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Effects of verbal suggestion and music on mood : [a thesis] ...

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EFFECTS OF VERBAL SUGGESTION AND MUSIC ON MOOD

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Abstract

This study examined the effects of verbal suggestion and music listening on mood changes of college students. The 135 volunteers were randomly assigned to one of three conditions (Condition 1/somber depiction with music, Condition 2/pleasant depiction with music, or Condition 3/music only). The Profile of Mood States was administered before and after each condition. Significant differences ($p<.05$) were found between pre and posttest scores within the groups; however, no significant differences were found among the groups for these same measures.

A music questionnaire was administered following the posttest which examined the subjects' preference for the music played, the frequency of experiencing images while listening to music, and their opinion concerning whether the depiction complemented the music. Implications of the results are discussed, and suggestions for future research are given.

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Music constantly touches our lives. We hear it while we are shopping, in business offices, and in the radio and television advertisements we are exposed to daily. We even turn to music for energy and reflection. Music does seem to affect our mood and the way we feel. Researchers have studied the effects of music and mood interacting with each other, and these studies have manipulated and examined relationships between mood and specific behaviors.

Wessman and Ricks (1966) explained a mood as an emotional or affective response that varied in its length, yet was not a permanent condition. A descriptive definition is found in a study by Eagle (1971). He states that "mood is a relatively transient state...which can be cognized by individuals and designated with words" (p.17).

Non-Music Studies and Mood Responses

Mood has been examined in respect to its influence on helping behaviors (Carlson & Miller, 1987; Ridgeway & Waters, 1987). Negative moods are found to stifle curiosity in college undergraduates (Rodrigue, Olson & Markely, 1987) and inhibit their ability to recall and process information (Leight & Ellis, 1981). Physical performance is enhanced when positive moods are present (Kavanagh & Hausfeld, 1986). Muzekari, Knudsen and Evans (1986), studied psychiatric patients who were shown photographs paired with statements.

For example, the subjects viewed a photograph with a sad face and under the picture was the word excited. Each subject was to express whether the picture was congruent (picture and word the same) or incongruent (picture and word different). Perceptions of emotions were correctly identified when the subjects were shown the photographs that were congruent.

Music Studies and Mood Responses

Radocy and Boyle (1979) reviewed studies related to music and mood dating from 1927-1960. Each study focused on a different variable, such as listening to pop, folk, and classical music, and on the influence of rhythm, melody, harmony, timbre, pitch, and tone quality on mood states.

Zalanowski, Stratton & Campos (1987), found that mood changes occur in subjects who were exposed to music alone and subjects who were exposed to pictures and music. Henderson (1983), who studied hospitalized adolescents, found that a planned sequence of music therapy activities can influence mood. Music also enhanced their ability to express their emotions and become cognizant of their moods.

Soothing music inspired helpfulness immediately following an experiment (Fried & Berkowitz, 1979). In this study, stimulating and aversive pieces of music were used. Stimulating and soothing music produced positive moods, while aversive music encouraged negative moods.

Pignatiello, Camp, and Raser (1986) took the Velten technique (1968), a procedure used to induce mood states of

verbal college students, and substituted verbal suggestion with music, thereby creating a procedure appropriate for verbal and non-verbal individuals. Inducing mood with music will allow future researchers to study a mood with various populations, i.e., testing individuals who speak a different language.

Musical excerpts matched to a person's existing mood may change the direction of that mood in a step-wise fashion. The "Iso" principle, matching a person's actual mood to the music, grasps the subject's mood, holds it, and permits the mood to alter. Shatin (1970) states that when the music and mood are not matched, the subject will reject the music entirely-"a restless mood will not respond to tranquil music or bored to stimulated" (p. 81).

Live and recorded music were used in studies by Bailey, (1983) and Wheeler (1985). Those who listened to live music reported significantly less tension-anxiety, more vigor and changes in their mood than did subjects who listened to taped music (Bailey). Contrasting results in the Wheeler (1985) study indicated that a person's mood state is determined prior to the music, and the music is not influential in changing that mood. The mode of presentation (live or recorded) did not significantly influence the development of a person's mood, nor did the order of test presentation, as discovered by Eagle (1971).

Influential Elements of Music on Mood Responses

Claims have been made concerning various specific

elements of music, such as major and minor modes, rhythm, harmonies, and tempi, and their effect on mood. Characteristics of the major modes seem to enhance feelings of happiness, gracefulness, and joy. The minor modes reflect sadness, sentiment and grief. Flowing rhythms aid in promoting gracefulness, happiness, and tenderness, contrasting with vigorous firm rhythms. Dissonant harmonies evoke excitement and lean toward sadness while consonant harmonies promote lyrical and graceful phrasing (Hevner, 1936). Slow tempi typically consisting of 63-80 beats per minute, evoke sad, sentimental responses. Fast tempi, ranging from 102-150 beats per minute, are energetic (Ludin, 1985).

The styles of music used in the above studies are as unique as each individual project. Classical music (Downey & Knapp, 1927; Eagle, 1971; Fried & Berkowitz, 1979; Pignatiello, Camp & Raser, 1986; Riggs, 1937; Shatin, 1970; Wheeler, 1985; Zalanowski, Stratton & Campos, 1987), jazz music (Fried & Berkowitz, 1979; Pignatiello, Camp & Raser, 1986) and popular music (Bailey, 1983; Park & Young, 1986; Pignatiello, Camp, Raser, 1986) are all represented. Other researchers have used instrumental (Bailey, 1983; Eagle, 1971; Fried & Berkowitz, 1979; Pignatiello, Camp & Raser, 1986; Shatin, 1970; Riggs, 1937; Wheeler, 1985; Zalanowski, Stratton & Campos, 1987) and vocal music (Bailey, 1983; Eagle, 1971; Henderson, 1983) in their work.

Various instrumentation has been explored. The guitar

(Bailey, 1983) and piano (Wheeler, 1985) appear as solo instruments, and arrangements for orchestras (Downey & Knapp, 1927; Eagle, 1971; Fried & Berkowitz, 1979; Pignatiello, Camp & Raser, 1986; Riggs, 1937; Shatin, 1970; Zalanowski, Stratton & Campos, 1987) vocals, (Shatin, 1970) and jazz bands (Fried & Berkowitz, 1979) are implemented in other studies. Both style and instrumentation have been used in experiments but have not been scientifically examined.

Suggestion and Music

Suggestion can be defined as the acceptance of an idea without involving critical thought. Suggestion is a powerful tool and can be direct or indirect. A direct suggestion refers to explicit directives, such as when a professional has hypnotized a client. An indirect suggestion is a subtle form of influence, i.e., a professional recommending a treatment. Most often, the second definition is used and preferred (Chertok, 1986).

Suggestibility is influenced by a desire to conform to the wishes of authority figures (Ceci, Ross & Toglia, 1987). Park and Young (1986) look to see if background music (popular) can suggest certain attitudes about products. In this study, music was a catalyst to the subjects' imagination and facilitated identification of certain images. Harkins and Petty (1987) used non-musical suggestion in their research. It was discovered that multiple sources significantly influence suggestion only

when the subjects were not permitted to discuss their perceptions with their peers.

Programme music ("musical suggestion") can be defined as a narration or description that precedes a piece of music. Descriptions often originate from music historians, record album jackets, and on sheet music. This concept was introduced by the composer Franz Liszt and is a technique used by many composers. The idea of programme music is to focus attention on the poetic ideas of the music. By suggesting particular emotions in the preface of a composition, the music can indirectly represent feelings (Sadie, 1985).

Some claim that affective reactions are easily identified in compositions that can be characterized as programme music. Unpleasant emotions, such as despair and grief, are more frequently found than pleasant feelings, such as joy (Hampton, 1945). In a study by Riggs (1937), participants could distinguish sadness from joy, but progressively finer discriminations were not obtained.

Measurement of Mood Responses

Historically, researchers have relied on verbal reports to record mood responses from subjects. Three basic methods used in collecting mood are: adjective check lists, semantic differences, and various types of rating scales, i.e., likert scale (Eagle, 1971).

