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MULTICULTURAL APPROACH TO INDUCTION OF DEPRESSIVE MOOD BY MUSIC

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To my Aunt Wilma
For her unconditional love and support

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Abstract

The present research studied the differential effect that ethnic music has on the induction of depressive mood amongst members of two ethnic communities. The following hypotheses were tested (1) Induction of depressive mood using Armenian music will be more effective to Armenians than Arab subjects. (2) Depressive mood will be more pronounced in older people of the two ethnic groups than the young. (3) It was expected that young Armenians would show significant mood change by listening to Arabic music than young Arabs to Armenian music. 72 healthy subjects young and old volunteered to participate in the experiment from both Armenian and Arab ethnic groups. Depressive mood was induced by making subjects listen to sad Armenian and Arabic music. Change in mood was measured by the administration of MAACL-R test before and after the induction procedure, also by judging 12 faces with respect to six emotions presented during the experiment on the computer screen. Results indicate that the influence of music on individuals is not a simple one; age, ethnic background and familiarity with ethnic music play a role in the induction of depressive mood. Contrary to hypothesis one and two the response of both Armenian old and young to Arabic or Armenian music was almost identical. Contrary to the hypothesis three an interesting and unexpected outcome of this research was the intense depressive mood induced on young Arabs who listened to Armenian music. Both of these results were explained in terms of assimilation of Armenians into Lebanese Arab society and the familiarity of Armenian and Lebanese groups with each other's ethnic music.

CHAPTER I

Introduction

Context of the Problem:

Through the ages and across cultures music has a long history for the treatment of human mind, body and mood. The last ten to fifteen years the effect of music became a popular trend in the West, extensive research was done on classical music and its effect on relieving stress, inducing relaxation, controlling pain, regulating blood pressure and heartbeat, improving memory and changing mood.

The question is what is the effect of ethnic music on people? There are many societies and ethnic groups each with their own unique music. Does ethnic music have an effect on a listener from a different ethnic group?

Statement of the Problem:

The purpose of the current research is to study the differential effect of ethnic music on two different ethnic groups. Since research is conducted in Beirut –Lebanon the two ethnic groups considered are the Lebanese who are the majority and the Armenians who are considered minority in Lebanon. This research wants to find out if there is a difference in the effect of music on those two communities when they listen to their respective music. The way this differential effect of music is studied is by using musical mood induction procedure, which is a laboratory method for induction of a certain mood state.

In the current research the mood state induced by music is depression where by participants from both ethnic backgrounds will listen to Armenian or Arabic sad depressive music. Later, two devices will measure the mood change: a self-rating scale (MAACL-R) and ratings on 12 line drawn faces. Therefore, the purpose of this study is to study the differential effect of ethnic music on the induction of depressive mood amongst members of two ethnic groups, Armenians and Lebanese.

Rationale of the Study:

Music is a major component of ethnic identity. In order to preserve their culture and to avoid assimilation minority groups cling to their language, folklore and music. It is interesting to know what is the situation is with Armenians living in Lebanon who are considered as a minority, if they are assimilating into the Lebanese Arab society and loosing their identity. Therefore, in this particular research a study will be done on the differential effect of ethnic music (Armenian and Arabic) on Lebanese and Armenians, respectively. Consequently, we expect that Arabic music will have the same effect on Armenians as the Armenian music because of assimilation. Though this research is not a study on assimilation, yet it could be an indicator of the assimilation of the Armenians as a minority group into the Lebanese society.

Operational Definition of the Variables:

The dependent variable in this experiment is the sad mood induced by musical mood induction procedure. The dependent variables are: (1) music:

Armenian and Arabic folk music. (2) Ethnicity: Armenians and Lebanese living in Beirut-Lebanon. (3) Age: young (18-22) and old (55-60).

Operational Definition of Terms:

- Ethnic: of or relating to large groups of people classed according to common racial, national, tribal, religious, linguistic, or cultural origin or background.
- Assimilating: to absorb into the culture or mores of a population or group.
- Armenians: a Lebanese sub-group that carry Lebanese nationality and whose mother language is Armenian.
- Lebanese: Lebanese citizens whose mother language is Arabic.

Statements of the Hypotheses:

Hypothesis (1): Induction of depressive mood using Armenian music will be more effective with Armenian participants than Arab participants.

Hypothesis (2): Induced depressive mood will be more pronounced in older people of the two ethnic groups than the young.

Hypothesis (3): Armenian music will induce more depressive mood on young Armenians than Armenian music on young Arabs.

Rationale for the Hypotheses:

- Referring to hypothesis one we expect Armenian music to have more effect on Armenians than Arabs. The rationale is that Armenian music

carries in it part of the Armenian identity for Armenian participants. This however, is not the case with Arab participants who listen to Armenian music. Therefore, we expect Armenian music to induce more intense depressive mood on Armenians than Arabs.

- As for the rationale for hypothesis two, there is tendency to believe that as people grow older they cling more to their ethnic music. Therefore, in this experiment it is expected that induced depressive mood will be more pronounced in older people of the two ethnic groups than the young.
- The rationale for hypothesis three is: Since young Armenians are familiar with Arabic music, we expect that Arabic music will induce intense depressive mood on them. As for the young Lebanese, who belong to the majority group we expect that Armenian music will not induce intense depressive mood on them, because they are unfamiliar with Armenian style of music.

Limitations:

The differential effect of ethnic music on the musical mood induction procedure is a relatively new research field. Consequently, there was limited literature on this subject.

CHAPTER II

Review of Literature

The purpose of this study is to examine the differential effect that ethnic music has on the induction of a depressive mood amongst members of two ethnic communities; Lebanese Arabs and Armenians.

Psychologists were using music to induce moods as early as 1806, when Samuel Mathews first proposed the iso principle. The iso principal of music therapy has been employed in psychiatry to alter disruptive affective states of mental patients. Music is selected to match the actual mood of the participant, the negative affect that would be altered. For example if the mood of the participant was depressive, then blue and depressive music might be matched to the depressive mood of the participant. This is the iso or similar phase of music stimulation. Then by stages the content and quality of the music is changed towards a happy cheerful feeling tone, thereby altering the mood of the participant into a happy cheerful direction. This is the stepwise vectoring or directed movement of music to the desired goal from sad to cheerful, or restless to tranquil, or bored to stimulated (Shatin, p. 81-82).

The therapeutic use of music had been known long before the discovery of the iso effect. Through out the ages different cultures have recognized music as a remedy for the disturbance of the mind and the ailment of the body. In the western Tradition the history of music as multifaceted

medicine seems to have originated in ancient Egypt where the Klahum papyrus refers to healing the sick with songs. In Mythical times Apollo, leader of the Muses was considered the god of music, medicine and mental purity. Orpheus, Apollo's servant played a harp with magical healing powers with which he charmed his way into Hades to rescue a goddess in distress (Miles, p.15).

Greek deities themselves blessed the connection between mind, body and music. In 850 BC Homer recommended music to alleviate anger, sorrow, worry, fear and fatigue, and claimed that choral singing could prevent the plague. The Greeks also used music to soothe mobs, vanquish enemies, calm violent tempers, cure hangovers and heal various physical and mental illnesses (Miles, p.15).

In 580-500 BC Pythagorus who discovered the physics of musical sound was himself an advocate for making music part of daily life as measure of promoting good health. Plato (C 428-348 BC) also praised music's power to harmonize the revolutions of the soul when its rhythms have been disturbed and also he advocated music not for pleasure but for the enhancement of perception and physical power. In his words Plato says:

> All audible music sound is given us for the sake of harmony, which has motions akin to the orbits in our soul, and which, as anyone who makes intelligent use of the arts knows, is not to be used, as is commonly thought, to give irrational pleasure, but as a heaven-sent ally in reducing to order and harmony and disharmony in the revolutions within us

The trend continued with Aristotole (348-322 BC) who believed that music provided an emotional catharsis with medical benefits. In 106-43 BC

the Roman statesman Cicero wrote that " there is nothing so kindred to our feelings as rhythmic cadences and musical sounds, by which we are stimulated and inflamed and soothed and thrown into a state of languor, and often brought to a state of cheerfulness or sorrow" (Miles, p.16).

In 1500 AD Indian artists confirmed the music- mood connection when they painted ragamalas, miniatures depicting thirty-six different ragas (musical scales), each with a different emotional setting. In Europe, during the Renaissance period thinkers began the first documented discussion of the influence of music on breathing, blood pressure, muscular activity and digestion. In 1789 AD an article appeared in the Columbian magazine, in the United States entitled "Music physically Considered" about using music to treat depression by exciting the nervous system. The author was the first American to propose in print that impact of music on the mind could treat the body and support overall health (Miles, p.16-17).

