMBER		. HARMONY (Alife	ris Music Ach	ievemer	lt Test)
MULTIPLE R SQUARE	R .635 .404	ANOVA REGRESSION RESIDUAL	DF 3. 22.	SUM OF SQUARES 1605.588 2365.950	MEAN SQUARE 535.196 107.543	F 4.976	SIGNIFICANCE .009
VARIABLE	ENTERED ON	STEP NUMBER	4.	. AGE			
MULTIPLE R SQUARE	R .661 .436	ANOVA REGRESSION RESIDUAL	DF 4. 21.	SUM OF SQUARES 1735.224 2236.314	MEAN SQUARE 433.806 106.491	F 4.073	SIGNIFICANCE .013
VARIABLE	ENTERED ON	STEP NUMBER	ى	. COUNSELING (Af	fective Sensi	tivity	Scale)
MULTIPLE R SQUARE	R .715 .512	ANOVA REGRESSION RESIDUAL	DF 5. 20.	SUM OF SQUARES 2034.914 1936.623	MEAN SQUARE 406.982 96.831	F 4.203	SIGNIFICANCE .009

Table 11. Multiple Regression--Backward Elimination

and Table 11 reveals the five chosen variables to be significant at the .05 level of probability.

# Discriminant Function Analysis

The appropriateness of discriminant function analysis for a small sample (N = 26) is dubious, however it is possible to make divisions of clinical capability for the sample. The analysis serves to predict classification of subjects into levels of clinical capability according to the recorded data. The percentage of correct classification of the sample is obtained by comparing the predicted classification to the recorded classification. Analysis for the twenty-one variables is presented in Table 12. Variables not in the equation were deleted by the computer because of insufficient tolerance levels. Prediction results are presented in Table 13.

Introducing the Edwards into the Analysis, it is possible to observe the differences of the sample in personality profile by group. Analysis for the Edwards is presented in Table 14. Prediction results (also including work performance) are presented in Table 15. It should be noted that by the addition of the Edwards to the analysis, the wilks lambda is minimized to 0. Also, the Edwards increases the prediction results to 100 percent. Analysis for all measures and variables is presented in Table 16. Descriptive statistics by group are presented in Table 17.
Preference Schedule	
Personal	
Edwards	
scriminant Function Analysis Minus	l Field Work Performance Report
12. Di	an
Table	

Step No.	Variable Entered	E I I	Number ncluded	Wilks Lambda	Sig.	RAOS V	Change in V	sig.
-1 2 m -	Grade Point Average Age Client (1)*	5.567 1.656 3.723	ч о м	.673 .585 .432	.011 .017 .005	11.135 16.099 29.777	11.135 4.964 13.677	.004 .084 .001
t	pation (2)	1.636	4	.371	.007	36.137	6.360	.042
പ	Informal (1)	1.260	ß	.327	.010	42.908	6.771	.034
9	Education	.900	9	.298	.017	45.583	2.674	.263
2	Child (1)	1.945	7	.242	.015	58.094	12.510	.002
8	Group (1)	1.424	8	.205	.017	63.342	5.247	.073
6	Harmony (3)	1.038	6	.180	.024	72.721	10.379	.006
10	Total Aliferis (3)	1.137	10	.155	.031	87.053	13.332	.001
11	Interviewer (1)	1.817	11	.121	.027	99.519	12.465	.002
12	Total Affective Sen-	011	с г г	600	210	101 001	30 605	
13	Sitivity Scale (1) Health (1)	2./40 1.083	13	.069	.022	143.695	13.570	.001
14	Course Material (2)	.643	14	.061	.039	160.611	16.915	.000
15	Psychotherapy (1)	.884	15	.051	.057	187.431	26.819	.000
16	Rhythm (3)	.172	16	.049	.118	190.909	3.477	.176
17	Male (1)	.024	17	.049	.233	192.160	1.251	.535
	ALL ELIGIBLE VARIABLES		ED					

\*(1) - Affective Sensitivity Scale; (2) Teacher Ratings; (3) Aliferis Music Achieve-ment Test.

Actual G	roup	Number of	Predic	ted Group Mempers	ship
Name	Ċođe	Cases	Group I	Group II	Group III
Group l	Г	6	8. 88.9 pct.	0 0 pct.	1. 11.1 pct.
Group 2	5	ω	0 0 pct.	8. 100.0 pct.	0 0 pct.
Group 3	m	6	0 0 pct.	0 0 pct.	9. 100.0 pct.