Researchers have most frequently employed author-compiled adjective check lists (Fried & Berkowitz, 1979;

Henderson, 1983; Larson, 1987; Riggs, 1937; Velten, 1968), the Depression Adjective Check List (DACL) (Leight & Ellis 1981; Pignatiello et al., 1986; Rodrigue, Olson & Markely, 1987), the Wessman & Ricks (1966) Elation v. Depression Scale (Eagle, 1971; Wheeler, 1985), the Eight-State Questionnaire (Boyle, 1987), the Beck Depression Inventory (Pignatiello, Camp & Raser, 1986), and the Profile of Mood States (POMS) (Bailey, 1983, Boyle, 1987) in their studies. Physiological measures have also been employed effectively in mood research. In a study by Ridgeway & Waters (1987), the use of electromyography allowed the experimenter to monitor each subject's physiological response.

Statement of the Problem

Music has been closely associated with mood in various studies. However, most of these studies have been descriptive in nature, with few employing systematic observation. This study implements a standardized mood assessment tool, the Profile of Mood States (McNair, Lorr & Droppleman, 1981). Due to the lack of experimental research in this area, and the scarcity of studies specifically related to suggestion and music, further examination seems warranted. The purpose of this study is to examine the effects of verbal suggestion and music listening on mood perceptions.

Null Hypotheses

The null and alternative hypotheses for this study are as follows:

Ho There will be no difference in the subjects' mood states among the groups presented with suggestion and without suggestion prior to listening to music.

H1 There will be a difference in the subjects' mood states among the groups presented with suggestion and without suggestion prior to listening to music.

Ho There will be no difference in the subjects' mood states within each condition.

H1 There will be a difference in the subjects' mood states within each condition.

Method

Subjects

One hundred thirty-five undergraduate students enrolled at the University of the Pacific in Stockton, California participated in this study. Each group of volunteers was randomly assigned to one three conditions:

Condition 1 = somber description and music (Massenet's "Meditation")

Condition 2 = pleasant description and music (Massenet's "Meditation")

Condition 3 = music alone (Massenet's "Meditation")

Design

A pretest was administered to each subject within each experimental condition. Subjects in Condition 1 were given a somber description followed with music listening.

Subjects in Condition 2 were given a pleasant description and listened to the same music. Those subjects in Condition 3 listened to the same music without a description. A post-test was given to all groups, and each subject completed a music questionnaire.

O1 X1 O2

O1 X2 O2

O1 X3 O2

Experimental Variables

Dependent variables used for pre/post assessment of mood were the Profile of Mood States (POMS) and a music questionnaire (McNair, Lorr & Droppleman, 1981; Appendix A). The POMS assessed an adults mood. Sixty-five items measured six dimensions of affect: Tension-Anxiety, Depression-Dejection, Anger-Hostility, Vigor-Activity, Fatigue-Inertia, and Confusion-Bewilderment. The test-retest reliability for the six mood factors on the POMS ranged from .61-.69, based on a study of 150 VA outpatients following four weeks of medical treatment. These figures are considerably lower than the figures associated with personality and intelligence, characteristics where test-retest reliability is closer to .80-.90. Mood naturally fluctuates. Even with similar testing procedures some individuals exhibit wider mood swings than others and at different rates in time (McNair, Lorr, Droppleman, 1981). For these reasons, test-retest reliability figures will normally be lower. Within the six mood scales, the internal

consistencies range from .84-.95.

Validity studies using the POMS have detected mood changes with psychotherapy, controlled outpatient drug trials and emotion-inducing conditions. Over an eight-week psychiatric treatment period, the means of 180 VA outpatients improved significantly ($p<.001$) within Tension-Anxiety, Depression-Dejection, Anger-Hostility, and Fatigue (Lorr, McNair, Weinstein, Michaux & Raskin, 1961). The POMS successfully identified changes associated with mild tranquilizers. In a comparison of two groups, chlordiazepoxide and a placebo, the group with the active drug displayed a greater reduction in Tension-Anxiety and a significant increase in Vigor, both of which occurred after one week of treatment (Lorr, McNair & Weinstein, 1964).

Pillard and Fisher (1967) assessed the mood of 122 subjects before, during, and after viewing an anxiety-inducing autopsy film. Subjects were given the POMS with either chlordiazepoxide, secobarbital, or a placebo after viewing a neutral film. Tension scores decreased from baseline scores following the neutral film, increased after the autopsy film, and decreased by the end of the experiment.

Concurrent validity coefficients comparing the POMS and the Hopkins Symptom Distress Scales range from .51-.86 in all six affect categories. The POMS has also been correlated with other scales, yielding the following concurrent validity coefficients: Tension [Manifest Anxiety

(r=.80, p<.01)], Depression [Inpatient Multidimensional Psychiatric Scale (r=.30, p<.01)], Anger [Interpersonal Behavior Inventory Hostility (r=.32, p<.01)] and Vigor [Observer Rating of Interview Activity (r=.29, p<.05)].

An author devised Music Questionnaire (Appendix B) was completed after the posttest. This questionnaire had the subjects evaluate their feelings concerning the music and verbal descriptions, and requested pertinent demographic information.

Independent variables included verbal suggestion and slow tempo music. In two experimental conditions, a somber or pleasant verbal description was followed by music specifically selected to reinforce the description (Capurso, 1952).

Massenet's "Meditation" from the opera "Thais" applied to the somber and pleasant verbal descriptions. The music contained a long sweeping melody, soft dynamics and expressive phrases.

Experimental Setting

The experiment was administered in the Wendell Phillips Center auditorium, room 140. This large room was capable of holding 45 people comfortably, and was equipped with cushioned chairs with removable desk tops. All chairs faced a platform where the experimenter stood. Fabric and thin wooden panels lined the walls and provided a sound proof environment. The subjects were tested in groups of 3-15 and sat in the first seven rows of the auditorium. All

directions and experimental conditions (music) were pre-recorded and orally presented to the subjects.

Apparatus/Materials

A Magnavox Cassette Recorder, model number D8027/17L, was used to play the cassette tape. Each subject was supplied with a pencil and an assessment packet which contained a pretest, post-test and a music questionnaire.

Procedures

Each subject was asked to sign a volunteer consent form (Appendix C) and refrain from talking before entering the testing area. Once the subjects had been seated, these directions were given:

"This experiment deals with music listening. You will be asked to complete a questionnaire at the beginning and end of the experiment. Take out the first questionnaire (white form). When you have finished, place the questionnaire under your chair and wait for the next step. Begin working on the first questionnaire now."

At the completion of the questionnaire, the following directions were given, based on the corresponding experimental conditions.

Condition 1

"For the next four minutes you will listen to a piece of music that depicts the defense of personal honor. The year is 1789. The sun is setting slowly behind a stately manor. In a beautiful garden a duel has taken place and the young man has been injured defending his honor. His best friend was a witness to the event and stays with the wounded man until his death. Close your eyes and concentrate on the music. When the music stops, I will have you complete the second questionnaire. When you are finished, you may leave."

Condition 2

"For the next four minutes you will listen to a piece of music that depicts a rosy sun setting over a meadow. In

the flowery meadow lies a patch of soft grass just right for resting. Life is good and exciting. The meadow is inviting, re-vitalizing. Close your eyes and concentrate on the music. When the music stops, I will have you complete the second questionnaire. When you are finished, you may leave."

Condition 3

"For the next four minutes you will listen to a piece of music. Close your eyes and concentrate on the music When the music stops, I will have you complete the second questionnaire. When you are finished, you may leave."

Results

Pretest and posttest POMS mean scores (see Table 1) within conditions were compared using *t*-test analyses. The following significant comparisons were found: Mean scores for Condition 1 were 62.62 pretest and 54.24 posttest (df=44, t=2.05, p<.05); Condition 2 mean scores were 49.67 pretest and 41.53 posttest (df=44, t=3.37, p<.05); and Condition 3 showed mean scores of 48.44 pretest and 40.51 posttest (df=44, t=3.46, p<.05). A significant affective state score between pre and posttest (see Table 2) was revealed within each of the three conditions for Tension-Anxiety (p<.0001). Other statistically significant differences between pre and posttest measures were found on all affective states for Condition 3. Condition 2 showed significant differences on all affective states except Confusion and Vigor, with Condition 1 showing significant differences only on Tension-Anxiety and Vigor. The null hypothesis of no difference in the subjects mood state within each condition was rejected.

