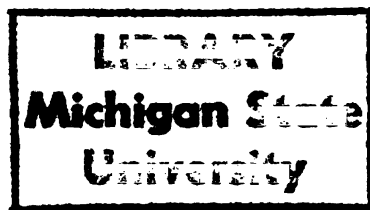




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THE EFFECT OF MUSIC THERAPY SESSIONS
ON PERCEIVED STATE OF AFFECT
AMONG RESIDENTS OF A RETIREMENT CENTER

By

Michiko Kato

A THESIS

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ABSTRACT

THE EFFECT OF MUSIC THERAPY SESSIONS
ON PERCEIVED STATE OF AFFECT
AMONG RESIDENTS OF A RETIREMENT CENTER

BY

MICHIKO KATO

The purpose of this study was to examine the effects of music therapy sessions on perceived state of affect among residents of a retirement center.

Each of twenty subjects was randomly assigned to either an experimental group or a control group. The Affect Balance Scale was individually administered to each of them as a pretest prior to the first music therapy session. Subjects from the experimental group attended one to seven weekly sessions. One experimental subject withdrew from the project. The remaining nine experimental subjects and ten control subjects completed the Affect Balance Scale as a posttest after seven sessions had been completed. Four experimental subjects were eliminated from the statistical analysis due to their poor attendance in sessions.

No significant difference was found between the changes from the pretest scores to the posttest scores of the experimental and control groups. In addition, no significant difference was found between the two scores of pretest and posttest in the experimental group.

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CHAPTER I

THE PROBLEM

Introduction

The growing population of elderly people is one of the most serious issues in today's society and will draw more attention in the near future. In 1980, there were more than 35 million persons over age 60 in the United States. While the population as a whole increased by 11 percent during the period of 1970 to 1980, the population 65 and over increased by 28 percent. Furthermore, the latest population projections indicate that the proportion of those over 75 will be rising in the next few decades (Siegel & Davidson, 1984). Society, therefore, will have to face many problems on how to meet the needs of elderly people in a sufficient way.

Aging is a very complex process. It is biological, psychological, and sociological in nature. From the biological view, one looks for signs of aging in the loss or decline of functional efficiency of bodily organs. Changes in neuromuscular skills, learning ability, judgment, memory, and sensory acuity are important for the psychological view of aging. In addition, behavioral scientists and sociologists look for signs of aging in the individual's changing roles

in society and growing dependence in life (Cox, 1983; Siegel & Davidson, 1984). Disengagement of an aging individual from the society can occur due to organic diseases and disabilities related to age-typical diseases such as arthritis, brain damage or heart disease. As well, it can occur following retirement from work. Thus, old age is a time when many persons experience personal and social losses. Since all these factors are interrelated, it is important for people working with aging persons not only to treat the disease or the problem, but also to give consideration to the whole person with his or her multiple needs (Ford, 1962). In other words, elderly people need assistance to learn, in the best sense, to grow old instead of merely becoming old (Boxberger & Cotter, 1968).

The first part of the present study focuses on the area of social gerontology. Gerontology is the scientific study of aging, while geriatrics involves the application of gerontological knowledge. Social gerontology is defined as the study of the effect of aging upon individuals and society, as well as the resulting reactions of individuals and society to aging (Koller, 1968). Though the field of gerontology in general is still young with very few theories of aging that are established scientifically (Watts, 1980), there has been a dramatic increase in the number of published reports in gerontological research (Hoyer, Raskind & Abrahams, 1984). Particularly, much attention has been paid to older persons'

psychological well-being in recent years (Markides & Martin, 1979).

Psychological well-being includes the concepts of adjustment, morale, satisfaction with life, and happiness which have been dealt with interchangeably in earlier research. Recently, researchers have been attempting to separate each term from the others, and to establish more sophisticated, scientific measurement techniques of these concepts along with formulation of theories.

The second part of this study deals with utilization of music with elderly people. Many programs have been established to improve life quality for the elderly, including music (Gibbons, 1980 & 1983a). The number of articles describing the use of music therapy in geriatrics has, however, been scarce, especially articles of a scientific nature, though the need for more scientific study has already been recognized (Boxberger, 1960). Except for a few articles and unpublished master's theses or doctoral dissertations, most publications are of a descriptive nature.

Only a few studies have dealt directly with the effects of music therapy on psychological aspects of the elderly such as morale (Gibbons, 1980). personal adjustment (Binford, 1982), depression (Ramsay, 1982), and self-esteem (Ice, 1984).

Purpose of the Study

It has been widely recognized that the growing population of older people demands more extended, multiple care. Music has been used in many institutions for the elderly. However, specific studies regarding the use of music therapy for elderly people and these people's musical characteristics have been extremely limited (Riegler, 1980a; Ramsay, 1982; Hylton, 1983; Gibbons 1983a).

On the other hand, in the field of social gerontology studies of life satisfaction or psychological well-being have increased in the last few decades, and more scientific measurements have been developed. The Affect Balance Scale, conceived by Bradburn in 1969, was one of these measurement techniques. This self-report scale was developed to measure short term state of affect. Using a revised form of this scale, suggested by Beiser (1974), as a pretest and posttest measurement, the present study attempted to examine the effect of music therapy sessions on perceived state of affect among residents of a retirement center. There were two reasons for the choice of the term of "perceived state of affect." First, the term of psychological well-being or mental well-being seemed to be so broad that it might have been inappropriate in such a study using a very small sample and a scale with ten items as the measure. Second, terms such as life satisfaction, morale, or happiness have been assumed to underlie the Affect Balance Scale, but this writer felt that

the use of one of these terms could also be misunderstood. On the other hand, a person's perceived state of affect is what this scale actually measures since it assesses both positive and negative affects as well as the balance of these affects.

Research Hypotheses

The Affect Balance Scale (Bradburn, 1969) has been recognized as one of the most effective instruments available to assess psychological well-being. It was devised to measure with sensitivity fluctuations of positive and negative affects over a period of a few weeks. The scale was appropriate for this study because of its use with elderly populations and its ability to measure affective changes over the period required. More details will be presented in the following chapters.

Using a population from a retirement center, a living facility for elderly persons in East Lansing, Michigan, the following null-hypotheses were formulated.

1. The eight weekly music therapy sessions will result in no statistically significant difference between the experimental and control groups in their changes from the pretest scores to the posttest scores as measured by the Affect Balance Scale.
2. There will be no statistically significant difference between the pretest and posttest scores in the experimental group as measured by the Affect Balance Scale.