In the nineteenth century Americans and Europeans began a course of experimentation with the relationship between music and mental state with the aim of discovering applications for psychiatric treatment. German philosopher Friedrich Nietzche asked, " What is that my whole body really expects of music? I believe, its own ease." In 1899 American Neurologist James L. Corning, conducted the first controlled music therapy experiment pertaining to sleep and the emotions. In the Early twentieth Century European composers and music educators Carl Orff and Zoltan Kodaly discovered a universal "Ur song" sung by children of all different cultures in their play. This sequence of the third, fifth, and sixth tones of the major scale seemed to be given to

humans by nature (Miles, p.17).

In 1914 American physician Evan O'Neill Kane reported using music to alleviate pain in the hospital. In 1940s pioneering scientific studies by psychologists and physicians in the United States discovered that music can produce various moods, prolong attention span, relieve internal tension, stimulate associations and imagery, and facilitate self-expression, Therefore music therapy was born (Miles, p.18).

Indigenous cultures also have accessed the power of music since prehistoric times. Great civilizations from Confucian to Aztec Empire developed sophisticated philosophies describing the music-mind-body connection. In the Middle East and specifically in Syria Bemarisdans an Iranian word for house of the sick were built which corresponded to the modern day mental institutions. These houses were built around a big courtyard, which had greenery, water fountain and a band that played soothing music through out the day. They believed that music along with the medication administered enhanced the cure of the patients (Heraytani, No 10, 51, 1992).

In modern times, the effect of music on mental capacity was attested experimentally when in 1993 experimenters at the University of California Irvine established that Mozart made people smarter, with an experiment in which listening to Amadeus piano sonata improved IQ by an average of nine points (Miles, p. 19). From ancient Egypt to the discovery of listening to Mozart that raises the IQ the consensus is clear: music can make a difference in how people feel, think and act.

According to musicologists there are seven major factors that determine the psychological and physiological effects of a musical selections. First: Rhythm, which is the ordered flow of music through time. Second: Timber, which is the unique sound quality or color of an instrument or voice like oboe versus a guitar. Third: Texture, which is the instrumentation of a piece and how the parts interrelate. The simplest texture is a single voice or instrument and the most complex being a symphony orchestra. Fourth: Pitch, which is the fundamental sound wave frequency of a tone, for example a bass guitar plays in a low pitch range. Fifth: Tempo, which is the speed music moves in. Sixth: Harmony, which is the simultaneous combination of two or more notes to produce a chord. Seventh: Melody, which is the sequence of tones that catches people's attention and floats above the harmony and rhythm (Pen, 1992, p. 287-305).

When all these factors come together to the composer music is created. Music is a language, a form of communication, it can elicit emotional responses and provoke thoughts but it can not signify concrete things or ideas in the manner of nouns, verbs and adjectives. Music is an abstract language, it depends on the creator and the listener. When music hits the listener's ear it is filtered through the cultural conditioning of peers, family, authorities and the media. Then it is processed by the participant's personal characteristics like age, sex, ethnicity, personality, musical education and person's own store of memories (Pen, p. 4-5).

Nowadays culture and race have a greater role to play on the effect of music on individuals. Since societies are becoming more diverse, the implementation of multiculturalism in music not only for entertainment but also for therapeutic means has become more prominent. Research has shown that music provokes different emotions in different ethnic groups. Bearing on this problem is the cross-cultural research that was conducted by Andrew Gregory and Nicholas Varney (1996). They had 90 participants from European and Asian cultural backgrounds living in England, listen to twenty-one musical excerpts (13 Western classical and 8 classical Indian). Immediately after attending to each excerpt, listeners were asked to tick one or more items on an adjective checklist to describe the emotional feelings aroused by the various music excerpts. These adjectives were modified version of Hevner's 1936 adjective list. Statistical analysis revealed that there were significant differences in the nature of emotional response to music from the different ethnic groups. Specifically Westerners and Asians reported different emotions to the same musical excerpts (Gregory, Varney, p. 49-51). Another research conducted by Niewiadomka-Bugaj and Zeranska-kominek (1993) on a Lithuanian minority group in Poland, showed that music is one of the major determinants of ethnic identity, it is often used by minority groups to preserve their culture from being assimilated by the larger group. In this study a questionnaire was aimed at confronting the reaction and views of respondents to folk music from their own region with reaction and views to folk music of other ethnographic regions in Lithuania. Each respondent had to listen to sixteen very short fragments of songs which were divided into three groups:

Songs from Lithuania, songs outside their region but similar to their own music and songs outside their region and not similar. After listening to each song participants were asked the question "Do you like that song?" Results showed that people liked music which was from their region (Lithuania) and did not like music which was outside their region (Niewiadomka-Bugaj, Zeranska-Kominek, p.290-293).

Based on the above research, music provokes different emotions in different ethnic groups, and minority groups use music to preserve their culture from being assimilated by majority groups. The present research is intended to investigate the differential effect of Armenian and Arabic music on the Armenian minority group and the Arab majority group living in Beirut-Lebanon by using the musical mood induction procedure.

It is vital, before going any further to give a short survey about the Armenians in Lebanon and to review the literature done on the assimilation of Armenians into the Arab society. Then mood induction procedures will be discussed followed by the presentation of the framework of the current research.

Armenians in Lebanon:

The Armenian community in Lebanon is of a relatively recent formation. After the Turkish massacres during the First World War, waves of Armenian refugees came and settled in Lebanon. Initially they were poor but through hard work they raised their living standard. After Lebanon gained independence from the French mandate in 1942, the Armenian community

received recognition as a minority group, and enjoyed its due rights and privileges. They have their representatives in the government, and are very active in all aspects of community life, social and academic. Owing to the sectarian nature of the Lebanese society and democratic way of government, Armenians were able to maintain all aspects of their culture. Relevant here is a research conducted by Hilal Khashan (1991) which dealt with the subject of political values of Lebanese Armenian College students. Armenian college students revealed a clear preference for Armenian leaders, and appeared to cohere more to their community than the non-Armenian students towards their own leaders (Khashan, p. 55-60). The author explained these responses in two related ways. Firstly the Genocide, which most likely had left enduring scars upon Armenian minds, and second the distinct ethno-linguistic differences. Armenians, traumatized by Genocide, worried about the reconstitution of the fragments of the cultural aspects of their lives, did little to acquaint themselves with the Lebanese way(s) of life. Armenians have been able to maintain all aspects of their culture such as language, drama, music, and literature. They have built their own churches, opened their own schools and have organized their own political parties.

Research shows that the new generation of Armenians is more acquainted with the Lebanese Arab culture. A research conducted by E. T. Prothro (1961) at the American University of Beirut, compared the child rearing practices of Lebanese Arab Orthodox Christians, Lebanese Armenian Apostolic and Arab Sunni Muslim mothers. Differences were found in child rearing methods. For instance, Lebanese Arab Orthodox mothers encouraged

earlier training for independence of their children than Lebanese Armenian Apostolic mothers, followed by the Arab Sunnis. Lebanese Apostolic mothers showed higher expectation of their children in terms of cleanliness, responsibility and regular home duties. Apostolic mothers spent relatively more time with their children than the other groups of mothers. Differences were observed in the attitude of the mothers towards fighting. While the Lebanese Orthodox mothers accepted fighting as necessary, Lebanese Armenian mothers accepted it only in self defense and Sunni mothers did not accept it at all. More Armenian Apostolic mothers expected their children to get university education than Orthodox or Sunni mothers. Based on this research, it is expected to find distinct personality differences between the Armenian and Arab children, as they grow older. Their differences could also effect their perception of mood in music. Listening to the same musical excerpt would have different effect on Armenians and Arabs.

Assuming that child rearing practices influence personality development, two investigators in the same university: Der Karabetian Agop and Melikian Levon, (1973) compared the scores of two groups of university students, Lebanese Armenian and Lebanese Christian, on a standardized questionnaire that measured 15 personality characteristics. Based on Prothro's findings about differences in child rearing practices between Armenians, Sunnis and Arab Orthodox mothers, the two researchers predicted differences on six of the personality variables, namely: achievement, order, autonomy, affiliation abasement and aggression. For example it was predicted that Lebanese Arab Orthodox adults would score

higher on Achievement variable than Lebanese Armenian adults. Statistical tests of the scores showed that none of the predictions could be supported. Researchers attributed the results to the possibility of the influence of growing up in the same socio-cultural milieu for 12 years during which the initial personality differences that may have resulted from differential patterns of child rearing may have given way to more similar personality characteristics (Der-Karabetian, Melikian, 1974, p. 68-69). Furthermore, the comparison of the scores of similar groups of participants who had taken the same test in 1956 showed that the groups then differed on 10 of the 15 variables. The scores were also analyzed in such a way as to reveal the way in which the scores have changed over the time period of 17 years from 1956 to 1973. The results indicated that both groups had changed to some extent. However, the magnitude of the change in the Armenian scores from 1956 to 1973 was greater than and in the direction of the Arab Christian scores (Der-Karabetian, Melikian, p. 173-175).

Given the definition of Assimilation, as the process of accommodation of one's behavior to group life adopting the attitudes and habits common to the members of the majority group (Der-Karabetian, 1981, p. 246), the above mentioned studies show a trend toward assimilation of the Armenian youth into the Lebanese Arab society.