A one-way analysis of variance was used to analyze the

Table 1

Profile of Mood States Pre/Posttest Scores:
Means, Standard Deviations, *t*-Scores

	Mean		Standard Deviation		
Condition	Pretest	Posttest	Pretest	Posttest	t
1	62.62	54.24	36.38	27.05	2.05*
2	49.67	41.53	24.53	19.31	3.37*
3	48.44	40.51	20.88	18.76	3.46*

*$p < .05$

Table 2

Mean Profile of Mood States Scores of Affect States

Affect	Condition	Mean Pretest	Mean Posttest	Standard Deviation Pretest	Standard Deviation Posttest	t
Tension	1	9.80	5.89	6.69	5.78	4.77*
	2	7.13	3.16	5.22	3.99	6.76*
	3	8.02	4.11	4.52	4.19	7.29*
Depression	1	7.47	8.62	8.56	8.54	-0.09
	2	7.16	4.91	10.30	6.33	2.47*
	3	5.60	4.16	4.92	4.82	2.30*
Anger	1	6.80	4.91	8.85	6.01	1.93
	2	4.71	2.24	6.55	4.85	3.11*
	3	6.09	2.58	6.63	4.66	4.43*
Vigor	1	17.29	19.44	7.05	6.76	-2.43*
	2	16.42	18.16	6.66	5.94	-1.86
	3	15.18	18.20	6.02	6.18	-3.79*
Fatigue	1	10.42	9.37	6.02	6.17	1.31
	2	8.53	6.93	5.40	4.87	2.27*
	3	7.58	6.40	5.53	5.50	1.98*
Confusion	1	7.71	6.91	4.93	4.00	1.41
	2	7.27	6.16	4.42	4.37	1.97
	3	5.93	4.87	3.30	3.30	2.72*

*$p < .05$

Table 3

Analysis of Variance Table:
Pretest Profile of Mood States Scores

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	P
Between Groups	5555.24	2	2777.62	3.53	.032*
Within Groups	103891.69	132	787.06		
Total	109446.92	134			

*p<.05

Table 4

Analysis of Variance Table:
Posttest Profile of Mood States Score

Source	Sum of Squares	Degrees of Freedom	Mean Square	F	P
Between Groups	5268.33	2	2634.16	5.42	.0054*
Within Groups	64102.76	132	485.63		
Total	69371.08	134			

*$p<.05$

Table 5

Music Questionnaire: Music Preference

Condition	Strongly Liked	Liked	Neutral	Disliked	Strongly Disliked
1	15	19	10	1	1
2	13	24	6	0	0
3	12	25	8	0	0
Total	40 (30%)	68 (50%)	24 (18%)	1 (1%)	1 (1%)

Table 6

Music Questionnaire: Experiencing Images with Music

Frequency of Images	Total Number
Always	31 (23%)
Frequently	56 (42%)
Occasionally	38 (28%)
Seldom	6 (4%)
Never	4 (3%)

Table 7

Music Questionnaire: Music and Depiction

Condition	Music Complemented	Music did not Complement
1	32 (71%)	13 (29%)
2	36 (80%)	9 (20%)

mean pretest POMS scores among the three conditions. A significant difference was found among the groups (see Table 3), thereby rejecting the assumption of homogeneity. An analysis of variance also revealed significant differences among the conditions on posttest scores (see Table 4).

The ratio of male to female was 69:66, and men and women were evenly distributed among the conditions. Data from the music questionnaire provided the researcher with subjects' opinions concerning the music and procedures used in the experimental process, such as 1) their preference for that music (see Table 5), 2) the frequency of experiencing images while listening to music (Table 6), and 3) their opinion concerning whether the depiction complemented the music (Table 7). Of the 135 tested, 37 recognized the music, but only one subject correctly identified the piece. A majority of the subjects (80%) reported a preference for the musical selection used in the study with 30% stating that they "strongly liked" and 50% stating that they "liked the particular piece.

Of the 135 subjects tested, 31 (22%) always, 56 (41%) frequently, 38 (28%) occasionally, 6 (4%) seldom, and 4 (3%) never experienced images while listening to music. Thirty-two (71%) of the 45 subjects in Condition 1 and 36 (80%) of the 45 subjects in Condition 2 stated that the music complemented the verbal depiction.

Discussion

This study examined the effects of verbal suggestion

and music listening on mood changes of college students. Overall the subjects' mood-state altered, decreasing from pretest to posttest. A significant change did occur in all three experimental conditions as indicated by *t*-test analyses. In all conditions the music was consistent and may have enhanced mood changes.

The Tension-Anxiety affective state was the only category to reach statistical difference in all three conditions. Similar results were obtained by Logan (1984), who found significant differences in the tension levels of subjects who listened to music. Exploring tension and anxiety is a current trend among researchers in music therapy and other related fields (Hanser, 1986). It is hoped that future studies will continue to examine the influence of music on such stress related disorders as hypertension, skin disorders, and respiratory ailments.

Condition 1 was given a somber description before listening to music. Post-test scores revealed that there was an increase in Depression, though not significant. This trend would seem to be "normal" since the subjects were asked to reflect on the death of a man. Interestingly, Vigor increased in Condition 1, as well as in 2 and 3. The experimental process lasted approximately twenty minutes, during which, each subject was passive. Numerous subjects reported that they were tired before entering the testing area but felt rested at the conclusion. Affect scores seem to reflect this state, since significant differences were

found for Vigor in Conditions 2 and 3.

Subjects in Condition 2 were given a pleasant description before listening to music. The verbal depiction and musical characteristics permitted the subjects to significantly decrease their scores in Depression, Anger, and Fatigue. It may be expected that when an individual is given the opportunity to reflect about a quiet, relaxing place, anxious and tense feelings may subside.

The analysis of variance failed to yield homogeneity among the three conditions. Without similar pretest scores, thorough analyses were not possible, making comparisons and conclusions of the posttest scores inappropriate. With a larger sample size or matched groups among the experimental conditions, a homogeneous population might have been obtained. It is suggested that future studies in this particular area consider sample size when conducting research.

Many subjects reported to have recognized the music used in the experiment. When asked to name the piece and composer, responses such as "Rhapsody in Blue" by Gershwin, the "Swan" by Saint Saens, and Copland's "Appalachian Spring" were recorded. Only one subject correctly identified the piece of music. The majority of the subjects (80%) "strongly liked" or "liked" the musical selection.

Most subjects reported that the verbal descriptions complemented the music (see Table 7). Since the same music was used with both depictions, these results are

encouraging. It may be possible for the same piece of music to represent pleasant as well as somber ideas, depending upon prior suggestion. The selection, "Meditation" by Massenet is in a major mode. A soft and slow expressive melody was performed by a solo instrument and supported by an unobtrusive accompaniment. These findings are similar to those of Park and Young (1986) involving suggestion and music listening. In both studies, music was used to suggest images and ideas. Ninety-one percent of the subjects reported to have previously experienced images while listening to music, and the majority of the subjects found the music pleasing. From these particular results, it may be concluded that the music did enhance the depictions.

Music therapists frequently attempt to change the affective states of clients, e.g., to reduce tension and anxiety. A therapist may have a client listen to music with floating melodies to experience relaxation, or listen to a selection with strong rhythms to experience excitement. By placing a depiction with the music it could be possible for a therapist to guide a client to new or untouched emotions.

Based on the results of this project, future studies involving mood and music may examine 1) the length of the depiction, employing more detailed descriptions, 2) subject-derived depictions, and 3) various types of music which may enhance the descriptions. A longer verbal section would require the subjects to focus on the suggestion for a longer period of time. Additional information may be gained when

subjects are allowed to devise their own depiction and select preferred musical recordings to enhance mood change.

Mood is a constantly fluctuating aspect of the human condition. It can vary from excitement to depression, from efficiency to confusion, and friendliness to spitefulness. Understanding how mood is effected by sensory stimulation, such as music, could possibly assist in the treatment of stress reduction and affective disorders. Only future research can provide adequate answers that may directly influence actual clinical practice.