Limitations

This study limited its experimental and control subjects to higher functioning residents who were living in an independent living unit of the retirement center. The reason for choosing this population was to avoid the wide range of mental and physical functioning levels of residents in the health care center and the intermediate living unit from the same retirement center. It would have been difficult or impossible for most residents from both these units to understand the questions of the Affect Balance Scale.

Due to the available room and the number of musical instruments, the number of the participants was limited to ten in the experimental group and ten in the control group. Moreover, music therapy sessions were held only once a week because of the regular weekly programs at the center as well as the different personal schedule of each participant.

Statistical analysis was limited to determining the difference between two groups in their changes from pretest to posttest and the difference of pretest and posttest in the experimental group. Some studies have attempted to correlate variables such as health state, mental alertness, or activity level to the perceived psychological well-being. Such was not attempted in this study because of the small size of the sample.

Overview

In Chapter II, theoretical and empirical background of this study is presented in a review of related literature. The first part of the review focuses on the theories and research findings in social gerontology. Definitions of psychological well-being and related terminologies are presented. The relationship between activity and well-being concludes the first part of the literature review. The second part deals with music therapy for elderly people. Treatment goals, research findings and treatment approach are presented in this section.

Chapter III includes the methodology of the present study. The sample, setting, materials and equipment, procedure, and statistical analysis of data are described. In Chapter IV, the data collected are presented in relation to the relevant research hypotheses investigated, and the results are interpreted. Chapter V includes a summary of the study, discussion of conclusions and recommendations for future research. Appendices include a list of cassette tapes and a list of songs used in sessions, an example of a song sheet, the revised form of the Affect Balance Scale, an example of scoring procedure, and tables of raw data and demographic information.

CHAPTER II

REVIEW OF RELATED LITERATURE

Theories and Findings in Social Gerontology

Psycho-social Theories of Aging

As stated by Maddox and Wiley (1976), recognition of aging as a social problem is new. Studying this issue scientifically is even more recent, and there exists no single theoretical perspective yet which organizes substantive research on the social aspects of aging. However, the amount of research publication on psycho-social aging has increased dramatically in the recent few decades.

The activity theory is one of the major theories which have dominated gerontological research in the United States. This theory states that the maintenance of social activities is the most effective way to age optimally, even though some reduction in social roles is inevitable as one ages (Havighurst, 1963). According to this theory, an active rather than a passive role is important for mental health and satisfaction with life. Therefore, substitutes should be found when a person has to give up certain roles or activities (Butler & Lewis, 1982).

Definitions

It is important to know who belong to an older population. Siegel and Davidson define the older population as persons aged 55 and over, the elderly as persons of 65 and over, the aged 75 and over, and the extreme aged 85 and over. They also use the term of the frail aged for the age group 80 and over (1984). Butler and Lewis (1982) refer to the concept of two groups among older people: early old-age between 65 and 74 years and advanced old-age 75 and above. One must, however, be aware of the fact that age itself is not an indicator of a person's physical, mental, and psychological status.

The major concern of researchers, regardless which theory they represent, has been so-called successful aging. There has been conceptual confusion in terminology related to successful aging. One prefers the term of psychological well-being or mental health; another uses the concept of adjustment or adaptation; and still others choose morale, life satisfaction, or happiness. The literature review reveals that some authors have used these terms interchangeably, while others have attempted to differentiate them from each other.

Psychological well-being, sometimes called subjective well-being, is assumed to be one's subjective evaluation of the overall quality of one's inner experience (Lawton, 1983). Campbell (1981) interprets mental well-being as the

entirely subjective experience of individuals and their feelings of being happy and content. However, these definitions are so global that there have been attempts to define particular characteristics of psychological well-being more precisely. For example, life satisfaction, morale, and happiness have drawn much attention as such major characteristics underlying psychological well-being.

Life satisfaction refers to the degree to which one is presently content or pleased with his or her general life situation (Lemon, Bengston, & Peterson, 1972). Many researchers agree that life satisfaction has played an important role in social gerontology (Maddox & Wiley, 1976; Peppers, 1976; Lohmann, 1977; Larson, 1978; Cutler, 1979; George & Bearon 1980; Kausler, 1982).

Morale refers to the emotional component of a person's attitude toward his or her own life, a reflection of his or her feelings about the past, present, and future (Chown, 1977).

Happiness sometimes is used as a synonym for life satisfaction, but more precisely reflects the affect people feel toward their current state of affairs. Bradburn defined happiness as the extent to which positive feelings outweigh negative feelings (1969).

Measuring Psychological Well-being

Psychological well-being has been the subject of many researchers in the last few decades. Although a clear

concept, especially regarding the causal relationships between biological, environmental and psychological factors influencing one's feeling of satisfaction with life, has not been established yet, a review of the literature reveals sufficient insights to enable investigators to model causal networks and to test their model (Berghorn, Schafer, Steere, & Wiseman, 1978). This writer will first review the most frequently used measurement instruments of psychological well-being for elderly people, and then present the findings regarding the correlates of well-being.

Neugarten and her team attempted to establish a short, easily-administered instrument as a measure of old people's well-being (1961). The Life Satisfaction Ratings and Indices A and B are the results of their efforts. The Ratings and Indices have been revised, and are recognized as probably the most widely used instrument for assessing subjective perception of well-being among the older population (George & Bearon, 1980). The basic concept of these instruments is the assumption that there are five underlying dimensions of psychological well-being: zest, resolution and fortitude, congruence between desired and achieved goals, positive self-concept, and mood tone (Neugarten, Havighurst, & Tobin, 1961). In general, the Life Satisfaction Indices are recommended for use with healthy older persons.

Next, extensive studies have been done regarding the Philadelphia Geriatric Center Morale Scale, which was

designed by Lawton and his team in 1972. This scale was developed for use with very old, institutionalized persons, and, after revisions, now consists of 17 items with three dimensions. The dimensions are agitation, attitudes toward one's own aging, and lonely dissatisfaction (Lawton, 1975).

Unlike the Life Satisfaction Indices and the Philadelphia Geriatric Center Morale Scale, both of which measure long-term perception of well-being, the Affect Balance Scale was developed to measure short-term state of affect by Bradburn (1965, 1969). He postulated that overall psychological well-being depends on person's recent perception of two independent dimensions which are the positive affect and the negative affect. In this scale, each dimension has five questions, and the difference between the scores of both affects is suggested to be a good predictor of a person's current level of psychological well-being. Bradburn stated that happiness can be defined as the extent to which positive feelings outweigh negative feelings, using the time referent of a few weeks.