An important variable on the effect of music on people is that of age. In the previously mentioned research by Der-Karabetian and Melikian (1974) on Lebanese Armenian and Lebanese Christian participants, 226 Armenians participated: 53 elderly, 49 middle aged and 124 young with average ages of

66.6, 41.7 and 22.5 years respectively. Results showed that elderly Armenians were much closer in their ethnic orientation than the young. While the elderly seemed to indicate greater attachment to the Armenian homeland and resentment for being removed from there, the young seemed to indicate a tendency to break away from old traditional customs and institutions, and a growing disbelief in the existing traditional values in the Armenian family (Der-Karabetian, Melikian, p. 168). Thus by moving away from Armenian tradition, young Armenians become more open and susceptible to other influences, one of which is the culture and the tradition of the majority Arab people.

It would seem that, on the one hand, there is a tendency to break away from traditional ways and values by young Armenians and on the other, a tendency to preserve and maintain them by elderly Armenian. Consequently one would expect that Armenian ethnic music will have a greater effect - in terms of mood change – with the older Armenians compared to the young Armenians.

Mood Induction:

The increasing interest of researchers in the relation between emotion and cognition has led to the development of a range of laboratory methods for induction of mood states. The range of different moods for which mood induction procedures have thus far been utilized is fairly restricted. Most of the induction methods have been employed for elation and depression, the latter reflecting research interest in clinical depression.

In research by Terwogt and Grinsven (1991) a group of adults were asked to judge a large number of mood states for their possible expressions in music. Elation and depression were found to be the most pronounced and clear emotions perceived by participants. In principal, most of the induction procedures are adopted to induce depression and elation.

A change in mood can be done by many methods one is imagery and another is music. Use of imagery is one of the induction methods where participants listen to a tape-recording instructing them to relax, make themselves comfortable, and focus their attention on the instructions they are about to hear. Participants are instructed to imagine situations that would leave them feeling either happy or sad. They are told that they can either imagine hypothetical situations or real events from their past. They are then requested to generate vivid imagery of the events. They are instructed to concentrate on their thoughts that they would actually think and try to experience the same happy or sad feelings that they would actually feel if they were in the situation. This technique was developed by Wright and Mischel (1982).

Another major mood induction method is music, which is utilized in the present investigation. Procedures for musical mood induction fall into two categories: Incremental music and non-incremental music procedures.

1-Incremental music procedure:

This method was created by Pignatiello, Camp and Rasar (1986). Nineteen non-lyrical selections chosen for the two mood types (depression

and elation) were recorded, ranging from 1 to 5 minutes in length. They were originally chosen by Rabson (1977) on the basis of the musical characteristics of pitch, rhythm, mode, loudness, melody and tempo.

The procedure for the incremental mood induction method according to Pignatiello, Rasar and Camp (Pignatiello, Rasar, Camp, 1986, p. 295-296) is as follows: Prior to listening to the music participants are assessed for present levels of depression with a short form of depression inventory. Also participants are informed that they will be asked questions about the selections once the tape ends and thus they are simply instructed to listen carefully to the music without being aware that the tapes are designed to alter their mood. After the music is over mood will be again measured by a short form of depression adjective checklist to find out if the desired mood has been induced (Pignatiello, Rasar, Camp, 1986, p. 295-296).

Based on their results, Pignatiello, Rasar and Camp came to the conclusion that incremental music procedure is capable of altering mood irrespective of gender with minimum demand characteristics. Meaning mood induced is not artifactual that is subjects really change mood and not simply comply with experimental demands.

2- Non-incremental music procedure:

The major difference between this procedure and the incremental method is that the non-incremental procedure participants are made aware that music is played to them in order to change their mood. In fact they are specifically asked to actively contribute to the change of their mood. Therefore

in this procedure when depressive or elated music is played, participants are asked to use the music as a background to their own efforts to get into the mood desired by the experimenter (Martin, p. 671).

A highly relevant study for our purpose in the field of musical mood induction is the one conducted by Antoinette Bouhuys, Gerda Bloem and Ton Groothuis (1995). Using the non-incremental procedure, the aim was to examine the effect of depressed-elated mood induced by music on judgement of emotional expressions of 12 line –drawn- faces. Thirty non-depressed participants participated in this experiment. Participants were told that the aim of the study was to examine the influence of music on their judgment of facial expressions. Faces shown were a series of 12 line drawings presented in the form of a booklet, each page showing one face (see Appendix 1). Participants had to judge the faces on a five-point scale after listening to music with respect to the six emotions: Fear, happiness, anger, sadness, disgust and surprise. They also had to fill Visual Analogue Scales (VASs) before and after listening to music for assessing depression, elation, hostility and anxiety. Participants could express their moods along these scales ranging from 0% not applicable to 100% highly applicable (Bouhuys, Bloem, Groothuis, 1995, p. 216-217).

Clearly Bouhuys' used two techniques to examine the effect of musical mood induction procedure: The first technique was the Visual Analogue Scale (VAS) which is categorized under the self-rating method of evaluation. Usually self-ratings or Standardized measures are administered right before and after participants have listened to the musical extract. The second technique used

was the faces which are presented after participants have listened to the musical extract.

Self ratings technique as used in the present context have two drawbacks: First: Once participants stop listening to the music and start filling the form, they will be distracted and their attention will be shifted from the general atmosphere that music has created in them to the form that they have to fill out. As a result their responses may not express their true mood. The second drawback of this method and especially when non-incremental musical method of induction is used is situational demand effect that is: participants may not really change mood but simply report doing so, in order to comply with experimental demands.

As for the Facial expressions, they are generally considered as one of the most important signals of emotional states. Numerous studies have shown that participants can accurately and reliably identify specific facial stimuli, expressing the six fundamental emotions, happiness, surprise, fear, disgust, anger and sadness (Ekman, 1982; Kirouac & Dore', 1982, 1983; Kirouac, Dore' & Gosselin, 1983). According to Paul Ekman (1987) a pioneer in the field of facial expressions and emotion, these six emotions are recognized cross culturally (Ekman, Friesen, p. 716). However, because usually it is administered right after the participant had listened to the musical extract, it can have the same drawback of the self-ratings method, which is shifting the attention of the participant to a new activity.

To show the differential effect of ethnic music on the induction of depressive mood, the methods and the procedure used in the present study are based on Bouhuys' research but with six major differences however what follows is essential for understanding the method and procedure of the present research.

1-Different purpose:

Bouhuys' research was interested in the effect of music on perception of faces. In other word the mood was the independent variable, however the present study is interested in studying the differential effect of ethnic music on the induction of depressive mood. Therefore mood is the dependent variable as measured by participants' mood rating of the faces; the independent variable being the music.

2- Different mood induction procedure:

In Bouhuys' research non-incremental musical procedure of mood induction was used, where participants were asked to cooperate in the induction of the depressive mood. In the current research incremental musical mood induction procedure is used, in which participants are kept unaware that the music they hear is expected to change their mood. Therefore no special demands were made on the participants.

3- Different self-rating scales:

Instead of using (VAS) the Multiple Affect Adjective checklist -revised

(MAACL-R) is used. This is a popular instrument for the measurement of affect as states or traits. The MAACL- R test consists of five scales: Anxiety, depression, hostility, positive affect and sensation seeking. Since the mood induced in the current study is depression, the scores on the scale of depression are of great importance for the analysis of the data.

According to a recently compiled bibliography, 716 published articles or doctoral dissertations used the MAACL-R test and in most studies MAACL-R state scales have proven to be sensitive indications of the effects of experimental or natural conditions (Zuckerman,M., Lubin, B., p. 4-5). For example in a research conducted by Valerie Stratton and Annette Zalanowski they used the MAACL-R test to measure the effect of music and paintings on mood (Stratton, V.P., Zalanowski, A.H., p.33). For the test see Appendix 3.

Since ethnicity and its differential effect on music is an important component of the current study, the MAACL-R was translated by professionals into Arabic for Arab participants and Armenian for Armenian participants. Copies of them are found in Appendices 4 and 5.

4- Different usage of the faces:

The same faces that are used in the Bouhuys' research are being used but with three important differences: The first difference was already mentioned earlier: Which is the difference in the purpose of the usage of the faces. Second, in Bouhuys' research faces with ratings were presented in the form of a booklet. In the current study faces and ratings of the six emotions are presented on the computer screen. Third, the administration of the faces

in the Bouhuys' research was after the musical extract was over. In our research faces were presented while participants are listening to music. By doing this we will not be shifting the attention totally to some other activity, also in this way we will be able to observe the development of the mood.

5- Different mood induced:

In Bouhuys' research elated and depressed moods were induced, but in the current research only depressed mood is induced. Bouhuys in his research found that elated music did not affect mood significantly like the depressed music. According to her floor effect may be involved because the basal state of the participants before the experiment was already elated (Bouhuys, p. 224).