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Appendix A

SCANTRON FORM NO. T-61258 POMS

NAME _____ DATE _____

SEX: Male (M) Female (F)

IDENTIFICATION

Below is a list of words that describe feelings people have. Please read each one carefully. Then fill in ONE circle under the answer to the right which best describes HOW YOU FEEL RIGHT AT THIS MOMENT.

The numbers refer to these phrases.

0 = Not at all
1 = A little
2 = Moderately
3 = Quite a bit
4 = Extremely

Col (C) O.P. (O)

	NOT AT ALL	A LITTLE	MODERATELY	QUITE A BIT	EXTREMELY
1. Friendly	0	1	2	3	4
2. Tense	0	1	2	3	4
3. Angry	0	1	2	3	4
4. Worn out	0	1	2	3	4
5. Unhappy	0	1	2	3	4
6. Clear-headed	0	1	2	3	4
7. Lively	0	1	2	3	4
8. Confused	0	1	2	3	4
9. Sorry for things done	0	1	2	3	4
10. Shaky	0	1	2	3	4
11. Listless	0	1	2	3	4
12. Peeved	0	1	2	3	4
13. Considerate	0	1	2	3	4
14. Sad	0	1	2	3	4
15. Active	0	1	2	3	4
16. On edge	0	1	2	3	4
17. Grouchy	0	1	2	3	4
18. Blue	0	1	2	3	4
19. Energetic	0	1	2	3	4
20. Panicky	0	1	2	3	4
21. Hopeless	0	1	2	3	4
22. Relaxed	0	1	2	3	4
23. Unworthy	0	1	2	3	4
24. Spiteful	0	1	2	3	4
25. Sympathetic	0	1	2	3	4
26. Uneasy	0	1	2	3	4
27. Restless	0	1	2	3	4
28. Unable to concentrate	0	1	2	3	4
29. Fatigued	0	1	2	3	4
30. Helpful	0	1	2	3	4
31. Annoyed	0	1	2	3	4
32. Discouraged	0	1	2	3	4
33. Resentful	0	1	2	3	4
34. Nervous	0	1	2	3	4
35. Lonely	0	1	2	3	4
36. Miserable	0	1	2	3	4
37. Muddled	0	1	2	3	4
38. Cheerful	0	1	2	3	4
39. Bitter	0	1	2	3	4
40. Exhausted	0	1	2	3	4
41. Anxious	0	1	2	3	4
42. Ready to fight	0	1	2	3	4
43. Good natured	0	1	2	3	4
44. Gloomy	0	1	2	3	4
45. Desperate	0	1	2	3	4
46. Sluggish	0	1	2	3	4
47. Rebellious	0	1	2	3	4
48. Helpless	0	1	2	3	4
49. Weary	0	1	2	3	4
50. Bewildered	0	1	2	3	4
51. Alert	0	1	2	3	4
52. Deceived	0	1	2	3	4
53. Furious	0	1	2	3	4
54. Efficient	0	1	2	3	4
55. Trusting	0	1	2	3	4
56. Full of pep	0	1	2	3	4
57. Bad-tempered	0	1	2	3	4
58. Worthless	0	1	2	3	4
59. Forgetful	0	1	2	3	4
60. Carefree	0	1	2	3	4
61. Terrified	0	1	2	3	4
62. Guilty	0	1	2	3	4
63. Vigorous	0	1	2	3	4
64. Uncertain about things	0	1	2	3	4
65. Bushed	0	1	2	3	4

MAKE SURE YOU HAVE ANSWERED EVERY ITEM.

EdITS POM 021

Appendix B

MUSIC QUESTIONNAIRE

condition_____
number_____

1. Did you recognize the music? _____yes _____no
   if yes, name the piece_____

2. Was it difficult to use the depiction given when listening to the music? _____yes _____no if yes, clarify_____
   _____

3. Did the music complement the verbal description? ___yes ___no

4. Did the verbal description interfere with your listening?
   _____yes _____no if yes, clarify_____
   _____

5. Did the music bother you? _____yes _____no
   if yes, what aspect of the music bothered you?
   (check all that apply)

_____melody	_____dynamics
_____rhythm	_____instrumentation
_____loudness	_____personal association

6. Rate your preference to this music (circle one)

strongly liked		neutral	disliked	strongly disliked
1	2	3	4	5

7. Do you often experience images while listening to music?
   (circle one)

never	seldom	occasionally	frequently	always
1	2	3	4	5

   What type of music produces images for you? (please specify)
   _____

8. Has anything recently happened in your life that would influence your mood right now? _____yes _____no, specify
   _____
   _____

age_____
year in school F S J Sr G
major_____
primary music preference (check one)
_____jazz _____classical _____popular, other (specify)_____
Do you prefer to listen to (check one)
_____vocal _____instrumental

THANK YOU FOR YOU COOPERATION!!

Appendix C

VOLUNTEER PARTICIPATION FORM

I, _____ volunteer to participate in this research project on _____, 1988. I understand that I will listen to some music and fill out two questionnaires.

Additionally, I will:

1) refrain from talking upon entering the room,
2) answer the questionnaires truthfully and to the best of my ability, and
3) understand that my name will not be requested on the questionnaires.

Appendix D

PROFILE OF MOOD STATES

NUMBER	CONDITION 1	TENSION-ANXIETY		DEPRESSION-DEJECTION		ANGER-HOSTILITY		VIGOR		FATIGUE		CONFUSION		TOTAL MOOD SCORE	
	sex	pre	post	pre	post	pre	post	pre	post	pre	post	pre	post	pre	post
6	male	23	6	12	10	14	6	22	21	24	16	14	10	109	63
7	male	2	1	0	1	0	0	16	18	2	4	1	2	21	25
8	male	24	11	46	17	34	8	26	21	20	9	23	11	173	77
9	female	10	10	6	6	5	4	14	23	7	11	4	8	46	62
17	male	6	10	3	6	6	6	19	22	10	6	6	6	140	56
20	male	9	6	6	9	8	6	14	15	9	3	8	8	54	47
26	female	8	0	1	1	1	1	11	5	9	1	2	0	32	8
27	male	13	13	9	10	2	3	10	15	11	12	16	10	61	63
28	female	5	3	6	4	1	1	12	18	6	6	4	3	34	35
29	male	8	4	16	3	11	3	21	11	10	2	14	4	80	27
30	male	10	2	12	12	10	2	20	21	17	17	5	10	74	64
32	male	3	1	0	1	0	1	16	18	5	6	4	12	34	27
33	male	5	4	0	1	0	4	9	20	6	14	3	2	23	45
36	male	4	0	1	0	1	2	15	12	6	7	4	4	31	25
40	male	4	1	4	0	7	3	11	13	4	2	5	2	35	21
51	female	8	0	7	0	0	0	11	20	6	9	6	3	38	32
54	female	9	7	2	1	0	0	16	15	13	4	1	1	41	28
55	female	8	4	4	3	4	1	13	21	11	15	3	2	42	46
57	male	1	5	6	34	3	4	28	24	22	24	9	12	69	103
58	female	6	2	9	11	2	3	29	32	9	6	6	7	61	61
59	female	12	11	6	9	7	7	16	16	6	7	9	10	56	60
60	female	10	2	3	8	3	2	7	20	6	11	8	6	37	29