Although the original scale had been developed with a sample of younger subjects, several authors have used this scale with older persons. Gaitz and Scott (1972), for example, examined whether there were age related differences in responses of 1441 subjects in six age groups, including a group of persons 75 years and over, to several instruments used to measure mental health. Among other findings, they

concluded that the Affect Balance Scale scores showed no significant pattern of relationship to age. However, older groups reported less positive and less negative affects than younger and middle-age groups did. Moriwaki (1974) attempted to validate the Affect Balance Scale using eight psychiatric out-patients and 19 normal persons aged 60 years and over. She employed several other instruments such as the Comprehensive Role Index, the Rosow Morale Scale, the Nine-Item Mental Health Scale and self-reports of avowed happiness. Results indicated that the Affect Balance Scale was the best over-all measure of psychological well-being, and Moriwaki concluded that this scale was applicable to the elderly as well as to younger populations. She added, however, that differential age norms should be developed to accommodate the lowered affect associated with age.

This writer found the Affect Balance Scale as a suitable instrument in the present study because of its sensitivity to current affective fluctuation within the preceding few weeks, and its brief administration form. More details will be discussed in the Chapter III.

Correlates of Well-being

First, one should consider the fact that not only the objective factors determine the level of well-being, but also one's subjective perception of these factors are very important as correlates of well-being (Fengler, 1981). The

focus of the review of correlates of psychological well-being and related concepts in this study was the causal relationship of activity and social interaction to the level of perceived well-being among older people.

Among other correlates, perceived health has been widely found to be by far the most important one (Palmore & Luikert, 1974; Palmore & Kivett, 1977; Larson, 1978; Barresi, Ferraro, & Hobey, 1984; Dillard, Campbell, & Chisolm, 1984). Other significant variables are education, socioeconomic status, housing conditions and social activities (Palmore & Luikert, 1974; Palmore & Kivett, 1977; Birren & Schaie, 1977; Larson, 1978; Barresi et al., 1984; Dillard et al., 1984).

Activity and Well-being

The research findings of how the level of activities and social interaction will affect one's well-being have been somewhat controversial. First of all, activity is defined as any regularized or patterned action or pursuit beyond routine or personal maintenance (Lemon et al., 1972). In addition, Lemon et al. divided activity into three categories: informal, formal, and solitary activities. It is also important to note that many aged persons have limitation in activity due to a chronic condition. For example, in 1981, 45 percent of persons aged 65 years and over were limited in their activity, compared with only 10.5 percent of younger persons (Siegel & Davidson, 1984).

The initiators of the activity theory, Tobin and

Neugarten (1961), found supporting evidence of this theory in their longitudinal study with two age groups of the older population. According to the study results, social interaction was positively associated with life satisfaction. Neugarten (1977), Pfeiffer (1977), and Markides and Martin (1979) also confirmed the strong association of activity and life satisfaction. Pepper (1976) concluded from the study of the effects of leisure types on life satisfaction among retirees that social and/or physical activities had the most positive effect on life satisfaction. Lemon et al. (1972), however, stated that only informal activities such as interaction with friends, relatives, and neighbors were directly associated with life satisfaction. Using the Affect Balance Scale, Graney (1975) found a direct relationship between happiness and social activity among elderly people. He emphasized that passive activities such as watching television or reading were not related to happiness while activities involving face-to-face interaction were positively related to happiness.

An interesting finding was reported by Wylie (1970) in the study of life satisfaction as a program impact criterion. Wylie examined the effects of a three-year demonstration program on the lives of an aged population. Results indicated that higher morale scores were registered in the experimental group after participation in the program of social activities. This finding, however, was a contradiction to the finding of the survey by Toseland and Sykes

(1977). In their investigation examining the relationship between senior citizen center participation and life satisfaction, they concluded that senior citizen center participation was not related significantly to life satisfaction, but that activity level was by far the best predictor among other variables of life satisfaction. In this writer's opinion, the contradictory results of both studies might come from the difference in the nature of the studies: The first included an experimental treatment; the other was a form of survey. In spite of the difference in the results, both studies indicate the importance of program planning in senior citizen centers to improve participants' activity level.

On the other hand, some gerontologists have warned against making a causal relationship between the activity and well-being. For example, Wolk and Telleen (1976) compared living conditions of retirees from two different populations in order to study the relationship of health and economic sufficiency to life satisfaction. Their study populations were from a nursing home and from a retirement type village. They concluded that the components of life satisfaction are affected differently by the living arrangements. According to Wolk and Telleen, activity level may be of limited and secondary importance to successful and satisfying experiences of older people. In another study, the relative impact of personality factors and social status variables

upon levels of activity and psychological well-being among middle-aged and older persons was examined in a five-year period (George & Bearon, 1978). Findings suggested that psychological well-being could be predicted better by personality factors than by social status factors, while activity levels were better predicted by social status variables. Between levels of activity and psychological well-being, however, there existed only a weak correlation. Markides and Martin (1979) maintained that not activity itself, but health and socioeconomic status determine the degree of both activity and life satisfaction. In other words, a person who is healthy and has abundant resources for living is more likely to engage in activities than a person with poor health and limited resources.

From the review of literature, it is apparent that concepts of psycho-social aging and causal relationships of well-being and various factors of a living situation still need much more investigation in future. There are a few possible explanations for this need. First, the dimension of a person's psychological well-being is so complex that a clearcut study of causal relationships is very difficult to conduct. Second, the population of elderly people is not a homogeneous group, but a very heterogeneous group with a wide range of age. Third, gerontology itself is a quite new social science though it has grown dramatically since the 1950's. Finally, study findings regarding the

impact of activities and social participation upon a person's well-being have been, to a certain degree, contradictory. It might be a great challenge for future researchers to approach these problems. In this writer's opinion, however, there is enough positive evidence to support the concept of maintaining the activity level of elderly persons at as high a level as possible. Ford (1962), for example, defined the individual use of leisure time as one of the most important features in preparing older people for successful aging. Pfeiffer and Davis (1974) stated that middle-aged people should get more training for leisure to avoid serious degrees of dissatisfaction in old age. Similarly, Moran (1979) suggested that it is essential to find substitute companions and activities for an aging person in order that he or she can maintain healthy mental outlooks by filling his or her day-time in a meaningful way.

Music can provide opportunities for improving leisure-time skills and enhancing social interaction among participants in all ages. Musical activities can be adapted to the decreased abilities of elderly people and to their specific needs. The following part of the literature review focuses on music therapy as it relates to this population.

Music Therapy for Elderly People

Music activities have been incorporated into many recreational programs for elderly people to enhance life

quality (Williams, 1953; Gibbons, 1983a). With increasing numbers of elderly people, music therapy, both in geriatric residential institutions and community settings, is becoming more important. For the first population, arresting senility and deterioration is one of the major treatment goals, while helping people to prepare for productive and enjoyable life is essential for the latter population (Gilliland, 1953).