96.2 percent of known cases correctly classified

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\*Chi square = 46.173, significance = .000

Step No.	Variable Entered	ГН Eq	Number ncluded	Wilks Lambda	Sig.	RAOS V	Change in V	Sig.
-			-	663		11 125	11 125	
-1	Grade FOINT AVERAGE	100.0	-	c/0.	<b>TTN.</b>	CCT.11	CCT.11	.004
7	Succorance (4) *	2.675	7	.541	.008	18.830	7.694	.021
ო	Autonomy (4)	2.472	ო	.438	.006	28.451	9.620	.008
4	Age	3.083	4	.335	.003	43.963	15.511	.000
ъ	Nurturance (4)	2.356	ß	.268	.002	51.792	7.829	.020
9	Counseling (1)	3.026	9	.201	.001	61.337	9.544	.008
7	Female (1)	2.534	7	.154	.001	79.137	17.800	.000
ω	Child (1)	2.600	œ	.116	.001	106.622	27.484	.000
6	Dominance (4)	1.778	6	.094	.001	118.034	11.412	.003
10	Order (4)	3.147	10	.065	.000	146.891	28.857	.000
11	Achievement (4)	<b>1.648</b>	11	.051	.000	177.607	30.715	.000
12	Melody (3)	1.386	12	.042	.001	192.770	15.162	.001
13	Course Material (2)	1.642	13	.032	.001	216.492	23.722	.000
14	Rhythm (3)	.885	14	.027	.002	234.369	17.876	.000
15	Informal (1)	.994	15	.022	.004	265.679	31.310	.000
16	Client	2.713	16	.013	.003	391.546	125.866	.000
17	Deference (4)	<b>1.609</b>	17	.009	.005	525.623	134.077	.000
18	Leadership/Partici-							
	pation $(2)$	3.102	18	.004	.003	968.712	443.089	.000

Discriminant Function Analysis Minus Field Work Performance Report

Table 14.

\*(1) Affective Sensitivity Scale; (2) Teacher Ratings; (3) Aliferis Music Achievement Test; (4) Edwards Personal Preference Schedule.

Table 14 (Continued)

Step No.	Variable Entered	Ŀı	Number Included	Wilks Lambda	Sig.	RAOS V	Change in V	Sig.
19 21 23 23	Aggression (4) Health (1) Dyad (1) Endurance (4) Education (1)	1.431 1.613 .962 31.865 7.842	22 22 23 23	.00010000000000000000000000000000000000	.007 .012 .034 .034 .030	1455.779 2283.614 3400.382 34712.780 554826.280	487.066 827.834 1116.768 31312.397 520113.500	00000

Actual Gr Name	toup Code	Number of Cases	Pred Group I	Icted Group Member Group II	rship Group III
Group 1	г	6	9. 100.0 pct.	0 0 pct.	0 0 pct.
Group 2	7	ω	0 0 pct.	8. 100.0 pct.	0 0 pct.
Group 3	m	თ	0 0 pct.	0 0 pct.	9. 100.0 pct.

Prediction Results of the Discriminant Function Analysis for All Variables\*

Table 15.

IUU.U percent of known cases correctly classified

\*Chi square = 52.000, significance - .000

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Step No.	Variable Entered	ſщ	Number Indicated	Wilks Lambda	Sig.	RAOS V	Change in V	Sig.
	Data Collection (4)*	15.830		.420	000.	31.660	31.660	000.
2	Succorance (3)	2.917	7	.332	.000	41.345	9.684	.008
'n	Treatment Implemen- tation (4)	2.358	m	.271	.000	53.173	11.828	.003
4	Professional Character-	_						
	istics (4)	2.778	4	.212	.000	72.281	19.107	.000
ъ	Nurturance (3)	2.708	ى ک	.165	.000	82.065	9.784	.008
9	Autonomy (3)	<b>1.634</b>	9	.139	.000	93.051	10.985	.004
7	Counseling (1)	2.179	7	.111	.000	102.712	9.661	.008
8	Dominance (3)	1.829	8	.090	.000	114.482	11.769	.003
6	Female (1)	2.220	6	.069	.000	130.968	16.486	.000
10	Change (3)	1.671	10	.056	.000	152.142	21.174	.000
11	Child (1)	1.122	11	.048	.000	165.657	13.514	.001
12	Endurance (3)	1.183	12	.040	.001	183.777	18.120	.000
13	Rhythm (2)	3.729	13	.023	.000	261.876	78.098	.000
14	Communication							
	Skills (4)	2.358	14	.016	.000	342.894	81.018	.000
15	Total Work Perfor-							
	mance (4)	2.660	15	.010	.000	501.002	158.107	.000
16	Education (1)	2.234	16	.006	.000	717.203	216.201	.000
17	Heterosexuality (3)	1.678	17	.004	.001	1014.579	297.376	.000
18	Treatment Plan-							
	ning (4)	2.321	18	.002	.001	1138.337	123.757	.000