6- Different musical pieces:

The musical pieces that were used in Bouhuys' research were Western Classical pieces, like "Swan of Tuonela" by Sibelius for depressed mood and "Coppelia" by Delibes for elated mood. The duration of these pieces was around 5 minutes. In our case two musical pieces are used, both are depressive meaning that the music has slow tempo and written in a minor key. They were chosen after consulting four experts in the field of Armenian and Arabic music. One is an Armenian tune which is taken from an old Armenian sad folk music and the other one is an Arabic tune, which is a part of a maqam taken from Nidaa Abou Mrad's tape by the name "The Art of the Maqam on the Violin". The instrument in both musical pieces is a single violin

and the duration of each piece is around 5 minutes.

To recapitulate the present research uses ethnic music (Armenian, Arabic), Age (old, young) and ethnic background (Armenian, Arab), as independent variables and mood as Dependent variable.

The following primary hypotheses are tested in the present study:

Hypothesis (1): Induction of depressive mood using Armenian music will be more effective with Armenian participants than Arab participants.

Hypothesis (2): Induced depressive mood will be more pronounced in older people of the two ethnic groups than the young.

Hypothesis (3): Armenian music will induce more depressive mood on young Armenians than Armenian music on young Arabs

CHAPTER III

Method

Participants:

72 volunteers (36 Lebanese Armenians and 36 Lebanese Arabs) participated in this study. Of the 36 Armenians, 20 were between the ages of 18 to 22 and constituted the young Armenian group and the other 16 making the old Armenian group were between 55 to 60. Similarly, of the 36 Lebanese volunteers 20 were between the ages 18 to 22 making the young Lebanese Arab group while the rest (16) constituted the old Lebanese group. Each participant within his/her age bracket and ethnic background was randomly assigned to one of the two condition groups: either listens to Arabic music or Armenian.

Material:

1. Music: Two depressive musical pieces were used. One is an Armenian old folk tune by an unknown artist and the other one an Arabic tune which is a part of Maqam from Nida Abou Mrad's tape by the name "The Art of Maqam on the Violin". These stimuli were recorded on two cassettes and presented on a Hitachi cassette Recorder (model 720) operated by the experimenter. Participants listened to the music through headphone attached to the recorder.

2. Faces: A Pentium 3 computer was used to present randomly the 12 line drawn faces with their ratings. Each line drawn face was seen separately by the participant. The subjects judged the faces with respect to the six emotions: Fear, happiness, sadness, disgust and surprise. Emotions on the faces were rated on a five-point scale as to their applicability to each of the 12 faces. The scale ranges from 0% applicable; 255: very little; 50%: little; 75%: moderately; to 100%: highly applicable.
3. Multiple Affect Adjective Checklist - revised (MAACL-R) was used to measure mood change. The MAACL-R is prepared by Zuckerman and Lubin, it consists of 132 adjectives and has been made as simple as possible for the test taker, requiring only an "X" or no "X" mark in the box next to each of the adjectives. The individual MAACL-R scale scores are obtained by summing the number of adjectives checked on each of the five respective scales (anxiety, depression, hostility, sensation seeking and positive affect).

All of the scales in the MAACL-R test show satisfactory internal reliability. Validity studies were reported in a variety of populations including normal adolescent, adults, counseling clients, and patients from clinics and hospitals. Self-ratings on similar dimensions to those in the MAACL-R show good convergent validity for all the MAACL-R scales. Single clinical observer ratings also show significant correlations and show good discriminated validity. In general all the scales of MAACL-R correlate with self-ratings of health in both normal and clinical samples (Zuckerman,M., Lubin, B., p. 4-5)

4. A short questionnaire was administered at the end of the experiment, in order to assess the participants' familiarity with the music and the mood of the music. A sample of that questionnaire is found in Appendix 6.

Procedure:

In the experiment the young participants both Armenian and Arab were recruited from the Haigazian University student body. The old Armenian and Arab participants were recruited from the faculty and staff of Haigazian University and from friends and relatives. The old had a minimum of high-school education. The difficulties in recruiting the old resulted in having unequal number of participants between the young who were 10 participants in each experimental group and the old who were 8 in each experimental group. This difficulty in recruiting was due to their being employed therefore had hard time leaving their jobs during the day to participate in the experiment.

The experiment was conducted individually and by appointment. The experimental room was set to give the feeling of comfort and warmth to the participants. Meaning the room was not crowded and participants were sited in a comfortable armchair facing the computer.

During the experiment participants sat in a comfortable armchair computer. Each participant then was instructed to relax as completely as possible and the instructions were given and explained in detail. Those of the old, who were not familiar with the use of computer, were taught its use prior to proceeding with the experiment.

At the time of the experiment participants were given the following instructions:

> " This project is about the relationship of music and concentration.
> I want you to relax and place this headphone, and listen to the music with concentration.
> After 30 seconds of your listening to the music faces will be shown on the computer as you can see in this sample. (A sample of a face with the six emotions to be rated was shown while this instruction was given).*see Appendix 2*
> Your job is to judge how much each of the six emotions is present on the faces, using a five - point scale that ranges from 0% (not applicable) to 100% (highly applicable).
> Now there will be a demonstration on the computer, to show you how to use the program and rate the faces.
> Also before and after listening to the music you will be asked to fill out a questionnaire.
> If you have any questions please feel free to ask, if not we can proceed with the study".

After giving the instructions the demonstration on the computer was carried out and participants were asked if they had any questions.

When participants were ready the experiment started: The first form of MAACL-R was handed out to the participants. After the completion of the questionnaire, the participants had to put their earphones on, listen to the music and after 30 seconds started judging the 12 faces as was instructed. Immediately as the music ended participants were asked to fill out the MAACL-R form again. Participants were also requested to fill out the short questionnaire about their familiarity with the music. Before leaving they were asked if they had any questions and were thanked for participating in this study.

CHAPTER IV

Results

Results of MAACL-R:

Mood change score was indexed by the difference between the MAACL-R depression affect scales for each of the participants. In line with the hypotheses the mean differences between groups were tested by t tests, presented in Table 1.

Table 1

Summary table of t test results

Experimental groups	t	p
Old Vs young Armenians / Armenian music	0.39	n.s.
Old Vs young Arabs/Arabic music	0.40	n.s.
Old Vs young Armenians / Arabic music	0.25	n.s.
Young Armenians Arabic music Vs young Arabs / Armenian music	**9.17**	**< 0.001**

As can been seen from the table the only significant results was that of the difference in induced depressive mood between the young Armenians by Arabic music and the young Arabs by Armenian music.

$t = 9.17, df(18), p < 0.01$.

To test for any interactional effects MAACL-R scores were cast into 2X2X2 analysis of variance format, with music (Arabic and Armenian), ethnicity

Results are presented in the summary table below.

Table 2

Summary Analysis of variance for MAACL-R

Source	SS	DF	MS	F	P
Total	35855.652	71	----------	-------	----------
Music	1414.372	1	1414.372	3.7	n.s.
Ethnicity	1809.874	1	1809.874	4.7	0.05
Age	934.375	1	934.375	2.4	n.s.
Music X ethnicity	30.628	1	30.628	0.08	n.s.
Music X Age	2487.017	1	2487.017	6.5	0.025
Ethnicity X Age	1094.626	1	1094.626	2.9	n.s.
Music X ethnicity X Age	3622.407	1	3622.407	9.5	0.05
Error	24462.354	64	382.224	-------	

Two significant interaction effects were found: between music and age $F(4.08)= 6.5\ p< .05$, and between the three variables (age, music and ethnicity). $F(8.83)=9.5\ p<.05$

Table 3 depicts the mean changes in MAACL-R depression scale for the 8 condition groups: Armenian young listening to Armenian or Arabic music, Armenian old listening to Armenian or Arabic music, Lebanese young listening to Armenian or Arabic music and Lebanese old listening to Armenian or Arabic music.

Table 3

Mean table for MAACL-R

	Armenian		Lebanese	
Age	Old	Young	Old	Young
Armenian Music	+1.88	+5	-2.13	**+23.9**
Arabic Music	-4.88	**-5.7**	+7.62	+2.5

As can been seen from Table 3, Armenian music induced significant depressive mood on young Arabs, and Arabic music did not induce a significant depressive mood on young Armenians. These results are opposite to what was hypothesized in the current research.

Another way of looking at the data is by noting the direction of change in the percentage of participants' score shifts on the MAACL-R test after listening to music. Where by scores can shift towards sadness, towards relaxation or can stay the same. Some suggestive differences emerged when the patterns of mood shifts are examined in this way.

Results of Faces:

The twelve faces used in this research were subdivided in two groups of equal sizes: (a) ambiguous faces: reflecting similar amounts of positive and negative emotions (faces 3-6, 8 and 10) and (b) clear faces: showing preponderance of positive or negative emotions (faces 1,2,7,9,11 and 12). Bouhuy tested this subdivision in her research: when 50% of the participants agreed upon the presence of an emotion on one of the faces, it was considered an ambiguous face. If more than 50% agreed upon an emotion, the face was considered a clear face (Bouhuy, p. 218-219).