According to recent data, about five percent of persons aged 65 years and over were living in institutional settings in 1981. Moreover, those 65 years and over may generally expect to spend about one year, on the average, in an institution sometime in their remaining life span. Third, among the institutionalized residents, there are far more women than men, and a higher number of non-married people and persons over 75 years compared with non-institutionalized persons (Siegel & Davidson, 1984). Finally, other major factors affecting the nursing home population are the high prevalence of chronic diseases, mental impairment and severe physical limitations (Moran, 1979). All these factors mentioned above should be taken into account when planning a music therapy session since the majority of music therapists in the geriatric field will probably be working with institutionalized persons.

Treatment Goals

The overall goal of music therapy for elderly people should be to achieve and to maintain these people's mental,

physical, and psychological levels of functioning as high as possible. There seem to be general treatment goals which are common and essential among all age populations, and goals which are set to meet specific needs of elderly people. This writer briefly describes general goals, then moves on to more age-specific goals, and last, focuses on goals which are strongly related to the present study's topic.

To begin with, music can be used as a tool to provide opportunities for stimulating creativity. Donahue (1953) suggested that music therapy should be applied as an outlet for the creative impulses which are still present in elderly persons. Creative activity also is suggested to enhance the feeling of self-esteem (Toombs, 1968). Having an opportunity for a successful experience might lead to an enhanced self-concept or increased self-esteem (Palmer, 1977; Gibbons, 1980). In addition, music is an excellent tool for providing group experiences to improve social and communication skills. Liederman (1967) indicated that the promotion of the feeling of organization within a group is probably the most important therapeutic effect. Many authors agree on the importance of facilitating socialization through musical activities and sharing common experiences among older people (Toombs, 1968; Palmer 1977; Hylton, 1983; Hennessey, 1984; McGraw, 1985). Finally, self-expression and expression of feelings are common treatment

goals. Since many elderly people might have experienced various kinds of loss and grief in their lives, it is essential for them to release tension, repressed feelings, anxiety, depression, aggression or negative self-concern. Music may be helpful to facilitate such processes (Toombs, 1968; Browne & Winkelmayr, 1968; Shapiro, 1969; Bright, 1972; Tanner & O'Briant, 1980).

Among the more age-specific goals, it is important to motivate elderly persons to engage in physical activities, and, when necessary, to exercise for better physical functioning in spite of some possible chronic limitations. The literature review indicated that many therapists have recognized the importance of utilizing music in conjunction with physiotherapy and general physical activities. (Toombs, 1968; Palmer 1977; Mason, 1978; Hennessey, 1984). Along with improving physical functioning, Palmer (1977) and Hylton (1983) pointed out the importance of providing mental stimulation. This is particularly true for institutionalized people, because the high prevalence of mental deterioration, in many cases, is the reason for placing aging individuals in an institution (Butler & Lewis, 1982). In conjunction with a reality orientation program, a way of recognizing the social structure of the institutional environment so that residents are encouraged and allowed to behave in a more rational fashion, music therapy has proved to be a useful tool (Citrin & Cixon, 1977; Riegler, 1980a).

Lastly, there are goals which seem to be of particular interest for this study. Musical activities can be adapted at each person's individual functioning level so that everyone can have a successful experience. This, in turn, may lead to enhanced elevation of mood, and the feeling of well-being and better quality of life. The research team at University of the State of New York in Albany suggested that rhythm and sound stimulate physical and emotional well-being, and satisfaction in accomplishment might lead to personal enjoyment and confidence (1968). Satisfaction and a sense of well-being may be a result of well established group feeling (Toombs, 1968). Shapiro (1969) emphasized giving a new zest for living as one of the treatment objectives. According to Bright (1981), the sense of enjoyment is essential to successful rehabilitation for elderly people.

All these treatment goals, however, have been suggested based on theoretical speculations or empirical observations during music therapy sessions. Very little scientific research has been done to examine and evaluate specific musical characteristics of elderly people, and the effect of use of music on these people. This writer strongly felt a need for reviewing the literature which has attempted to cover these neglected areas.

Research Findings

First, some auditory characteristics typical for aged people must be examined since music is primarily of an auditory nature. Rees and Botwinick (1971) studied psychological factors which might influence older people's lower audiometric scores in addition to age-related sensory decline. They concluded that older people are more cautious in decision making in a test situation than younger people are, and the magnitude of auditory deficits in later life may be overestimated due to this factor. This view was confirmed by Potash and Jones (1977) and Moran (1979). Regarding auditory ability of elderly people, Riegler investigated the most comfortable loudness level for a geriatric population (1980b). In her experiment, after ascertaining hearing acuity of a pure tone of 440 Hz at 50 dB, 28 residents from a group home and from a nursing home were asked to set the most comfortable loudness level while listening to a pure tone or recorded music. The results showed that the mean most comfortable loudness for the pure tone of 440 Hz was 58.8 dB, and the mean most comfortable loudness for the recorded music with an average frequency of approximately 440 Hz was 67.6 dB. She further stated that the subjects preferred soft music to loud music. It was, however, unclear in this study whether the most comfortable loudness level of elderly subjects was significantly different from that of younger persons.

More research is needed in this area.

An extensive study was done by Gibbons (1980) to examine musical aptitudes in relation to age in an independently living elderly population sample. Using Gordon's Musical Aptitude Profile, Gibbons compared its scores with self-esteem, morale scores and other attribute variables. Study results indicated that no significant differences were found when correlation coefficients were computed for age and the Musical Aptitude Profile Scores. Moreover, the following variables were slightly related to the Musical Aptitude Profile Scores: musical activity level, musical experience, frequency of music listening, and monthly income. General morale was a rather weak predictor of the composite Musical Aptitude Profile Scores. In a later study, she investigated musical aptitudes of an institutionalized elderly population (1983a), using Gordon's Primary Measures of Music Audiation. Results revealed no significant correlation between the test scores and the age groups in the sample. She concluded that this finding suggests that the musical aptitude of her study subjects was maintained beyond age 65 to later years. Unlike the results of her study in 1980, no correlation among selected attribute variables and the test scores was found. In another study in the same year, she conducted an additional experiment to analyze the musical discrimination response of an institutionalized elderly sample by administering the Tonal and Rhythm Subtests

of the Primary Measure of Music Audiation Test (1983b). Her finding seems to be important for practicing music therapists since it implies that the institutionalized elderly have problems in learning or performing music which requires discrimination of subtle musical changes and complex rhythm patterns. Gibbons recommended the use of music with marked changes in pitch or duration and with simple rhythm patterns for facilitating successful experiences.