\*(1) Affective Sensitivity Scale; (2) Aliferis Music Achievement Test; (3) Edwards Personal Preference Schedule; (4) Field Work Performance Report.

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Step No.	Variable Entered	F F	Number ndicated	Wilks Lambda	Sig.	RAOS V	Change in V	Sig.
19 20 23 23 23	Informal (1) Psychotherapy (1) Abasement (3) Harmony (2) Age ALL ELIGIBLE VARIABL	3.342 2.341 2.341 3.215 87.348 168.973 ES INCLUDEI	19 20 23 23 23 23	100 000 000 000	.001 .002 .003 .000	1441.081 2114.387 5076.333 379291.764 125936919.084	302.744 673.305 673.305 2961.946 374215.430 125557627.320	000

Variables
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Group
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Table 17.

Variable	Group ]	. Group 2	Group 3	Total
	(N=9)	(N=8)	(N=9)	(N=26)
Edwards Personal Preference Sch	ledule			
Achievement S	t 13.55	14.50	14.33	14.11
	D 2.35	5.42	4.47	4.07
Deference	10.88 3.55	12.25 4.02	11.44 2.65	11.50 3.33
Order	5.59 5.59	7.75 3.84	11.33 6.30	9.65 5.38
Exhibition S	E 13.44	13.75	15.88	14.38
	D 3.35	4.09	3.37	3.63
Autonomy	r 15.55 3.35 3.35	11.87 4.29	12.11 3.10	13.23 3.85
Affiliation x	E 15.00	18.00	16.77	16.53
S	8D 3.08	3.42	2.94	3.26
Intraception	t 19.44	18.75	19.77	19.34
	SD 3.32	4.68	5.35	4.36
Succorance	E 10.11	15.62	13.77	13.07
	3.68	4.50	3.42	4.38

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Table 17 (

Variable		Group 1 (N=9)	Group 2 (N=8)	Group 3 (N=9)	Total (N=26)
Dominance	sD	14.33 3.35	12.87 3.56	12.77 4.35	13.34 3.70
Abasement	sD	12.88	12.12	12.44	12.50
	SD	5.98	3.68	3.97	4.51
Nurturance	sD	17.55	15.37	19.11	17.42
	SD	4.66	3.96	3.48	4.19
Change	sD	19.88	19.25	15.22	18.07
	SD	4.56	5.84	4.17	5.13
Endurance	sD	8.88	11.12	9.88	9.92
	SD	4.70	5.66	3.10	4.47
Heterosexuality	sD	16.33	15.62	14.22	15.38
	SD	5.87	4.89	6.55	5.68
Aggression	sD	12.44 5.45	11.12 3.52	11.00 4.79	11.53 4.56
<u>Teacher Ratings</u>	sD	75.00	79.37	82.77	79.03
Course Material	SD	6.61	5.63	5.06	6.48

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Variable		Group 1 (N=9)	Group 2 (N=8)	Group 3 (N=9)	Total (N=26)
Leadership/Participation	s x I	73.33 5.00	76.87 7.53	80.55 6.34	76.92 6.79
Affective Sensitivity Scale					
Total Affective Sensi- tivity Scale	s SD XI	66.33 16.67	74.00 14.31	75.11 12.19	71.73 14.49
Client	s D S	28.55 5.61	32.00 7.05	31.55 6.02	30.65 6.17
Interviewer	sD SD	27.66 8.17	31.62 7.15	30.44 6.44	29.84 7.19
Adult	sD SD	56.22 15.89	62.87 13.59	64.33 10.03	61.07 13.34
Child	sD SD	10.11 1.61	11.12 2.74	10.77 3.80	10.65 2.78
Male	sD	37.11 12.56	41.25 8.97	43.77 8.88	40.69 10.31
Female	xI SD	29.22 5.09	32.75 7.40	31.33 4.79	31.03 5.75