PROFILE OF MOOD STATES

NUMBER	CONDITION 1	TENSION-ANXIETY		DEPRESSION-DEJECTION		ANGER-HOSTILITY		VIGOR		FATIGUE		CONFUSION		TOTAL MOOD SCORE	
	sex	pre	post	pre	post	pre	post	pre	post	pre	post	pre	post	pre	post
61	female	11	14	0	5	2	6	1	7	6	5	5	7	25	44
62	female	1	0	0	0	0	0	7	13	7	8	4	4	19	25
63	female	19	12	22	26	14	4	14	17	22	21	17	16	108	96
64	female	5	2	7	4	0	0	28	30	15	10	11	9	66	55
65	male	2	0	0	6	1	1	25	28	7	0	6	4	41	39
68	female	6	2	4	3	5	0	13	21	12	8	1	4	41	38
70	female	12	3	4	2	5	1	29	28	15	9	9	4	74	47
76	female	3	6	3	7	3	4	8	8	0	3	4	6	21	34
77	male	16	17	12	13	5	11	30	32	10	13	11	13	84	99
78	male	8	5	4	13	0	2	13	23	4	4	6	6	35	53
80	male	9	1	0	31	1	17	12	30	4	1	4	10	30	90
81	male	18	4	16	15	0	0	20	17	17	10	13	7	84	53
82	female	10	4	6	6	11	0	17	24	8	9	11	6	63	49
87	female	5	1	0	7	1	1	24	27	6	16	2	3	38	55
88	female	22	22	21	19	24	20	25	25	19	17	13	12	124	115
92	male	24	19	23	21	17	11	18	21	10	8	14	12	106	92
93	female	8	3	12	9	13	7	23	29	9	10	11	7	76	65
101	male	9	4	4	5	6	2	23	18	19	11	9	6	89	46
103	female	8	1	8	3	4	2	24	14	7	0	7	3	58	23
105	male	21	6	13	10	29	20	10	6	14	25	9	11	96	78
106	male	4	3	0	0	3	3	14	14	8	8	2	2	31	30
107	male	6	17	3	6	7	20	27	18	24	17	9	13	76	91
109	male	26	16	15	28	36	22	17	24	7	17	14	13	146	120

PROFILE OF MOOD STATES

NUMBER	CONDITION 2	TENSION-ANXIETY		DEPRESSION-DEJECTION		ANGER-HOSTILITY		VIGOR		FATIGUE		CONFUSION		TOTAL MOOD SCORE	
	sex	pre	post	pre	post	pre	post	pre	post	pre	post	pre	post	pre	post
10	female	11	12	41	34	25	17	27	26	16	14	13	20	133	123
14	female	4	2	1	1	5	2	22	22	21	14	5	3	58	44
16	male	27	13	56	24	34	15	24	10	23	8	21	19	185	89
18	male	2	0	0	2	0	0	7	15	1	1	0	1	10	19
19	female	1	0	3	6	0	0	14	28	8	16	5	10	31	60
21	female	11	3	3	0	7	0	18	19	3	4	5	6	47	32
22	male	4	2	2	10	9	1	8	22	4	4	6	6	33	45
25	female	6	8	7	5	3	0	14	22	5	12	9	8	44	55
35	female	4	0	0	2	3	0	1	22	4	14	5	6	17	44
38	female	15	5	16	6	12	0	10	17	5	0	11	5	69	33
39	female	1	0	1	4	3	0	11	11	2	0	7	6	25	21
41	female	3	1	6	6	0	0	7	10	13	11	8	4	37	32
45	male	7	3	5	3	2	0	16	16	2	0	6	3	38	25
46	female	3	1	1	0	1	0	17	13	8	6	3	2	33	22
47	male	10	4	6	4	3	2	11	10	9	7	8	5	47	32
48	male	1	1	3	2	1	0	0	6	5	10	5	5	15	24
52	female	3	0	11	14	13	13	21	17	12	11	4	1	64	56
53	male	14	9	5	1	0	0	21	31	7	0	6	7	53	48
67	female	6	0	0	0	1	0	8	15	6	2	2	2	23	19
74	female	7	0	10	2	9	1	12	8	4	1	9	1	51	13
83	male	10	4	5	3	6	0	21	24	7	6	6	7	55	44
84	male	4	6	4	1	5	6	18	18	8	9	3	2	42	42

PROFILE OF MOOD STATES

NUMBER	CONDITION 2	TENSION-ANXIETY		DEPRESSION-DEJECTION		ANGER-HOSTILITY		VIGOR		FATIGUE		CONFUSION		TOTAL MOOD SCORE	
	sex	pre	post	pre	post	pre	post	pre	post	pre	post	pre	post	pre	post
85	male	13	6	9	3	10	2	15	14	9	4	9	5	61	34
94	female	2	0	0	0	0	0	25	29	11	9	5	5	43	43
95	female	1	0	0	1	0	0	13	15	4	3	2	3	20	22
96	male	9	9	4	3	2	2	24	25	12	11	8	9	59	59
97	male	14	11	4	1	6	2	22	17	16	7	13	7	75	45
98	male	5	3	2	2	0	0	9	15	4	4	5	9	25	33
99	female	15	15	13	13	1	1	16	16	1	1	10	10	56	56
102	male	3	1	16	10	1	0	24	22	12	11	10	9	66	53
108	male	8	1	10	5	2	0	29	21	16	7	5	4	70	38
110	male	7	5	19	10	2	1	17	18	9	5	11	12	65	51
114	male	7	0	10	3	7	0	16	20	17	15	3	7	60	45
116	female	5	3	3	3	0	0	20	29	6	14	4	5	38	54
118	male	3	1	3	4	5	5	18	15	0	1	20	3	49	29
125	male	11	0	3	4	10	1	15	21	11	10	8	5	58	41
126	female	10	1	8	3	7	1	13	17	8	10	12	8	58	40
127	female	5	2	4	6	4	0	22	25	16	13	4	4	55	50
128	female	4	0	0	6	0	0	12	11	3	5	3	1	22	23
129	male	4	7	4	1	10	7	25	17	6	0	12	14	61	46
130	female	4	0	4	3	2	1	14	14	7	10	3	1	34	29
131	male	16	1	13	3	5	0	25	19	14	8	15	12	88	43
132	female	4	0	2	0	0	0	15	11	7	0	6	2	34	13
133	female	4	0	4	0	0	21	24	20	9	5	5	3	46	48
134	male	6	2	1	7	0	0	21	24	13	9	7	10	48	52

PROFILE OF MOOD STATES

NUMBER	CONDITION 3	TENSION-ANXIETY		DEPRESSION-DEJECTION		ANGER-HOSTILITY		VIGOR		FATIGUE		CONFUSION		TOTAL MOOD SCORE	
	sex	pre	post	pre	post	pre	post	pre	post	pre	post	pre	post	pre	post
1	female	8	1	10	7	6	4	17	25	4	11	6	6	51	54
2	male	3	0	1	3	0	0	21	23	2	1	5	4	33	31
3	female	15	3	4	9	2	5	6	15	5	0	14	9	46	41
4	female	5	0	3	0	13	0	13	17	13	6	4	2	51	25
5	male	6	4	1	1	5	2	15	17	8	5	7	3	42	32
11	male	12	3	13	5	17	0	16	26	6	6	8	3	72	43
12	male	15	6	12	6	31	7	19	18	6	1	7	5	90	43
13	male	6	0	3	1	1	0	8	12	5	2	5	3	28	18
15	male	3	1	1	0	1	0	6	11	1	0	1	0	13	12
23	male	12	10	15	12	5	2	22	22	5	3	12	11	71	60
24	female	13	7	6	1	1	0	20	21	12	5	8	6	60	40
31	male	9	4	3	1	2	0	11	14	3	2	3	2	31	23
34	female	7	4	4	6	7	2	13	14	3	4	3	2	37	32
37	male	6	6	3	2	2	0	22	28	3	3	5	2	41	41
42	female	1	0	0	0	0	0	11	13	5	12	4	5	21	30
43	female	15	17	0	0	0	0	22	22	10	10	10	10	51	59
44	male	11	7	8	14	4	12	6	14	1	3	2	9	32	59
49	male	6	3	4	0	9	4	16	17	8	6	3	0	46	30
50	male	15	7	19	16	9	3	29	31	26	21	10	10	108	88
56	male	5	2	8	5	3	0	18	19	6	5	6	2	46	43
66	female	6	11	7	2	15	8	10	10	13	14	8	4	59	49
69	male	12	2	11	8	5	1	11	14	9	8	8	4	56	37