Another important objective for a more effective utilization of music for elderly people seems to be the study of musical preference of these people. Many authors agree that the popular music in young adult years is preferred to other kinds of music, and, as a result, the use of such music is effective in music therapy sessions. However, only a few studies have been done to examine systematically this widely held assumption. Gibbons (1977) conducted such a study, and found that music of young adult years was, in fact, significantly preferred to music of later life periods by her study subjects aged 65 to 95 years from various residential settings. In addition, another assumption that older people prefer sedative music to stimulative music could not be confirmed. Concerning the preference of musical activities, Ives (1980) examined the preference order among singing, Orff-Schulwerk, kitchen band and dancing in two groups of senior citizens. Most of the songs sung

in the sessions were popular between 1900 and World War II. Singing was the most preferred activity, followed by Orff-Schulwerk and kitchen band, and dancing was the least preferred activity. She suggested that singing might be the least threatening activity for participants, or might have special meaning for them from young years. In addition, she mentioned that singing might facilitate a successful experience in a relatively short amount of time.

A significant change which is related to singing and accompanies the aging process is lowered voice range. Since singing is suggested to be one of the prominent activities of music therapy sessions with elderly people, it is essential to understand what is the most comfortable voice range for this population. Greenwald and Salzberg (1979) concluded from their study with nursing home residents that the functional vocal range of this population sample was far more limited than the average range of young adults. Implication for practitioners is to transpose songs into lower keys so that elderly people can enjoy the singing activity more and for a longer period of time.

Last and most important for this study's topic, no published articles concerning the effect of music on elderly people's various psychological status could be found. Only a few master's theses have attempted to provide information in this specific area. Ramsay (1982) focused in his study on music therapy and depression in the elderly, but could

not obtain a statistically significant difference in pre-depression level and post-depression level of a nine-week period of music therapy sessions. He indicated, however, that music therapy was more effective in lowering depression levels on the care home residents with a relatively high level of depression than those with a lower level of depression. Binford (1982) examined the effect of early life music on reminiscence, self-report of ability for change and personal adjustment. As music selections, she chose songs popular between 1916 and 1941. An adjective check list describing subject's perception about himself or herself was used as one of the dependent variables. While the experimental group had the reminiscence part prior to filling the check list, the control group first completed the check list prior to the reminiscence. In spite of nonsignificant findings, Binford concluded that the use of music as a tool for recalling past memories may effectively be applied in the clinical approach to explore the curative process. In this writer's opinion, however, the reminiscence part was too poorly designed to have more impact on the adjective check list since the subjects had the opportunity to listen to the music only once. The effect of music and guided imagery on self-esteem of female carehome residents was examined by Ice (1984). Six semiweekly sessions yielded nonsignificant difference in the self-esteem scores of the pretest and

posttest among the experimental group as well as between the posttest scores of the experimental group and the control group which had poetry instead music for guided imagery sessions.

In conclusion, research in the elderly populations' musical characteristics and the effect of music on them has just begun. At this moment it is too early to draw any general conclusions in all the specific areas. Studies previously done have limitations in their experimental designs which hinder generalization, as all the investigators consciously admitted. The amount of research already done is also far too small. However, the first step has been done, and there are already some useful suggestions for future research. Music therapy in general has been criticized for its lack of studies in a more scientific manner. The area of geriatric populations particularly needs further investigation since the effectiveness of music therapy with these populations has been apparent and encouraging based on general observations. The last part of the literature review will describe the treatment approach.

Treatment Approach

Selecting appropriate types of music is a key for a successful music therapy session. Many practitioners agree that the music from the young adult years is particularly effective. For example, well-known familiar and favorite recreational home songs, patriotic songs, folk songs and

hymns were especially enjoyed by the participants on a geriatric ward (Hall, 1956). Liederman (1967) recommended as criteria for music selections the following: music with simple and repetitive rhythmic patterns and with prominent beats, and music of short duration and in familiar tunes. Mason (1978) suggested that the use of slower music with a firm thymhm might be a good choice.

There seem to be some particularly popular types of musical activities. First, singing is by far the most frequently chosen activity for elderly people. Graham (1977), for example, stated that songs from the early years associated with religious training and the courtship period are the most motivating music for geriatric patients. Group singing is supposed to facilitate group interaction and expression of feelings. In addition, group singing is a powerful tool to encourage reminiscing (Hennessey, 1976). Bright (1972) suggested that music can recall the past to one's mind, and such association can help participants relate one person's memories of a particular period of time with other persons through group discussion. According to Byrne (1984), reminiscing involves the reliving, re-experiencing, or savoring of past events, and one's immediate reactions to music can be used as material in group discussion.

Next, playing instruments is another popular activity among programs for elderly people. It can be in the form of accompaniment to singing (Boxberger, 1960; Moore, 1978)

or rhythm band or kitchen band (Williams, 1953; Merrill, 1967; Toombs, 1968; Douglass, 1978). However, Moore (1978) warns that some rhythm instruments have poor tone quality, and can cause association with kindergarten characteristics, an important point in this writer's opinion when planning a successful session, especially with higher functioning persons.

Third, music can be incorporated in movement exercise (Mason, 1978; Hennessey, 1984) and dance activities (Merril, 1967; Toombs, 1968).

Fourth, there are some scattered activities such as individual lessons for learning instruments (Eberly, 1953; Jeanette, 1966) and listening to music (Hall, 1956; Merrill, 1967; Douglass, 1978).

Finally, music has been used in combination with other therapy programs. Boudreault (1975) reported a successful integration of music therapy as a part of a milieu therapy, and Needler and Baer (1982) suggested that music and movement were combined with the techniques of remotivation therapy for stimulating and maintaining the functioning level of regressed elderly people.

To conclude this part of the literature review, some general guidelines for planning successful music therapy sessions should be added. Awareness of elderly persons' physical and mental limitations is important in order to modify activities to their functioning levels (Toombs, 1968).

Bright (1981) further referred to the importance of learning an extensive repertoire of music from the appropriate periods and asking the patient what music selection he or she would like to hear. In addition, participants should have plenty of time during discussions.

Summary

Study of aging as a psycho-social phenomenon has increased recently in the area of social gerontology. There have been many debates concerning theoretical formulations and the causal relationships of psychological well-being, and various factors in a person's living situation. The recent trend in research has been to determine some underlying characteristics of the rather broad terminology of psychological well-being. Life satisfaction, morale, and happiness have been given particularly much attention as they relate to psychological well-being. At the same time, more sophisticated instruments for measuring psychological well-being have been developed and used in the elderly population samples.