(Continued)
17
Table

Variable		Group 1 (N=9)	Group 2 (N=8)	Group 3 (N=9)	Total (N=26)
Group	s SD XI	13.55 3.87	15.00 4.24	15.11 4.80	14.53 4.21
Dyad	sD	52.77 14.13	59.00 10.73	60.00 8.63	57.19 11.44
Education	s xI	18.55 4.33	21.25 4.77	19.77 5.14	19.80 4.69
Health	sD SD	11.22 5.06	10.87 4.39	12.44 3.20	11.53 4.16
Informal	s SD SD	7.11 3.51	8.25 3.41	9.11 2.08	8.15 3.05
Counseling	sD SD	10.66 2.06	11.37 3.24	12.66 1.73	11.57 2.45
Psychotherapy	sD SD	18.77 7.85	22.25 2.43	21.11 4.01	20.65 5.35
Age	sD	23.88 4.37	22.00 2.07	23.00 4.61	23.00 3.83

Table 17 (Continued)

Variable		Group 1 (N=9)	Group 2 (N=8)	Group 3 (N=9)	Total (N=26)
Aliferis Music Achievement Tes	t.				
Melody	sD SD	14.77 3.11	14.75 5.44	15.11 5.66	14.88 4.65
Harmony	sD	7.55 2.45	8.62 3.29	9.00 3.20	8.38 2.94
Rhythm	sD	15.44 2.18	15.75 3.49	16.22 3.38	15.80 2.95
Total Aliferis Music Achievement Test	х SD	37.77 4.57	39.12 10.13	40.33 10.12	39.07 8.33
Field Work Performance Report					
Total Work Performance	sD	129.44 31.70	158.00 13.90	180.00 11.76	155.73 29.70
Data Collection	SD SD	14.00 3.87	19.37 2.92	22.22 2.43	18.50 4.65
Treatment Planning	sD	18.88 4.48	22.50 2.07	25.55 2.78	22.30 4.25

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Variable		Group 1 (N=9)	Group 2 (N=8)	Group 3 (N=9)	Total (N=26)
Treatment Implementation	s SD xI	48.77 11.90	56.87 5.86	64.22 5.65	56.61 10.40
Communication Skills	sn	15.88	19.37	22.66	19.30
	SD	4.88	3.58	1.50	4.49
Professional Characteris- tics	s ND SD	31.77 8.15	40.00 4.69	45.88 2.47	39.19 8.09
Grade Point Average	s	2.87	3.34	3.37	3.18
	SD	.31	.29	.43	.41
Dependent Variable	sD	52.00	68.25	80.00	66.69
Clinical Capability		5.05	3.45	4.00	12.60

### Discussion

The statistical results show that personality profile, music achievement, empathy skills, work performance, teacher ratings, academic achievement, and age as measured for this study are significant contributors to students clinical capabilities. When using all variables except personality profile and work performance, 96.2 percent of the sample was correctly classified for clinical capability. Further, it was shown that by introducing personality profile variables into the discriminant analysis, 100.0 percent of the sample was correctly classified.

#### CHAPTER V

## SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### Summary

The purpose of this investigation was to identify measurable contributors to students clinical capabilities. Twenty-six senior music therapy students were used in this study. Experimentation took place during Spring term, 1977 at Michigan State University. Various tests and measures were administered to the subjects in order to obtain data for the following variables: personality profile; music achievement; empathy skills; work performance; teacher ratings; academic achievement and age. Testing was done on both individual and group basis by the music therapy supervisors.

Subjects were video-taped with their clients during an actual music therapy session. Video-tapes were viewed and rated by the supervisors in accordance with the Student Practicum Evaluation Instrument (see Appendix C) in order to obtain a score for clinical capability.

A Stepwise Regression and a Backward Elimination Regression were computed to obtain five optimum variables as a predictive measure. A Discriminant Function Analysis

was computed for prediction in levels of clinical capability based on the obtained data. The analysis was directed toward determining the following:

(1) Whether personality profile as represented by the Edwards Personal Preference Schedule is a contributor to students clinical capabilities.

(2) Whether music achievement as represented by the Aliferis Music Achievement Test is a contributor to students clinical capabilities.

(3) Whether empathy skills as represented by the Affective Sensitivity Scale are contributors to students clinical capabilities.

(4) Whether work performance as represented by the Field Work Performance Report is a contributor to students clinical capabilities.

(5) Whether academic achievement as represented by the cumulative grade point average is a contributor to students clinical capabilities.

(6) (a) Whether comprehension of course material as represented by Teacher Ratings is a contributor to students clinical capabilities.