Since depression is the targeted mood to be measured and for maximum effect, first: the emphasis in the analysis was on the ratings of the emotion of sadness on the faces. Second: based on the theory that bias in perceiving emotion of sadness on faces will especially be pronounced in the ambiguous faces, the results of the ambiguous faces were separated from the results of the clear faces.

Like MAACL-R and in line with the hypothesis, differences between groups on clear and ambiguous faces for the emotion of sadness were assessed by t tests. Unlike MAACL-R no significant differences were obtained here. See Tables 4 and 5.

Table 4

T tests on ambiguous faces

Experimental groups	t	p
Old Vs young Armenians / Armenian music	0.66	n.s.
Old Vs young Arabs/Arabic music	1.26	n.s.
Old Vs young Armenians / Arabic music	0.28	n.s.
Young Armenians/ Arabic music Vs young Arabs / Armenian music	0.86	n.s.

Table 5

T tests on Clear faces:

Experimental groups	t	p
Old Vs young Armenians / Armenian music	0.071	n.s.
Old Vs young Arabs/Arabic music	0.46	n.s.
Old Vs young Armenians / Arabic music	0.065	n.s.
Young Armenians/ Arabic music Vs young Arabs / Armenian music	0.94	n.s.

To test for any interactional effects, ratings of sadness on clear and ambiguous faces were separately cast into 2X2X2 analysis of Variance format. With music (Armenian and Arabic), ethnicity (Arab and Armenian) and age (old and young) as independent variables were used. Results are presented in the Summary in tables 6 and 7 below.

Table 6

Summary ANOVA for ambiguous faces/ emotion of sadness

Source	SS	DF	MS	F	P
Total	29206.436	47	----------	-------	--------
Music	2.297	1	2.297	0.003	n.s.
Ethnicity	546.75	1	546.75	0.80	n.s.
Age	61.31	1	61.31	0.09	n.s.
Music X ethnicity	707.535	1	707.535	1.036	n.s.
Music X Age	503.759	1	503.759	0.74	n.s.
Ethnicity X Age	58.525	1	58.525	0.086	n.s.
Music X ethnicity X Age	4199.0989016	1	4199.0989016	6.147	0.025
Error	27326.260	40	683.1565	-------	

Table 7

Summary ANOVA for clear faces/ emotion of sadness

Source	SS	DF	MS	F	P
Total	14725.656	47	----------	-------	----------
Music	397.469	1	397.469	1.19	n.s.
Ethnicity	21.167	1	21.167	0.06	n.s.
Age	397.469	1	397.469	1.19	n.s.
Music X ethnicity	1.375	1	1.375	0.004	n.s.
Music X Age	67.391	1	67.391	0.20	n.s.
Ethnicity X Age	390.308	1	390.308	1.17	n.s.
Music X ethnicity X Age	123.120	1	123.120	0.37	n.s.
Error	13327.357	40	13327.357	-------	

Looking at the tables 6 and 7 we can see significant interaction was found between the three variables age, music and ethnicity for the ambiguous face. $F(5.42)= 6.147 p<0.025$, but no significant difference was found for clear faces.

To check for any differences pertaining to other emotions, a series of analysis of variance and t tests similar to those conducted on the emotion of sadness were performed on the scores of the remaining five emotions depicted by the faces (happiness, anger, fear, disgust and surprise). No significant results were found.

Tables 8 and 9 depict the mean facial ratings for the emotion of Sadness rated by each participant on clear and ambiguous faces.

Table 8

Means of the sadness rating/ ambiguous faces

	Armenian		Lebanese	
Age	Old	Young	Old	Young
Armenian Music	48.96	54.58	44.79	55.42
Arabic Music	48.44	42.92	38.54	50.83

Table 9

Mean of the sadness rating/ clear faces

	Armenian		Lebanese	
Age	Old	Young	Old	Young
Armenian Music	48.96	47.92	37.5	29.17
Arabic Music	43.23	44.17	45.60	45

As can be observed from the mean tables 8 a pattern is seen though not a significant one. Depressive mood induced the same effect on the old people as well as the young of the two ethnic groups. Also ambiguous faces show that Armenian music had more effect on young Arabs than Arabic music on young Armenians. This pattern is like the MAACL-R results and opposite to the hypotheses.

CHAPTER V

Discussion

Discussion of MAACL-R results:

Results of the MAACL-R were tested for the three hypotheses: the first hypothesis that induction of depressive mood using Armenian music will be more effective with Armenian participants than Arab participants was not supported. There was no significant difference in induced depressiveness (as reflected by the MAACL-R mean difference scores) between Armenians and Lebanese after listening to Armenian music. However further inspection of the data revealed that if one looked at the number of participants who changed their mood (rather than the group mean differences) suggestive differences emerge. Data showed that while 50% (N=9) of all Armenian participants became more depressed after listening to Armenian music a similar population of Armenian participants actually became more relaxed after listening to Arabic music. Only 3 Armenians became relaxed after listening to Armenian music and 3 were depressed after listening to Arabic music. All this argues for an unmistakable trend, for more of the Armenian participants to shift in mood towards sadness when listening to a sad ethnic music but not when listening to a sad but not ethnic music. These results fit well into the ideas expressed in the introduction that music is a major component of ethnic identity. This may account for the greater number of Armenians changing their moods with the sad Armenian music but not to, change their moods with similarly sad on-Armenian music. In general it may be concluded that depressive mood induced

by Armenian ethnic music seems to effect more Armenians than the depressive mood induced by Arabic music.

There was no support for the second hypothesized relationship that induced depressive mood will be more pronounced in older people of the two ethnic groups than the young. There was no significant difference in induced depressiveness (as reflected by the MAACL-R mean difference scores) between old and young of both ethnic groups after listening to Armenian and Arabic music. This lack of difference could be due to the sad music having slow to moderate tempo. Relevant here is a research by Moore (1992), in which he investigated musical preferences of a sample of 514 elderly (over 65 years of age) for vocal range, tempo and song repertoire, results indicated that older people prefer slower and moderate tempos to faster tempos. In the current research sad music, Armenian or Arabic, being slow and moderate in tempo was enjoyable by the old and it did not induce significant mood change.

In a previously mentioned study by Der-Karabetian and Melikian (1974), results showed that elderly Armenians were much closer to their ethnic orientation than the young. Old people also showed greater attachment to their homeland and resentment for being so far away. The old in Der-Karabetian's' research were the ones who had witnessed the massacres and the deportation and these memories were still fresh in their minds The young in Der-Karabetian's research showed less attachment to their culture. Those young represent the old in the current research. Consequently it is expected that in time old Armenians would have drifted further away from their ethnic attachments. Therefore it should come as no surprise now that when a group

of old Armenians listened to Armenian music only half of the group shifted their mood towards sadness as just was the case with a group of young Armenians who listened to the same music. Thus when old Armenian participants listened to Armenian music, the music might have already lost part of its emotional impact associated with Armenian identity and loss. This could indicate assimilation effect of the young of yesterday (the present old) as much as of the present young into the Lebanese Arab society.

As for the third hypothesis that young Armenians will show greater mood change listening to Arabic music than Arabs listening to Armenian music, results pointed to a significant but contrary relationship. A rather surprising result was obtained which was that Armenian music induced highly depressive mood on young Arabs, while Arabic music had no significant effect on young Armenians. Further inspection of the data reflected that 8 out of the 10 (80%) young Arabs shifted their moods towards depression compared to only 3 (30%) Armenian participants who shifted their moods in the same direction.

A tentative explanation may be offered based on the concept of familiarity. In the current research Armenian and Arabic music are the highlighted musical genres. Though both of these genres are essentially oriental in character (are similar for example in instrumentation) they still differ on cultural and ethnic grounds. One of the major differences is that Armenian music is based on harmony and melody that develops progressively during the music whereas, Arabic music is based only on melody that does not progress but repeats itself over and over. However both genres are within the sensitivity

and sound experience of listeners from both ethnic backgrounds. Thus we can say that in general Armenians and Arabs are not unfamiliar with each other's music.

Familiarity in this context refers to music that is within the sensitivity and sound experience of a participant, even though the participants have never been exposed to the specific musical piece. Unfamiliar music does not mean literally the opposite of familiar. It means music that is novel but again within the sensitivity and sound experience of a participant. Based on the above clarification, the intense induction of depressive mood on young Arabs who listened to Armenian music and the non-significant results of induction on young Armenians who listened to Arabic music could be explained. Lebanese Arab people, who are unfamiliar to Armenian music because they are the majority group who are not exposed extensively to Armenian music, the Armenian music must have added some novelty to the Lebanese Arab ear. This novelty effect may have sensitized the young Arab ears to Armenian music and this might have contributed to the induction of the intensive depressive mood. As for the Armenian people who are familiar to Arabic music, because of their being the minority group living within the majority group of Arabs, are extensively exposed to Arabic music and thus may have become more desensitized to Arabic music than Arabs to Armenian music. This could have made the novel aspect found in the Armenian music for Arabs not present in the Arabic music for the Armenians. Furthermore as a result of young Armenians being desensitized to Arabic music, Arabic music sounds lacking in anything that relates to the sadness commonly associated to the

Armenian identity. This may have created a relaxing and calming mood rather than a depressive mood on young Armenians.