Some factors in one's aging process have been defined as strong predictors of psychological well-being, while there have been different findings regarding other variables. The relationship between the level of activity/social interaction and psychological well-being has been, to a certain degree, contradictory; however, there has been sufficient

evidence to support the importance of increasing activity levels of older persons as a means for a more enjoyable and successful aging. Music has been incorporated in many programs to facilitate such process. Despite the paucity of scientific studies, the positive effect of music therapy upon elderly persons has been apparent, and it seemed to be very important to try to fill this gap in the literature. The present study attempted to examine the relationship between the effect of music therapy sessions and the degree of the perceived state of affect among residents of a retirement center.

CHAPTER III

METHODOLOGY

Sample

The sample studied in this investigation consisted of residents from a retirement center in East Lansing, Michigan. The subjects of the study were living in the independent living unit of this center. The residents of this unit were considered to be suitable for the present study because of its use of a self-report scale as the experimental measurement.

Selecting the Subjects

First, a letter was sent to the director and the activity therapy director of the center asking them for permission to conduct a research project. Next, two sets of a letter and consent form were prepared in large print. One set was for the control group and the other for the experimental group. The letter asking for a consent form of the control group included the purpose of the study, an approximate schedule of the project, and the nature of the scale as pretest and posttest. The other letter for the experimental group included the same description above, and a brief explanation about music therapy sessions. It was also mentioned that no musical background was required. The consent form for the control group indicated that the

persons had read the explanation about the project, and that he or she was willing to participate in two administrations of the scale. The consent form for the experimental group had an additional explanation that the person was willing to participate in eight music therapy sessions, but was free to withdraw from the study at any time without penalty.

Subjects were then randomly drawn from the telephone directory of the center. Since there were about 180 residents living in the unit, every eighth person was drawn to form two groups of ten persons each. They were randomly assigned to either group.

Upon a suggestion by the music therapist working at the center, each person was contacted personally by this experimenter accompanied by the music therapist. The presence of the therapist was helpful during the initial interviews because most of the persons contacted had no experience with a research project and did not know the experimenter. It was important to avoid unnecessary caution and possible fear or rejection by contacting them through someone they already knew. Each interview lasted about 10 to 15 minutes, in some cases longer, and included an introduction of this experimenter, an oral explanation of the project, and completion of the consent form. Out of the 26 persons contacted, 20 agreed to participate in the study. Almost two thirds of them required or preferred an oral presentation of the letter and the consent form due to poor vision.

Collecting the subjects and completing the consent forms took a total of five days.

All subjects were Caucasian, and their average age was 83.9 years. None of them had any regularly scheduled music therapy programs except an occasional sing-a-long group, music appreciation group, movement group, and talent shows provided by the activity program of the center.

The Experimental Group

There were eight women and two men in the experimental group. Their ages ranged from 71 to 91 with an average age of 82.1 years and a median age of 83 years. One person was living with her spouse, and others were living alone in their apartments. Six persons had significant visual problems which interfered with the ability or the motivation to read even large print. Two subjects had hearing impairment, but could understand enough to communicate when they were approached with a slow and firm voice in close proximity. Five subjects needed an aid to walk. One had had professional musical training.

The Control Group

There were seven women and three men in the control group. Their ages ranged from 65 to 97. The average age was 85.6 years and the median age was 84. Two of them were living with their spouses, while the others were living alone. Five persons had significant visual problems, and two had hearing problems. Two subjects needed ambulatory aid, and

one person was confined to wheelchair.

Setting

The initial interviews as well as the administration of pretest and posttest were done individually in the living room of each subject. Each living room was furnished with the subject's own belongings. The room was well-lighted, air-conditioned, carpeted, and quiet. The level of noise from outside was minimal.

The music therapy sessions were conducted in a private dining room of the center. The room was located apart from the living areas, but was easily accessible. It accommodated a large dining table, which was removed during the sessions, and 12 chairs. It was well-lighted, air-conditioned, carpeted, and very quiet. The room was furnished in a luxurious way like the other parts of the unit, and the whole atmosphere was comfortable.

Materials and Equipment

The following items were used for the administration of the pretest and the posttest.

- 1) Two pages of the Affect Balance Scale in large print
- 2) A pen.

Further materials were used for the music therapy sessions.

- 1) An autoharp

- 2) A guitar
- 3) A cassette recorder
- 4) Cassette tapes (See Appendix A)
- 5) Song sheets selected from various songbooks and typed in large print (See Appendices B and C)
- 6) A set of rhythm instruments including rhythm sticks, maracas, bells, woodblocks, hand drum and tambourine
- 7) A set of tone bars.

Procedure

The Pretest

The Affect Balance Scale was administered as the pretest in the present study. The scale consists of five items in the Positive Affect Scale and the Negative Affect Scale, respectively. The following questions are included in the scale:

During the past few weeks did you ever feel:

Positive feelings:

1. Pleased about having accomplished something?
2. That things were going your way?
3. Proud because someone complimented you on something you had done?
4. Particularly excited or interested in something?
5. On top of the world?

Negative feelings:

1. So restless that you couldn't sit long in a chair?
2. Bored?
3. Depressed or very unhappy?
4. Very lonely or remote from other people?
5. Upset because someone criticized you?

Measurement properties.

Bradburn (1969) reported a test-retest correlation of .76 with measurements three days apart. According to Larson (1978), the test-retest reliability with adults of age 18 years and over within 10 months was .74 for men and .71 for women.

As to validity, George and Bearon (1980) reported that the scale was significantly related to the Rosow Morale Scale ($r = .61$) and to the Life Satisfaction Index A ($r = .66$). Both validities were gathered with elderly samples.

Use in this study.

To avoid possible skewed scores toward a too positive or too negative direction, the questions were rearranged in a random order. The words of positive and negative feelings were eliminated, also. In the original scale, a dichotomous forced choice with "Yes" or "No" was used for responses. However, this writer felt that a trichotomous forced choice with "Often," "Sometimes," or "Never", suggested by Beiser (1974), might reflect more frequency and intensity of affective states. Therefore, a trichotomous response form was substituted for the original answer form. The reordered questions and altered answer sheets were typed in large print (See Appendix D).

As a result of the altered response form, the scoring was also changed. In the original scale, one point was given for each "Yes" response, and zero points were given for "No"

responses. The sum of the scores of the negative feelings was subtracted from the sum of the scores of the positive feelings, yielding a range of -5 to +5. A constant of five was added to this score for more convenient computations, resulting in a range from 0 to 10. In the present study, two points were given for each "Often" response, one point for each "Sometimes" response, and zero points for "Never" responses. A constant of ten was added to the subtracted sum of negative feeling scores from the sum of positive feeling scores. The final score ranged from 0 to 20, with higher scores reflecting more positive affective states. An example of scoring is included in Appendix E to illustrate the scoring procedure.