PROFILE OF MOOD STATES

NUMBER	CONDITION 3	TENSION-ANXIETY		DEPRESSION-DEJECTION		ANGER-HOSTILITY		VIGOR		FATIGUE		CONFUSION		TOTAL MOOD SCORE	
	sex	pre	post	pre	post	pre	post	pre	post	pre	post	pre	post	pre	post
71	female	1	0	6	4	6	3	14	13	6	6	12	9	45	35
72	female	9	1	1	0	0	0	16	17	8	5	3	4	37	37
73	female	6	4	2	2	7	1	20	15	5	3	3	2	43	27
75	female	19	10	1	0	0	0	22	26	16	12	7	6	65	54
79	female	7	1	6	10	7	0	11	18	7	2	5	9	43	40
86	female	5	2	1	4	0	0	15	19	4	3	3	3	28	31
89	female	9	7	8	8	14	8	18	14	7	7	12	12	68	56
90	male	5	2	10	20	7	4	17	24	18	20	8	10	65	80
91	male	7	0	1	9	1	1	9	20	4	8	6	10	28	48
100	female	4	1	1	0	0	0	17	9	12	6	1	1	35	17
104	female	2	0	7	1	0	0	24	20	18	6	7	3	58	29
111	female	14	10	3	0	6	1	25	23	17	19	7	6	72	59
112	female	6	0	1	1	1	0	6	22	0	2	4	2	18	27
113	male	11	14	11	11	22	27	22	26	14	14	5	7	85	99
115	female	7	8	4	1	1	0	23	27	10	19	3	4	48	59
117	male	1	1	0	1	0	0	6	24	1	1	0	3	8	30
119	male	10	3	15	2	10	1	8	20	8	3	9	5	60	34
120	male	7	6	10	4	9	2	19	21	6	6	7	6	58	45
121	female	12	6	6	1	13	4	13	14	13	6	10	4	67	35
122	male	1	1	2	2	9	8	18	17	2	2	3	3	35	33
123	female	4	0	0	0	0	0	7	8	4	0	1	0	16	8
124	male	15	10	15	6	12	5	12	13	6	6	8	8	68	48
135	male	9	0	5	1	11	1	9	6	7	4	4	0	39	12

MUSIC QUESTIONNAIRE

No.	Condition	#1	#2	#3	#4	#5	#6	#7	#8	age	year	major	music preference
1	3	yes	-	-	-	no	strongly liked	frequently	no	23	G	Music	Classical
2	3	no	-	-	-	no	liked	always	change in religious views	18	F	Art	Classical
3	3	yes	-	-	-	no	liked	always musically	sat next to attractive man	18	F	Exploratory	Jazz
4	3	yes	-	-	-	no	strongly liked	always	no	23	J	Music Therapy	Classical
5	3	no	-	-	-	no	liked	frequently	positive influence of romance	25	J	Dentistry	Reggae
6	1	no	yes	no	yes	no	strongly liked	frequently	under stress	21	Sr	Business	Pop
7	1	no	no	yes	no	no	neutral	frequently	no	20	J	Biology	Rock
8	1	yes	yes	no	no	yes PA	liked	always	problems in personal life	20	So	Biology	Pop
9	1	no	no	yes	no	no	liked	frequently	romantic problems	21	Sr	Communications	60's
10	2	yes	yes	no	yes	no	liked	frequently	had an argument	23	G	Social Work	Pop

KEY

PA = Personal Association

#1= Did you recognize the music?

#2= Was it difficult to use the depiction given when listening to the music?

#3= Did the music complement the verbal description?

#4= Did the verbal description interfere with your listening?

#5= Did the music bother you? If yes, what aspect of the music?

#6= Rate your preference to this music

#7= Do you often experience images while listening to music?

#8= Has anything recently happened in your life that would influence your mood right now?

MUSIC QUESTIONNAIRE

No.	Condition	#1	#2	#3	#4	#5	#6	#7	#8	age	year	major	music preference
11	3	no	-	-	-	no	liked	occasionally	no	22	Sr	Organizational Communication	Jazz
12	3	no	-	-	-	no	strongly liked	occasionally	mad at someone	22	F	Sociology	Popular
13	3	no	-	-	-	no	neutral	occasionally	personal matter	23	G	Pharmacy	Popular
14	2	no	no	yes	no	no	liked	frequently	sick	19	So	Biology	Rock
15	3	no	-	-	-	no	liked	occasionally	no	21	Sr	Business	Popular
16	2	no	no	yes	no	no	liked	occasionally	did poorly on a test	19	F	Pre-Pharmacy	Pop
17	1	yes	yes	yes	no	no	neutral	always	no	19	So	Psychology	Grateful Dead
18	2	yes	no	yes	no	no	strongly liked	always	had a satisfying week	19	So	Piano Performance	Show tunes
19	2	no	no	yes	no	no	strongly liked	occasionally	no	21	So	Music Therapy	Pop
20	1	no	no	yes	no	no	liked	frequently	no	19	So	Pharmacy	Rock

KEY

#1= Did you recognize the music?

#2= Was it difficult to use the depiction given when listening to the music?

#3= Did the music complement the verbal description?

#4= Did the verbal description interfere with your listening?

#5= Did the music bother you? If yes, what aspect of the music?

#6= Rate your preference to this music

#7= Do you often experience images while listening to music?

#8= Has anything recently happened in your life that would influence your mood right now?

MUSIC QUESTIONNAIRE

No.	Condition	#1	#2	#3	#4	#5	#6	#7	#8	age	year	major	music preference
21	2	yes	yes	yes	no	no	strongly liked	occasionally	anxious about a performance	19	So	Piano Performance	None
22	2	no	yes	yes	no	no	liked	occasionally	loss of friend	21	So	Engineering	New Wave
23	3	no	-	-	-	no	neutral	frequently	lost a friendship	20	J	Communications	Popular
24	2	no	-	-	-	no	liked	seldom	school pressure	19	So	English	Popular
25	2	no	yes	yes	no	no	liked	frequently	happy with life	24	G	Education	Pop
26	1	yes	yes	no	no	no	strongly liked	frequently	no	18	F	Biology	Pop
27	1	no	yes	no	no	yes D	disliked	always	no	21	J	International Relations	Rock
28	1	no	no	yes	no	no	liked	frequently	roommate problems	21	Sr	Mechanical Engineering	Jazz
29	1	no	no	yes	no	no	neutral	always	took a test	20	So	Liberal Arts	All
30	1	no	no	no	no	no	liked	frequently	no	22	So	Pharmacy	Pop

KEY

D = Dynamics

#1= Did you recognize the music?

#2= Was it difficult to use the depiction given when listening to the music?

#3= Did the music complement the verbal description?

#4= Did the verbal description interfere with your listening?

#5= Did the music bother you? If yes, what aspect of the music?

#6= Rate your preference to this music

#7= Do you often experience images while listening to music?

#8= Has anything recently happened in your life that would influence your mood right now?

MUSIC QUESTIONNAIRE

No.	Condition	#1	#2	#3	#4	#5	#6	#7	#8	age	year	major	music preference
31	3	no	-	-	-	no	strongly liked	always	under stress	24	G	Sports Medicine	All types
32	1	no	yes	no	no	no	neutral	never	no	23	J	Pharmacy	All
33	1	no	no	yes	no	no	neutral	never	no	23	Sr	Pharmacy	Pop
34	3	no	-	-	-	no	liked	seldom	no	19	So	Business	All types
35	2	yes	no	yes	no	no	liked	frequently	very happy	20	J	International Studies	All
36	1	no	no	yes	no	no	neutral	frequently	no	19	So	Pharmacy	Alternative Music
37	3	yes	-	-	-	yes MI	neutral	occasionally	no	21	J	Music Management	Jazz
38	2	no	no	no	no	no	liked	seldom	no	24	J	Psychology	Folk
39	2	no	no	yes	no	no	liked	frequently	no	20	So	Spanish	Folk
40	1	no	no	yes	no	no	liked	frequently	no	22	So	Communications	Pop

KEY

MI = Melody and Instrumentation

#1= Did you recognize the music?

#2= Was it difficult to use the depiction given when listening to the music?

#3= Did the music complement the verbal description?

#4= Did the verbal description interfere with your listening?

#5= Did the music bother you? If yes, what aspect of the music?

#6= Rate your preference to this music

#7= Do you often experience images while listening to music?

#8= Has anything recently happened in your life that would influence your mood right now?