Relevant here is the observation of two accomplished Armenian musicians; Rev. Neshan Bakalian and Rev. Nerses Balabanian, who are widely involved in school musical activities (choir, concerts,etc...). They concur in their observation that Armenian children listen extensively to Arabic music rather than Armenian music consequently do not usually develop the ability of singing in harmony, they can only sing in melody like the Arabic music.

To sum up, it seems that music being familiar or not does not make musical mood induction procedure more or less effective. It is the idea of being sensitized or desensitized to a musical excerpt that could create the intense mood desired by the experimenter. In fact when young Armenians who were exposed to Arabic music were asked after the experiment about the mood of the music they just had listened to and how familiar were they with it, they reported that the Arabic music was sad but rather calming and soothing and that they were familiar with such style of music. Some even thought that the music they listened to was Armenian.

As a conclusion it can be stated that Armenian youth are being assimilated more into the Lebanese Arab society and one of its manifestation is that they are totally familiar with Arabic music to the degree that some of them could not differentiate it from their own ethnic Armenian music.

As for the results obtained from the analysis of variance there was an interaction effect between age and ethnicity. This indicates that not any musical piece or genre is universally effective with participants. Rather music

can only be selected for induction of depressive mood after taking into consideration the age and the ethnic background of the participant. For example, the Armenian music had a differential effect depending on who the listeners are – whether Armenian, Lebanese, old or young.

In therapeutic settings when music is used in order to induce a specific mood, the above results are worth keeping in mind. Thus, Cheryl Dileo Marato in his book on Music Therapy and Stress Management states that " If inappropriate music is selected different psychological and physiological reactions are possible, including irritation, anger and frustration" (Lehrer, P.M., Woolfolk, R.L., p, 407-413).

Discussion of Face Results:

The same approach followed in testing for expected differences on MAACL-R was used now to test the same differences but this time in relation to the facial ratings. The analysis will be mainly in terms of the ambiguous faces. Facial expressions dominate contextual information (music in the present situation) in determining emotion attributions. The only exception being that contextual information becomes more influential when facial expressions are more ambiguous than context information (Ekman, Frieser and Ellsworth, 1982, p. 32-34). Therefore when participants are feeling depressed they will perceive more sadness in facial expressions and this bias will be especially pronounced in judging ambiguous faces. (Bouhuy, 1995, p. 218-219).

The first hypothesis that induction of depressive mood using Armenian music will be more effective to Armenian participants than Arab participants was not supported. There was no significant difference in the rating for faces between Armenian and Lebanese participants as a function of the Armenian depressive music.

The second hypothesis that old people will be influenced more than the young by their respective ethnic music was not supported. There was no significant difference between the old and the young, whether Armenians or Lebanese Arabs, in their facial ratings under their respective ethnic music. This pattern was similar to the one obtained by the MAACL-R. It can be stated that the old and young in this sample were effected by their respective ethnic music to the same extent. The explanations given previously for lack of significant differences with the MAACL-R are applicable here also. Namely that slow to

moderate tempo music has calming effect on old people. Further for old Armenians, because of assimilatory pressures, Armenian music might have lost part of its emotional impact associated with Armenian identity and loss. That may account for why the depressive mood associated with Armenian identity was not induced.

The third hypothesis that young Armenians will show more mood change by listening to Arabic music than Arabs listening to Armenian music was not supported. This result contradicts what was obtained on the basis of the MAACL-R. In that case Armenian music was found (contrary to expectation) to induce intense depressive mood on young Arabs. The question of whether Armenian music had such an unexpected effect on non-Armenian participants seems to resolve itself into the question of the nature of the instruments used in measuring the mood induction effect. The two instruments used may be taping different systems. MAACL-R is a cognitive and self-referential device like all self-rating methods are while, the other involves some kind of projective activity where all salient cues are ambiguous. The underlying assumption of projective tests is that individual's responses to vague or ambiguous stimuli (for example the ambiguous faces) will tend to reflect participant's true feelings and emotions. Therefore based on the previous discussion of the limitations of the MAACL-R, one may conclude that in reality labeling of emotions on ambiguous faces while listening to depressive music is perhaps the truer reflection of the depressive mood induced on participants. The risk of misperceiving or willfully distracting one's own motivation inherent in most self-rating devices is henceforth minimized.

However the issue between what amounts to the relative merits of projective versus reflective (introspective) methods remains endemic in mood induction research. For an enlightened review see the reference "On the induction of Mood" by Maryanne Martin.

The pattern of response to sadness on the 6 ambiguous faces corresponded closely to the pattern of responses on MAACL-R, where young Arabs were influenced more by Armenian music than young Armenians were influenced by Arabic music (see tables 3 and 8). The concept of desensitization of young Armenians to Arabic music because of their familiarity to such style of music versus the sensitization of the young Arabs to Armenian music because of their unfamiliarity explained the pattern to MAACL-R response. This response can be used to explain the similar pattern of results obtained on the ambiguous faces.

The analysis of variance conducted on ambiguous faces like MAACL-R revealed interaction between the three variables age, music and ethnicity, which further supports the previous argument that in the process of musical mood induction it is essential to take into consideration the ethnic background and the age of the participants.

CHAPTER VI

Conclusion

Music is ubiquitous in the majority of cultures. It is integral to daily life and pervasive in all areas of human functioning. Aside from its aesthetic and entertaining values, there are repeated and consistent research of its use for non-aesthetic or non-entertainment goals. In the interest of examining the use of music to promote health and well being, music therapy as a discipline emerged. Most of the relatively limited literature dealing with affective responses to music has been concerned with the power of music as an influencing factor on individual moods.

In summary the results obtained from the MAACL-R and the ratings of sadness on the ambiguous faces are found below:

1. Armenian participants responded similarly to Armenian and Arabic music that was labeled sad.
2. Old and young people of the two ethnic groups responded similarly to their respective ethnic music.
3. There was an intense effect of minority music (Armenian) on the majority group (Lebanese Arabs). This underlines interesting psychological insights, for which further investigation is recommended.

Based on these results, the following conclusions and recommendations are found below:

Because of the process of assimilation of the Armenian minority group into the Lebanese Arab society, Armenian ethnic music for Armenians may have lost part of the sense of identity associated with it. Therefore, the effect of Armenian music on Armenians was not intense but rather calming. For future investigation on the topic of assimilation of Armenians into Lebanese Arab society and Armenian music, it is recommended that one studies the relationship between Armenian music and the Armenian sense of Identity for Armenians living in Lebanon

It seems that the music labeled sad which has a slow to moderate tempo will have a relaxing and calming effect on listeners who are familiar with such a style of music. Based on previous research, this is truer for older people than the young. Therefore, further research is recommended to study the different musical styles that could induce a depressive mood on the old vs. the young. Further the present experiment may be replicated by adding an unfamiliar musical piece which is not within the sound experience of the participants. For example, the music of Australian aborigines could be used to see the differential effect of ethnic but totally unfamiliar music on Armenians and Arabs.

A rather technical problem emerges here and that is the "comparative sadness" between ethnic music. In the present research the Armenian and Lebanese music were judged as equally sad by experts in the field. However, it would be more desirable if a more objective (psychophysical) measure could be developed.

In addition to previous findings, this research also showed that musical mood induction procedure along with its therapeutic use could be used as an indicator of the degree of assimilation of a certain minority group into the majority group. The present study showed that old Armenians as well as the young may be drifting away from Armenian ethnic attachments, and are becoming more assimilated into the Lebanese Arab society.

For future research it should be taken into consideration that the faces and the MAACL-R are two different devices measuring different aspects of musical mood induction, procedure on participants (projective versus introspective). The novelty of this study was the usage of the faces as a measuring device for mood change (i.e. as an dependant variable) however, more research is needed in that direction. The MAACL-R being a self-rating method can still be used as long as one is aware of its limitations.