After the initial interviews which required five days to complete, the pretest was administered individually. Testing in a group was not possible due to many subjects' visual, auditory or comprehension problems. The pretest procedure required four days to complete.

The experimental group.

Seven subjects required or preferred an oral presentation of the scale. The examiner then recorded the answers for them. Three were able to complete the scale on their own.

Seven subjects had no major problems in completing the scale while two others needed some repeats and different explanations to understand some questions. One subject added

extended associations to each question, making the procedure very difficult.

The control group.

Six subjects required or preferred an oral presentation. Five subjects finished the testing without major problems. Three talked voluntarily about their associations with some questions or about their personal matters during the testing, but were able to focus on the task with some reminders. Two subjects had extreme difficulties remaining on task. Instead, they constantly talked about something else. One of them seemed to be not only talkative but also disoriented, and had problems understanding longer questions.

Music Therapy Sessions

The actual sessions started later than originally planned because of the extended period spent on the initial interviews and the pretest procedure. Due to the delay, subjects of the experimental group participated in seven group music therapy sessions once a week instead of eight originally planned sessions.

Sessions consisted of several activities: singing, listening to music, exercising to music in their chairs, playing instruments as accompaniment to songs, and discussion about the content of the songs as well as other seasonal events. An example of a session is included in Appendix F.

Despite the visual problems, six subjects were able

to read song sheets in large print. Therefore, all songs except a few introduction and goodbye songs were typed in large print, and every person who wished could have his or her own song sheets. For the two subjects with hearing problems, the words of each song were clearly and slowly read before singing. In addition, these two sat next to the therapist to enable them to hear well.

Out of ten subjects, only five participated more than four times in sessions. One never came to the session and dropped completely from the study during the seven-week period. One was seriously sick during the first five weeks. One complained about the side effects of the medication and could not attend the 9:30 a.m. sessions. The fourth had scheduling problems and withdrew from the sessions after two participations. The last subject was unable to participate due to reality disorientation.

Among the remaining subjects, only two seemed to be fully alert. The other three had to be reminded of the session every week and had to be escorted to the room because of their poor short-term memory about time and place.

The Posttest

The Affect Balance Scale was administered to both groups as a posttest four days after the completion of seven music therapy sessions. Again, testing was done individually and required four days to complete. For some subjects, there were similar problems in following the procedure and

understanding the questions. In addition, it became obvious this time that at least two subjects had some disorientation with time. They talked about the same topics they had discussed during the pretest procedure, indicating that for some questions they did not relate to the concept of "during the past few weeks".

Analysis

Of the nine experimental subjects who completed the posttest, four had to be eliminated from the statistical analysis because of their poor attendance in the sessions. Therefore, a Mann Whitney U Test, a non-parametric test, was performed on the changes of the scores from the pretest to the posttest to determine if there was a statistically significant difference in these changes between two groups.

A Wilcoxon Matched-Pairs Signed-Ranks Test was then computed to determine if there was a statistically significant difference between the pretest scores and the posttest scores of the experimental group.

Summary

Twenty subjects, averaging 83.9 years in age, were randomly assigned to either an experimental group or a control group. The Affect Balance Scale was individually administered to each of them as a pretest prior to the beginning of music therapy sessions. Nine subjects from the experimental group

attended one to seven weekly sessions. After the completion of the seventh session, the same scale was used as a posttest to all the subjects except one who had dropped from the study. Four more subjects from the experimental group had to be eliminated from the statistical analysis because of their infrequent attendance to the sessions. A Mann Whitney U Test was computed to determine the difference between two groups in their changes from the pretest scores to the posttest scores. A Wilcoxon Matched-Pairs Signed-Ranks Test was used to determine the difference between the pretest scores and the posttest scores of the experimental group.

CHAPTER IV

RESULTS

Findings

The present study attempted to determine the effect of participation in weekly music therapy sessions on a person's affective state. The Affect Balance Scale was used as pretest and posttest prior to and after seven music therapy sessions. The raw data and demographic information for each subjects of both groups are included in Appendices G through I. Table 1 represents mean scores of ten raw items, positive affects and negative affects, and the total score of the Affect Balance Scale in a revised form. Figure 1 illustrates changes from the pretest to the posttest in each group's mean scores from Table 1. The direction of the arrow indicates the change from the pretest to the posttest. It can be observed that there were no changes on four occasions. All positive affect scores except the item of "On top of the world" range from 0.8 to 1.4, indicating that these affects were experienced sometimes or more frequently by most of the subjects. All negative affect scores range from 0.1 to 0.8, indicating that these affects were felt less frequently than sometimes. In the experimental group, the scores of "Pleased about having accomplished something," "Proud because someone

Table 1

PRETEST AND POSTTEST MEAN SCORES
FROM THE AFFECT BALANCE SCALE

	Pleased	own way	proud	excited	on top of the world	positive affects	restless	bored	depressed	lonely	upset	negative affects	total score
Experimental Group													
Pretest Scores	1.4	1.0	1.4	1.2	0.8	5.8	0.2	0.8	0.4	0.6	0.6	2.6	13.2 *
Posttest Scores	1.2	1.0	0.8	1.4	0.4	4.8	0.4	0.6	0.4	0.6	0.4	2.4	12.4
Control Group													
Pretest Scores	1.4	0.9	0.8	1.0	0.4	4.5	0.1	0.5	0.8	0.4	0.4	2.3	12.2
Posttest Scores	1.3	1.1	1.1	0.9	0.9	5.3	0.4	0.6	0.5	0.4	0.2	2.1	13.2

* For computation of the total score, see Appendix E.