MUSIC QUESTIONNAIRE

No.	Condition	#1	#2	#3	#4	#5	#6	#7	#8	age	year	major	music preference
41	2	no	no	yes	no	no	- -	- -	deciding to move	19	So	Music Therapy	Folk
42	3	yes	-	-	-	no	strongly liked	frequently	no	18	F	Communications	All types
43	3	yes	-	-	-	no	neutral	occasionally	no	22	Sr	Music Therapy	Jazz
44	3	no	-	-	-	no	liked	never	no	20	J	English	Classical
45	2	no	no	yes	no	no	liked	seldom	no	22	Sr	Business	Pop
46	2	no	no	yes	no	no	liked	always	no	27	Sr	Business	Jazz vocal
47	2	no	yes	yes	no	no	neutral	seldom	fraternity rush	19	So	Math	Country
48	2	no	no	yes	yes	no	liked	occasionally	fraternity rush	19	So	Biology	Caribbean Music
49	3	yes	-	-	-	no	neutral	occasionally	no	20	J	Pre-Med	Rock
50	3	no	-	-	-	no	liked	frequently	had test previously	20	J	Pre-Med	Progressive

KEY

#1= Did you recognize the music?

#2= Was it difficult to use the depiction given when listening to the music?

#3= Did the music complement the verbal description?

#4= Did the verbal description interfere with your listening?

#5= Did the music bother you? If yes, what aspect of the music?

#6= Rate your preference to this music

#7= Do you often experience images while listening to music?

#8= Has anything recently happened in your life that would influence your mood right now?

MUSIC QUESTIONNAIRE

No.	Condition	#1	#2	#3	#4	#5	#6	#7	#8	age	year	major	music preference
51	1	no	no	no	no	no	liked	always	good mood	18	F	Education	Pop
52	2	yes	no	yes	no	no	strongly liked	always	worried about financial aid	33	J	Music Education	Pop
53	2	no	no	yes	no	no	liked	occasionally	dropped from rush	19	So	Biology	Old Rock
54	1	no	no	yes	no	no	liked	occasionally	no	18	F	Education	Pop
55	1	no	no	yes	no	no	neutral	frequently	no	19	F	Mechanical Engineering	Classical
56	3	yes	-	-	-	no	liked	frequently	school pressure	21	So	Finance	Popular
57	1	yes	no	yes	no	no	strongly liked	always	sick	18	F	Music Therapy	Jazz
58	1	no	no	yes	no	no	liked	frequently	fight with boyfriend	18	F	Music Therapy	New Age
59	1	no	no	yes	no	no	liked	occasionally	just took a big test	18	F	Business	Pop
60	1	yes	no	yes	yes	no	strongly liked	occasionally	no	18	F	Education	Classical

KEY

#1= Did you recognize the music?

#2= Was it difficult to use the depiction given when listening to the music?

#3= Did the music complement the verbal description?

#4= Did the verbal description interfere with your listening?

#5= Did the music bother you? If yes, what aspect of the music?

#6= Rate your preference to this music

#7= Do you often experience images while listening to music?

#8= Has anything recently happened in your life that would influence your mood right now?

MUSIC QUESTIONNAIRE

No.	Condition	#1	#2	#3	#4	#5	#6	#7	#8	age	year	major	music preference
61	1	yes	yes	no	yes	no	strongly liked	occasionally	no	19	F	Exploratory	Pop
62	1	no	yes	yes	no	no	strongly liked	frequently	no	19	So	History	Country
63	1	yed	yes	yes	no	no	strongly liked	always	boyfriend problems	19	So	Music Therapy	Classical
64	1	no	no	yes	no	no	neutral	frequently	boyfriend problems	20	J	Bachelor of Arts in Music	Jazz
65	1	no	no	yes	no	no	liked	always	no	20	J	Theatre Management	Popular
66	3	no	-	-	-	no	neutral	never	no	21	J	Urban Affairs	Popular vocal
67	2	yes	no	no	no	no	strongly liked	occasionally	no	18	So	Music Education	Classical
68	1	yes	no	yes	no	no	liked	occasionally	no	23	Sr	Sociology	Jazz
69	3	no	-	-	-	no	liked	always	no	28	J	Math	Hard Rock
70	1	yes	no	yes	no	no	liked	occasionally	bad day	21	J	Pharmacy	Pop

KEY

#1= Did you recognize the music?

#2= Was it difficult to use the depiction given when listening to the music?

#3= Did the music complement the verbal description?

#4= Did the verbal description interfere with your listening?

#5= Did the music bother you? If yes, what aspect of the music?

#6= Rate your preference to this music

#7= Do you often experience images while listening to music?

#8= Has anything recently happened in your life that would influence your mood right now?

MUSIC QUESTIONNAIRE

No.	Condition	#1	#2	#3	#4	#5	#6	#7	#8	age	year	major	music preference
71	3	no	-	-	-	no	liked	always	insomnia	20	J	Music Therapy	Popular
72	3	yes	-	-	-	no	liked	occasionally	no	31	Sr	Psychology	Popular
73	3	no	-	-	-	no	strongly liked	frequently	broke up with boyfriend	24	Sr	Communications	Rock
74	2	yes	no	yes	no	no	liked	frequently	problems with parents	19	So	Music Education	Classical
75	3	yes	-	-	-	no	strongly liked	occasionally	no	18	F	Music Therapy	Christian
76	1	no	no	yes	no	no	neutral	frequently	busy	18	F	Liberal Arts	- -
77	1	no	yes	yes	yes	yes PA	liked	frequently	just got off work	23	Sr	Business	Pop
78	1	yes	no	yes	no	no	liked	always	no	20	J	Business	Pop
79	3	yes	-	-	-	no	liked	always	emotional problems	18	F	Music Management	Jazz/vocal
80	1	no	no	yes	no	no	strongly liked	always	no	20	J	International Business	Rock

KEY

PA = Personal Association

#1= Did you recognize the music?

#2= Was it difficult to use the depiction given when listening to the music?

#3= Did the music complement the verbal description?

#4= Did the verbal description interfere with your listening?

#5= Did the music bother you? If yes, what aspect of the music?

#6= Rate your preference to this music

#7= Do you often experience images while listening to music?

#8= Has anything recently happened in your life that would influence your mood right now?

MUSIC QUESTIONNAIRE

No.	Condition	#1	#2	#3	#4	#5	#6	#7	#8	age	year	major	music preference
81	1	yes	no	yes	no	no	strongly liked	frequently	no	20	J	Biology	Pop
82	1	no	no	yes	yes	no	strongly liked	frequently	being away from loved one	20	So	Music Therapy	Folk
83	2	no	no	yes	no	no	liked	frequently	no	21	So	Pharmacy	Blue Grass
84	2	no	yes	no	no	no	neutral	occasionally	extra-curricular activities	18	F	Engineering	Progressive
85	2	no	no	yes	yes	no	liked	always	busy	19	So	Music	Jazz
86	3	no	-	-	-	no	strongly liked	always	school stress	20	So	Business	Classical
87	1	yes	no	yes	no	no	strongly liked	occasionally	no	19	So	Education	Pop
88	1	no	yes	no	no	no	liked	occasionally	school stress	19	So	Pharmacy	Classical
89	3	yes	-	-	-	no	strongly liked	frequently	loss of a friendship	21	Sr	Psychology	Classical
90	3	no	-	-	-	no	liked	frequently	in love	19	So	Music	Jazz

KEY

#1= Did you recognize the music?

#2= Was it difficult to use the depiction given when listening to the music?

#3= Did the music complement the verbal description?

#4= Did the verbal description interfere with your listening?

#5= Did the music bother you? If yes, what aspect of the music?

#6= Rate your preference to this music

#7= Do you often experience images while listening to music?

#8= Has anything recently happened in your life that would influence your mood right now?