The results of the MAACL-R and the ratings of sadness on the 6 ambiguous faces indicated that the influence of music on an individual mood is not a simple one. Affective/mood responses to music are highly individualistic, complex and difficult to operationalize. Age and the ethnic background of participants definitely play a major role in the individuals' complex responses to music. Therefore, it is recommended that in future research the music chosen for a musical mood induction session be carefully selected with the age, the ethnic background, and possible familiarity of the participants with the chosen music be kept in mind

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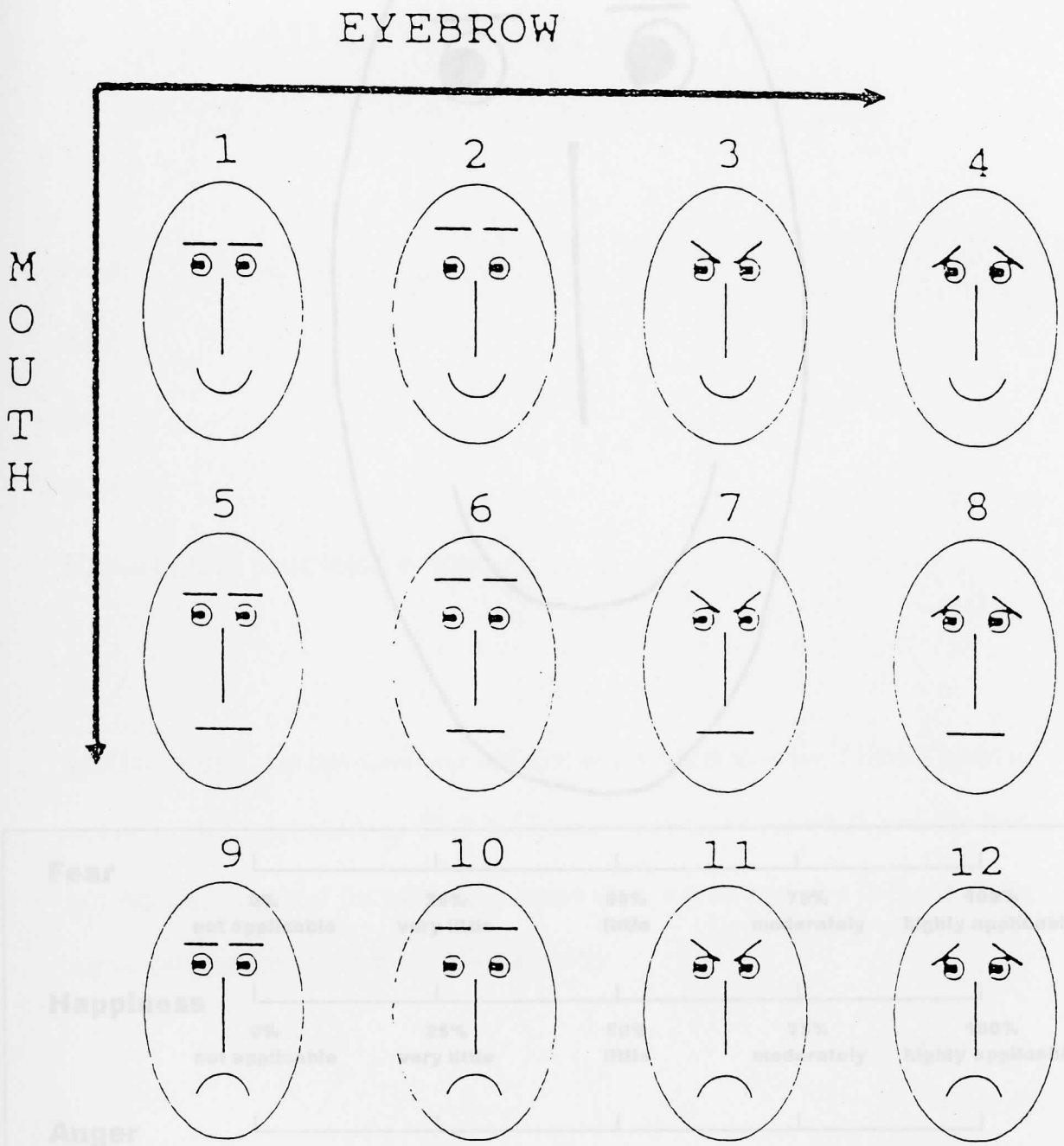
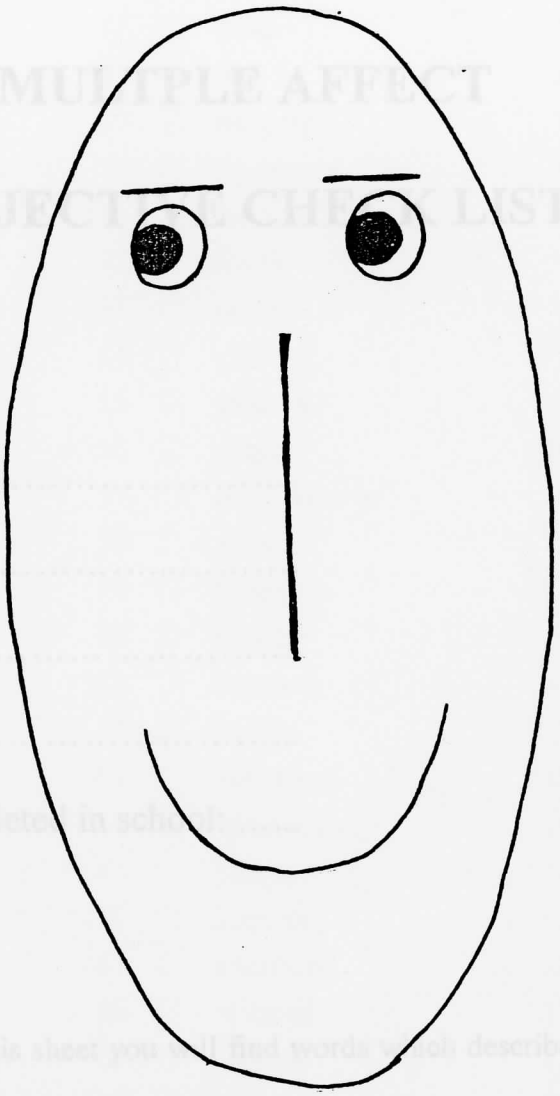
PENDIX 1



PPENDIX 2



Fear

0% not applicable | 25% very little | 50% little | 75% moderately | 100% highly applicable

Happiness

0% not applicable | 25% very little | 50% little | 75% moderately | 100% highly applicable

Anger

0% not applicable | 25% very little | 50% little | 75% moderately | 100% highly applicable

Sadness

0% not applicable | 25% very little | 50% little | 75% moderately | 100% highly applicable

Disgust

0% not applicable | 25% very little | 50% little | 75% moderately | 100% highly applicable

Surprise

0% not applicable | 25% very little | 50% little | 75% moderately | 100% highly applicable

PENDIX 3

MULTPLE AFFECT

ADJECTIVE CHECK LIST

Name: .....

Age: .....

Sex: .....

Date: .....

Highest grade completed in school: .....

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

1	☐	active	45	☐	fit	89	☐	peaceful
2	☐	adventurous	46	☐	forlorn	90	☐	pleased
3	☐	affectionate	47	☐	frank	91	☐	pleasant
4	☐	afraid	48	☐	free	92	☐	polite
5	☐	agitated	49	☐	friendly	93	☐	powerful
6	☑	agreeable	50	☐	frightened	94	☐	quiet
7	☐	aggressive	51	☐	furious	95	☐	reckless
8	☐	alive	52	☐	lively	96	☐	rejected
9	☐	alone	53	☐	gentle	97	☐	rough
10	☐	amiable	54	☐	glad	98	☐	sad
11	☐	amused	55	☐	gloomy	99	☐	safe
12	☐	angry	56	☐	good	100	☐	satisfied
13	☐	annoyed	57	☐	good-natured	101	☐	secure
14	☐	awful	58	☐	grim	102	☐	shaky
15	☐	bashful	59	☐	happy	103	☐	shy
16	☐	bitter	60	☐	healthy	104	☐	soothed
17	☐	blue	61	☐	hopeless	105	☐	steady
18	☐	bored	62	☐	hostile	106	☐	stubborn
19	☐	calm	63	☐	impatient	107	☐	stormy
20	☐	cautious	64	☐	incensed	108	☐	strong
21	☐	cheerful	65	☐	indignant	109	☐	suffering
22	☐	clean	66	☐	inspired	110	☐	sullen
23	☐	complaining	67	☐	interested	111	☐	sunk
24	☐	contented	68	☐	irritated	112	☐	sympathetic
25	☐	contrary	69	☐	jealous	113	☐	tame
26	☐	cool	70	☐	joyful	114	☐	tender
27	☐	cooperative	71	☐	kindly	115	☐	tense
28	☐	critical	72	☐	lonely	116	☐	terrible
29	☐	cross	73	☐	lost	117	☐	terrified
30	☐	cruel	74	☐	loving	118	☐	thoughtful
31	☐	daring	75	☐	low	119	☐	timid
32	☐	desperate	76	☐	lucky	120	☐	tormented
33	☐	destroyed	77	☐	mad	121	☐	understanding
34	☐	devoted	78	☐	mean	122	☐	unhappy
35	☐	disagreeable	79	☐	meek	123	☐	unsociable
36	☐	discontented	80	☐	merry	124	☐	upset
37	☐	discouraged	81	☐	mild	125	☐	vexed
38	☐	disgusted	82	☐	miserable	126	☐	warm
39	☐	displeased	83	☐	nervous	127	☐	whole
40	☐	energetic	84	☐	obliging	128	☐	wild
41	☐	enraged	85	☐	offended	129	☐	willful
42	☐	enthusiastic	86	☐	outraged	130	☐	wilted
43	☐	fearful	87	☐	panicky	131	☐	worrying
44	☐	fine	88	☐	patient	132	☐	young