(b) Whether leadership/participation in required class activities as represented by Teacher Ratings is a contributor to students clinical capabilities.

(7) Whether age is a contributor to students clinical capabilities.

### Conclusions

The conclusions drawn from this study apply only to the sample used in this investigation. Based on the results of this study and the statistical analysis of those results, the statistical hypotheses, stated in null form, are as follows (alpha level = .05):

(1) Personality profile as represented by the Edwards Personal Preference Schedule will not be a contributor to students clinical capabilities. Rejected.

(2) Music achievement as represented by the Aliferis Music Achievement Test will not be a contributor to students clinical capabilities. Rejected.

(3) Empathy skills as represented by the Affective Sensitivity Scale will not be a contributor to students clinical capabilities. Rejected.

(4) Work performance as represented by the Field Work Performance Report will not be a contributor to students clinical capabilities. Rejected.

(5) Academic achievement as represented by the cumulative grade point average will not be a contributor to students clinical capabilities. Rejected.

(6) (a) Comprehension of course material as represented by Teacher Ratings will not be a contributor to students clinical capabilities. Rejected.

(b) Leadership/Participation in required class activities as represented by Teacher Ratings will not be a contributor to students clinical capabilities. Rejected.

(7) Age will not be a contributor to students clinical capabilities. Rejected.

Use of the Edwards Personal Preference Schedule is questionable because it is an ipsative measure. This was not originally a consideration. When introduced to the discriminant analysis only eight of the fifteen personality characteristics proved to be significant contributors to students clinical capabilities. Therefore, only 53.33 percent of the measure is useful for this sample.

The total Aliferis Music Achievement Test proved a significant contributor at the .05 level of confidence. However, within the test structure, harmony is shown to be the most powerful discriminant variable for the sample. This phenomenon was not anticipated and is felt to be contributable to the musical training of the adjudicators. It is questionable whether this phenomenon would occur if the adjudicators were versed in therapeutically related fields (i.e., occupational therapy, recreational therapy, etc.), rather than being music therapists.

Empathy skills, as represented by the total Affective Sensitivity Scale, are significant at the .01 level of confidence. This phenomenon is quite understandable in respect to the necessity of acquired or learned interpersonal communication skills involved with therapy techniques. Sensitivity response of the therapist toward the client is a useful facilitator in therapy sessions.

Work Performance as measured for this study, is significant at the .000 level of confidence. In respect

to the dependent measure, rating work performance requires direct observation of the subject conducting therapy sessions. Because work performance is a measure of clinical capability, the measure should not be considered a contributor to the acquisition of clinical skills. This was not originally a consideration.

Academic achievement as represented by cumulative grade point average is significant at the .01 level of confidence. Grade point average is considered as a measure of what has been gained or learned through curriculum. It is important to note that grade point average may be representative of textbook comprehension but is not necessarily a measure of practical application.

The variable of course material as represented by Teacher Ratings is similar to that of grade point average in reflecting what has been learned or acquired in a textbook sense. However, this variable only pertains to music therapy techniques. Therefore, it is more valid than cumulative grade point average. Leadership/Participation in required class activities is reflective of practical application and therefore is more closely associated with the dependent variable in respect to needed observation for rating.

By employing the use of multiple regression analysis to obtain five optimum variables (Tables 10 and 11), it was possible to account for 51 percent of the total variance (multiple R). Certain aspects of interpersonal relationships,

skills, and the combination thereof, tend to be abstract and defy measurement. It is questionable whether the remaining 49 percent can be accounted for until further research provides a means for more applicable measurement in this area.

# Recommendations for Future Research

Based on the findings of this research, it is recommended that:

(1) The study be repeated with the following changes:

(a) Minimize the number of independent variablesby using measures that allow for a total score to reflectthe measure as a whole.

(b) Maximize the size of the sample to a minimum of twenty subjects per variable.

(c) Employ the use of adjudicators from therapeutically related fields other than music therapy.

(2) Further research should be designed to expand the population to various educational institutions.

(3) Further research should be designed to expand the population to various geographical locations.

It is strongly recommended that more research be done in identifying measurable contributors to students clinical capabilities in the field of music therapy. There is a lack of well controlled experimental research in this area. Such research may provide the basis for a diagnostic measure in the selection of students entering the field, as well as a means to counsel students in ascertaining their vocational skills.