MUSIC QUESTIONNAIRE

No.	Condition	#1	#2	#3	#4	#5	#6	#7	#8	age	year	major	music preference
91	3	no	-	-	-	no	neutral	frequently	no	23	J	Pharmacy	Modern Rock
92	1	no	yes	no	no	no	liked	occasionally	yes	19	F	Computer Science	Pop
93	1	yes	yes	no	yes	no	neutral	occasionally	boyfriend is a jerk	18	So	Business	Pop
94	2	no	no	yes	no	no	strongly liked	frequently	no	22	So	Music Therapy	All
95	2	no	no	yes	yes	no	strongly liked	always	no	20	J	Music Education	New Age
96	2	yes	no	yes	no	no	liked	occasionally	test coming up	18	F	Entertainment Management	Pop
97	2	no	no	yes	no	no	neutral	frequently	sick	18	F	International Business	Pop
98	2	no	no	yes	no	no	neutral	frequently	yes	21	Sr	Geo-Physics	Pop
99	2	yes	no	yes	no	no	strongly liked	frequently	no	21	J	Music Education	All
100	no	-	-	-	-	no	liked	always	very busy	19	So	English	Popular

KEY

#1= Did you recognize the music?

#2= Was it difficult to use the depiction given when listening to the music?

#3= Did the music complement the verbal description?

#4= Did the verbal description interfere with your listening?

#5= Did the music bother you? If yes, what aspect of the music?

#6= Rate your preference to this music

#7= Do you often experience images while listening to music?

#8= Has anything recently happened in your life that would influence your mood right now?

MUSIC QUESTIONNAIRE

No.	Condition	#1	#2	#3	#4	#5	#6	#7	#8	age	year	major	music preference
101	1	no	no	no	yes	no	liked	frequently	no	18	F	Business	Pop
102	2	yes	no	yes	no	no	strongly liked	occasionally	no	19	F	Economics	Blues
103	1	yes	yes	no	no	no	strongly liked	always	failed mid-term	18	So	Music Performance	Classical
104	3	yes	-	-	-	no	strongly liked	frequently	irritable	20	J	International Affairs	All
105	1	yes	yes	yes	no	yes	strongly liked	occasionally	daily life	21	So	Music Education	Classical
106	1	no	no	yes	no	no	strongly liked	frequently	no	19	F	English	Pop
107	1	yes	yes	yes	yes	yes	strongly disliked	occasionally	no	21	J	Music History	Classical
108	2	no	no	yes	no	no	liked	frequently	bad grades	18	F	Engineering	Jazz
109	1	no	no	yes	yes	no	strongly liked	always	fraternity games	23	Sr	Engineering	Pop
110	2	yes	no	yes	no	no	liked	occasionally	busy	20	So	Music Education	Jazz

KEY

#1= Did you recognize the music?

#2= Was it difficult to use the depiction given when listening to the music?

#3= Did the music complement the verbal description?

#4= Did the verbal description interfere with your listening?

#5= Did the music bother you? If yes, what aspect of the music?

#6= Rate your preference to this music

#7= Do you often experience images while listening to music?

#8= Has anything recently happened in your life that would influence your mood right now?

MUSIC QUESTIONNAIRE

No.	Condition	#1	#2	#3	#4	#5	#6	#7	#8	age	year	major	music preference
111	3	no	-	-	-	no	liked	frequently	no	20	So	Music Therapy	Blues
112	3	no	-	-	-	no	liked	occasionally	life is good	18	F	Special Education	New Age
113	3	no	-	-	-	no	liked	seldom	did poorly on an exam	23	Sr	Pharmacy	Rock
114	2	no	yes	yes	no	no	strongly liked	always	yes	26	Sr	Communications	Jazz
115	3	no	-	-	-	no	strongly liked	frequently	no	19	F	Exploratory	Folk
116	2	no	yes	yes	yes	no	neutral	occasionally	no	21	Sr	Business	Pop
117	3	no	-	-	-	no	strongly liked	always	no	24	J	Pharmacy	All
118	2	no	yes	yes	yes	no	liked	frequently	friend killed himself	21	J	Sociology	Country
119	3	no	-	-	-	no	liked	frequently	no	21	J	Pharmacy	Classical
120	3	no	-	-	-	no	liked	occasionally	anxious about a meeting	24	Sr	Engineering	Pop

KEY

#1= Did you recognize the music?

#2= Was it difficult to use the depiction given when listening to the music?

#3= Did the music complement the verbal description?

#4= Did the verbal description interfere with your listening?

#5= Did the music bother you? If yes, what aspect of the music?

#6= Rate your preference to this music

#7= Do you often experience images while listening to music?

#8= Has anything recently happened in your life that would influence your mood right now?

MUSIC QUESTIONNAIRE

No.	Condition	#1	#2	#3	#4	#5	#6	#7	#8	age	year	major	music preference
121	3	no	-	-	-	no	liked	occasionally	boyfriend	21	Sr	Graphic Design	Country
122	3	no	-	-	-	no	liked	always	no	24	Sr	Math	Pop
123	3	no	-	-	-	no	strongly liked	occasionally	no	--	J	Liberal Arts	Pop
124	3	no	-	-	-	no	liked	frequently	lost basket-ball game	24	Sr	History	All
125	2	no	yes	yes	yes	no	strongly liked	frequently	no	20	J	Music	Classical
126	2	no	no	yes	yes	no	neutral	frequently	roommate problems	19	So	Marketing	Pop
127	2	yes	no	yes	no	no	strongly liked	frequently	no	21	J	French	Classical
128	2	no	no	yes	yes	no	liked	occasionally	religious experience	18	F	Sports Medicine	Pop
129	2	no	yes	yes	no	no	neutral	frequently	two tests self-doubt	18	F	Business Administration	Pop
130	2	no	no	yes	no	no	liked	frequently	boyfriend	18	F	Business	Pop

KEY

#1= Did you recognize the music?

#2= Was it difficult to use the depiction given when listening to the music?

#3= Did the music complement the verbal description?

#4= Did the verbal description interfere with your listening?

#5= Did the music bother you? If yes, what aspect of the music?

#6= Rate your preference to this music

#7= Do you often experience images while listening to music?

#8= Has anything recently happened in your life that would influence your mood right now?

MUSIC QUESTIONNAIRE

No.	Condition	#1	#2	#3	#4	#5	#6	#7	#8	age	year	major	music preference
131	2	no	no	yes	no	no	liked	frequently	no	19	F	Physics	Rock
132	2	no	no	yes	no	no	strongly liked	frequently	no	31	Sr	Education	All
133	2	yes	no	yes	no	no	liked	always	yes	19	So	Music Education	Classical vocal
134	2	no	yes	yes	no	no	liked	frequently	friend's mom had heart attack	21	Sr	Biology	All
135	3	yes	-	-	-	no	liked	always	back trouble	21	J	International Affairs	Pop

KEY

#1= Did you recognize the music?

#2= Was it difficult to use the depiction given when listening to the music?

#3= Did the music complement the verbal description?

#4= Did the verbal description interfere with your listening?

#5= Did the music bother you? If yes, what aspect of the music?

#6= Rate your preference to this music

#7= Do you often experience images while listening to music?

#8= Has anything recently happened in your life that would influence your mood right now?

Vita

The author was born and raised in California. In Fresno, she attended elementary and secondary schools and was involved in music activities. She participated in honor bands and orchestras and was a member of the Fresno Junior Philharmonic. As a high school senior she was involved in a primary mental health program, being a "Special Friend" for two young children.

In September, 1982 the author entered the music therapy program at the University of the Pacific and graduated four years later with a Bachelor of Music in music therapy. While at UOP she was involved in the choral programs, a member of Mu Phi Epsilon (professional music fraternity), and a sweetheart for a social fraternity.

The author enjoyed performing, in addition to presenting a senior flute recital, she has played in student recital classes and church. In 1985, the Miss America Pageant awarded her a scholarship after her appearance in their program.

The author has worked with a wide variety of people. During a six-month internship at St Joseph's Medical Center in Stockton, Miss Cole worked with pediatrics, psychiatric adults, gero-psychiatrics, geriatric rehabilitation, and substance abusers.

In January, 1987, the author was awarded a teaching

assistantship in the music therapy department of UOP. She has enjoyed her involvement with the department and particularly the role of program coordinator of the Community Music Therapy Project, which provided free music lessons to handicapped children.

Currently the author is completing the course work for her master degree and is employed by the Central Methodist Church, Stockton, as the Director of Youth Ministries.