Աչխոյժ ☐ 1
Արկածախնդիր ☐ 2
Զգայուն ☐ 3
Վախցած ☐ 4
Գրգռուած ☐ 5
Հաճոյական ☐ 6
Յարձակողական ☐ 7
Ողջ ☐ 8
Առանձին ☐ 9
Սիրելի ☐ 10
Զուարթ ☐ 11
Բարկացած ☐ 12
Տաղտուկ զգալ ☐ 13
Ահռելի ☐ 14
Ամչկոտ ☐ 15
Դաւն ☐ 16
Անտրամադիր ☐ 17
Զանգրացած ☐ 18
Հանդարտ ☐ 19
Զգուշ ☐ 20
Ցնծալից ☐ 21
Մաքուր ☐ 22
Գանգատող ☐ 23
Գոհ ☐ 24
Հակառակ ☐ 25
Պաղարիւն ☐ 26
Գործակցող ☐ 27
Քննադատող ☐ 28
Հակառակող ☐ 29
Անգութ ☐ 30
Յանդուգն ☐ 31
Յուսահատ ☐ 32
Քանդուած ☐ 33
Նուիրուած ☐ 34
Անհամաձայն ☐ 35
Դժգոհ ☐ 36
Վհատ ☐ 37
Պժգալի ☐ 38
Նեղուած ☐ 39
Ժիր ☐ 40
Կատղած ☐ 41
Խանդավառ ☐ 42
Վախկոտ ☐ 43
Լաւ ☐ 44

Ցարմար ☐ 45
Անտէր ☐ 46
Անկեղծ ☐ 47
Ազատ ☐ 48
Ընկերային ☐ 49
Ահաբեկած ☐ 50
Մոլեգին ☐ 51
Կայտառ ☐ 52
Ազնիւ ☐ 53
Ուրախ ☐ 54
Տրտում ☐ 55
Բարի ☐ 56
Բարեմիտ ☐ 57
Խոժոռ ☐ 58
Երջանիկ ☐ 59
Առողջ ☐ 60
Անյոյս ☐ 61
Թշնամական ☐ 62
Անհամբեր ☐ 63
Փրփրած ☐ 64
Արհամարհուած ☐ 65
Ներչնչուած ☐ 66
Հետաքրքրուած ☐ 67
Բորբոքած ☐ 68
Նախանձոտ ☐ 69
Ցնծալից ☐ 70
Վեհ ☐ 71
Մինակ ☐ 72
Կորսուած ☐ 73
Սիրալիր ☐ 74
Ընկճուած ☐ 75
Բախտաւոր ☐ 76
Խենթ ☐ 77
Գձուձ ☐ 78
Համբերատար ☐ 79
Բերկրալի ☐ 80
Մեղմ ☐ 81
Թշուառ ☐ 82
Ջղային ☐ 83
Պարտաւորող ☐ 84
Նախատուած ☐ 85
Մելեգնած ☐ 86
Խուճապահար ☐ 87
Համբերող ☐ 88

Խաղաղասէր ☐ 89
Գոհունակ ☐ 90
Հաճելի ☐ 91
Քաղաքավար ☐ 92
Հզօր ☐ 93
Լուռ ☐ 94
[illegible]ուսպ-ըմբոստ ☐ 95
Մերժուած ☐ 96
Անտաչ ☐ 97
Տխուր ☐ 98
Ապահով ☐ 99
Բաւարարուած ☐ 100
Անվտանգ ☐ 101
Երերուն ☐ 102
Ամօթխած ☐ 103
[illegible]նդարտեցուած ☐ 104
Հաստատ ☐ 105
Յամառ ☐ 106
Փոթորկոտ ☐ 107
Զօրաւոր ☐ 108
Տառապալից ☐ 109
Խոժոռ ☐ 110
Ընկղմած ☐ 111
Համակիր ☐ 112
Ընտանի ☐ 113
Հոգածու ☐ 114
Պրկուած ☐ 115
Սարսափելի ☐ 116
Սարսափած ☐ 117
Մտածկոտ ☐ 118
Երկչոտ ☐ 119
Տանջուած ☐ 120
Հասկցող ☐ 121
Ապերջանիկ ☐ 122
Ոչ-ընկերային ☐ 123
Սրտնեղած ☐ 124
ձաթելու չափ բարկացած ☐ 125
Ջերմ ☐ 126
Ամբողջ ☐ 127
Վայրի ☐ 128
[illegible]ամքով լեցուն ☐ 129
Թոշնած ☐ 130
Մտահոգ ☐ 131
[illegible] ☐ 132

1 ☐ مليء بالنشاط
2 ☐ مغامر
3 ☐ عاطفي
4 ☐ خائف
5 ☐ مضطرب
6 ☐ ممتع
7 ☐ عدائي
8 ☐ مليء بالحيوية
9 ☐ وحيد
10 ☐ أنيس
11 ☐ متسلي
12 ☐ غاضب
13 ☐ منزعج
14 ☐ مرعب
15 ☐ خجول
16 ☐ لاذع
17 ☐ كئيب
18 ☐ ضجران
19 ☐ هادئ
20 ☐ حذر
21 ☐ مبتهج
22 ☐ طاهر النفس
23 ☐ متذمر
24 ☐ قانع
25 ☐ معاكس
26 ☐ بارد الأعصاب
27 ☐ متعاون
28 ☐ انتقادي
29 ☐ مشاكس
30 ☐ شديد القسوة
31 ☐ جريئ
32 ☐ يائس
33 ☐ مدمر
34 ☐ مخلص
35 ☐ سيء
36 ☐ زعلان
37 ☐ فاقد الهمة
38 ☐ قرفان
39 ☐ مستاء
40 ☐ فعال
41 ☐ شديد الغضب
42 ☐ متحمس
43 ☐ متخوف
44 ☐ رائع
45 ☐ ملائم
46 ☐ متروك
47 ☐ صريح
48 ☐ حر
49 ☐ ودود
50 ☐ مرتعب
51 ☐ محتد
52 ☐ منتعش
53 ☐ لطيف
54 ☐ مبسوط
55 ☐ مغموم
56 ☐ جيد
57 ☐ طيب القلب
58 ☐ شرس
59 ☐ سعيد
60 ☐ بصحة جيدة
61 ☐ يائس
62 ☐ عدواني
63 ☐ عديم الصبر
64 ☐ مراوغ
65 ☐ ناقم
66 ☐ ملهم
67 ☐ مهتم
68 ☐ منزعج كثيرا
69 ☐ غيور
70 ☐ فرحان
71 ☐ عطوف
72 ☐ مستوحد
73 ☐ ضائع
74 ☐ محب
75 ☐ محبط
76 ☐ محظوظ
77 ☐ مجنون
78 ☐ دنيء
79 ☐ وديع
80 ☐ مرح
81 ☐ معتدل
82 ☐ بائس
83 ☐ عصبي المزاج
84 ☐ خدوم
85 ☐ مهان
86 ☐ محتقر
87 ☐ مذعور
88 ☐ صبور
89 ☐ مسالم
90 ☐ راض
91 ☐ ممتع
92 ☐ مهذب
93 ☐ قدير
94 ☐ هادئ الطبع
95 ☐ لا مبالي
96 ☐ منبوذ
97 ☐ وقح
98 ☐ حزين
99 ☐ امن
100 ☐ مكتفي
101 ☐ مطمئن
102 ☐ مزعزع
103 ☐ خجول
104 ☐ مسترخي
105 ☐ ثابت
106 ☐ عنيد
107 ☐ هائج النفس
108 ☐ قوي
109 ☐ متألم
110 ☐ عابس
111 ☐ غرقان
112 ☐ ظريف
113 ☐ تافه
114 ☐ حنون
115 ☐ متوتر
116 ☐ رهيب
117 ☐ مروع
118 ☐ مستغرق في التفكير
119 ☐ جبان
120 ☐ معذب
121 ☐ متفهم
122 ☐ تعيس
123 ☐ منطو على نفسه
124 ☐ قلق
125 ☐ شديد الغيظ
126 ☐ دافئ
127 ☐ مكتمل
128 ☐ غير متمدن
129 ☐ متصلب
130 ☐ قاعد
131 ☐ مشغول البال
132 ☐ شاب

Please answer to the following questions:

1- Were you familiar with the music that you had just heard?

☐ Yes ☐ No

2- Do you play a musical instrument?

☐ Yes ☐ No

If yes, What instruments to you play? _____

2- Do any of your parents play a musical instrument?

☐ Yes ☐ No

If yes, What instruments to they play? _____