APPENDICES

APPENDIX A

SESSION PLANNING SHEET

### APPENDIX A

SESSION PLANNING SHEET

Client's Name\_\_\_\_\_Date:\_\_\_\_\_ Short Term Goals: (immediate session goals) 1. 2. 3. 4. Long Term Goals: 1. 2. 3. 4. Inappropriate Behavior to be Modified: 1. 2. 3. 4. Appropriate Behavior to be Reinforced: 1. 2. 3. 4. Reinforcement for Appropriate Behaviors: Activities, Techniques and Sources: Therapist:\_\_\_\_\_\_ Supervisor:\_\_\_\_\_

### SESSION EVALUATION SHEET

.

# APPENDIX B

#### APPENDIX B

#### SESSION EVALUATION SHEET

Client's Name:\_\_\_\_\_\_Date:\_\_\_\_\_

Materials Used:

Activities Used:

Observation and Evaluation of Implemented Session Goals:

Progress of Client in Relation to Long Term Goals:

Therapist:\_\_\_\_\_\_ Supervisor:\_\_\_\_\_

APPENDIX C

STUDENT PRACTICUM EVALUATION INSTRUMENT

# APPENDIX C

# STUDENT PRACTICUM EVALUATION INSTRUMENT

1.	Sequential presenta	tion of materials	and activities.	
	1	2	3	
2.	Use of varying and	appropriate music	activities.	
	1	2	3	
3.	Use of communicatio for the client.	n that is therape	utically suited	
	1	2	3	
4.	Pacing of session i	n respect to clie	nt's ability.	
	1	2	3	
F	Client involvement	throughout the go	agion	
5.	crient invorvement	chroughout the se	551011.	
	1	2	3	
6.	Appropriateness of	nonmusic activity	for therapy.	
	1	2	3	
_	· · · · ·			
/.	Overall evaluation	of the session.		
	1	2	3	
Stu	lent:		Score:	
Sup	ervisor:			

APPENDIX D

SURVEY QUESTIONNAIRE FOR CONTENT VALIDITY

#### MICHIGAN STATE UNIVERSITY

DEPARTMENT OF MUSIC

.

EAST LANSING . VICHIGAN . 4824

James F. McQuiston, R.M.T. Route 3 Ellisville, Ms. 39437 August 10, 1977

I am writing you in respect to a current research project at Michigan State University. The purpose of the project is the determination of some important goals, that attainment of which seem to be reasonably easy to measure, for students in a clinical practicum setting. The purpose of your response is to establish content validity for a Student Practicum Evaluation Instrument.

In agreement with Robert F. Unkefer, Chairman of Music Therapy at Michigan State University, the attached questionnaire is being sent to all N.A.M.T. approved colleges and universities. For your convenience, I have enclosed a preaddressed and stamped envelope. Thank you for your time and consideration in this matter.

1 7. Me Junton, McQuiston

In the clinical practicum at Michigan State University, the following six items were found to be: (1) measurable by an objective format; and (2) some of the most important goals for this setting. As an educator or supervisor in the field of music therapy, do you agree that these six items are important goals to be used in a clinical practicum for undergraduate senior music therapy students? (Please circle comment.)

1. To sequentially present materials and activities in a session.

yes no

- 2. To use varying and appropriate music activities in a session. yes no
- 3. To use a form of communication that is therapeutically suited for the client.

yes no

4. To pace the session in respect to the client's ability.

yes no

5. To have the client involved throughout the session.

yes

6. To make sure that non-music activity (when used) is appropriate for therapy.

yes no

By use of the reverse side of this sheet, your comments and/or suggestions are invited.

no

LIST OF INDEPENDENT VARIABLES

APPENDIX E

#### APPENDIX E

#### LIST OF INDEPENDENT VARIABLES

# Edwards Personal Preference Schedule

Achievement	Affiliation	Nurturance
Deference	Intraception	Change
Order	Succorance	Endurance
Exhibition	Dominance	Heterosexuality
Autonomy	Abasement	Aggression

# Aliferis Music Achievement Test

Melody	Harmony	Rhythm	Tota]
	-		

# Affective Sensitivity Scale

Client	Interviewer	Adult
Child	Male	Female
Group	Dyad	Education
Health	Informal	Counseling
Psychotherapy	Total	

## Field Work Performance Report

Data Collection	Communication Skills
Treatment Planning	Professional Characteristics
Treatment Implementation	Total

# Teacher Ratings

Course Material Leadership/Participation

# Academic Achievement

Cumulative Grade Point Average

Age

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