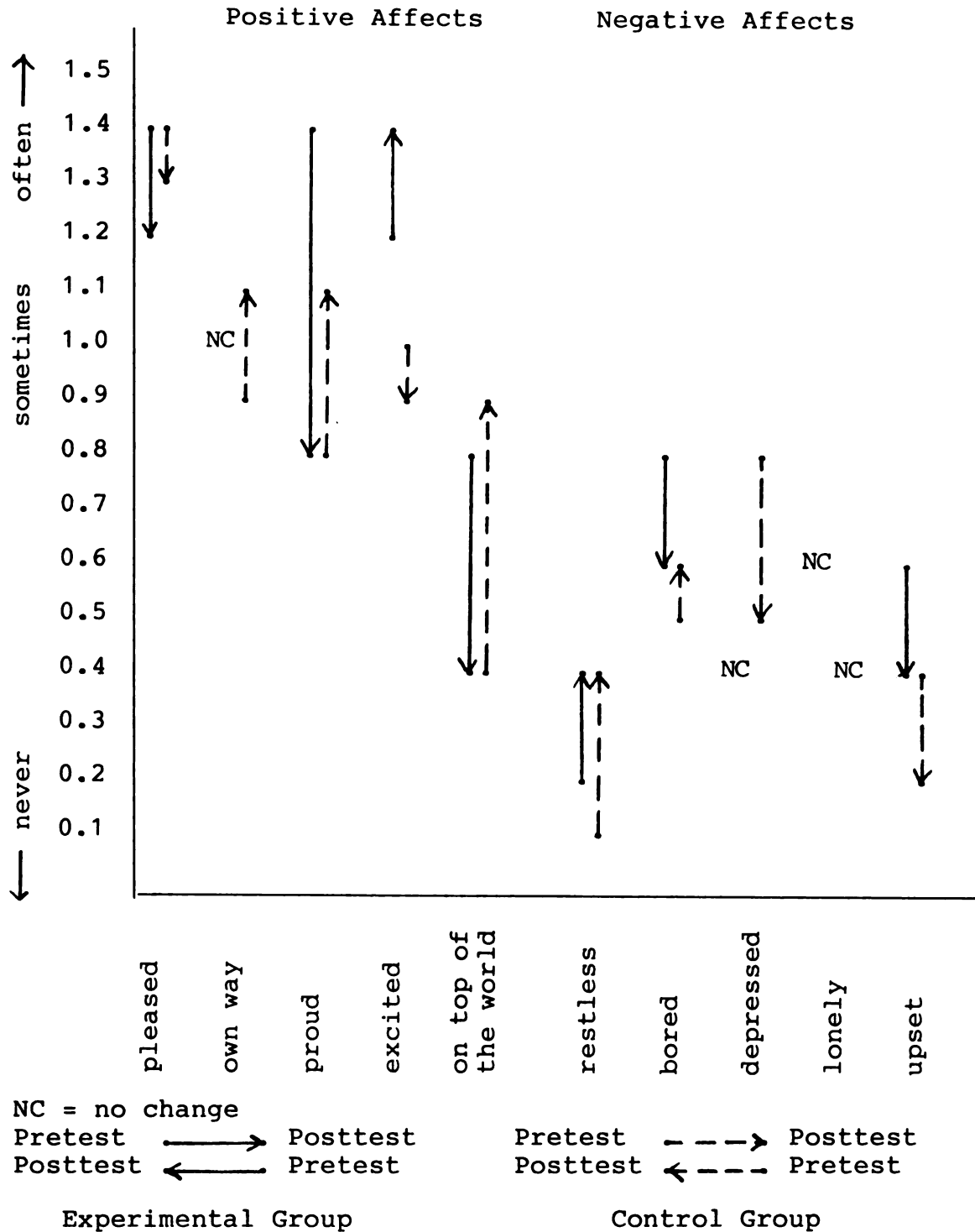


Figure 1

CHANGES OF RAW SCORES FROM PRETEST TO POSTTEST

complimented you on something you had done," and "On top of the world" were lower in the posttest while the score of "Particularly excited or interested in something" was slightly higher. In the control group, scores of "Things were going your way," "Proud because someone complimented you on something you had done," and "On top of the world" were higher in the posttest while others of positive affects slightly decreased. As to the negative affects, subjects in the experimental group had lower scores in "Bored," and "Upset because someone criticized you" in the posttest. Subjects in the control group scored lower in "Depressed," and "Upset because someone criticized you" in the posttest. Two statistical tests were applied to determine if these changes were significantly different.

Review of Hypotheses

1. The eight weekly music therapy sessions will result in no statistically significant difference between the experimental and control groups in their changes from the pretest scores to the posttest scores as measured by the Affect Balance Scale.

The reader should be reminded that seven instead of eight music sessions were held due to the delay during the initial procedure of the project. To test the first hypothesis, the change from the pretest score to the posttest score of each subject was determined (Table 2).

Because five subjects had to be eliminated from the statistical analysis due to their poor attendance in music

Table 2

PRETEST-POSTTEST GAIN SCORES
FROM THE AFFECT BALANCE SCALE

Experimental Group			Control Group		
Pretest Score	Posttest Score	Change	Pretest Score	Posttest Score	Change
7	7	0	8	12	+4
17	16	-1	11	11	0
15	13	-2	12	16	+4
13	11	-2	12	13	+1
14	15	+1	6	13	+7
			15	18	+3
			18	16	-2
			13	10	-3
			14	14	0
			13	9	-4

therapy sessions, there were five remaining subjects in the experimental group while all ten subjects remained in the control group. Therefore, a Mann Whitney U Test was computed because of the uneven numbers of subjects in the two groups. It determined whether the changes from the pretest to the posttest scores were significantly different between the two groups. The obtained U value of 11.5 did not reach the criterion U value for a two-tailed test with $n_1 = 5$ and $n_2 = 10$ at .05 level of confidence. Therefore, the first null-hypothesis that there will be no significant difference between changes from the pretest to the posttest of the experimental and control groups was accepted.

2. There will be no statistically significant difference between the pretest and posttest scores in the experimental group as measured by the Affect Balance Scale.

A Wilcoxon Matched-Pairs Signed-Ranks Test was computed to test this hypothesis. The computed z value of -1.21 did not reach the criterion z value required for a two-tailed test at .05 level of confidence. Therefore, the second null-hypothesis that there will be no significant difference between the two testing scores of the experimental group was accepted.

Interpretations

Since there was no significant difference between the changes from the pretest scores to the posttest scores of the experimental and control groups, it has been concluded

that the experimental treatment of weekly music therapy sessions had no effect on the person's perceived state of affect. This conclusion has been further supported by the fact that there was no significant difference between the two scores of pretest and posttest in the experimental group.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

With the growing population of elderly people, the study of aging as a psycho-social phenomenon has become increasingly important in today's society. Many researchers have attempted to identify major factors which might contribute to the psychological well-being of these people. Among factors which surround an elderly person's life, much attention has been given to the relationship between a person's engagement in activity and psychological well-being. Although there are some contradictory study findings, many authors and clinicians agree that being engaged in activities is very important for elderly persons in order to be satisfied with life. Since many old people become more limited in activities because of physical, social, financial or other reasons, it has been strongly recommended that maintaining or increasing the level of activities as much as possible, and finding some new meaningful activities can increase the quality of life for these people.

Music has been recognized as a powerful medium in stimulating elderly persons mentally, emotionally, and/or physically. It is supposed to help people develop new

skills, particularly those for leisure time, as well as to enhance enjoyment of activities. It has also been observed that music can facilitate socialization and group activities. However, not very much research has been done to examine the effectiveness of music therapy as a therapeutic tool for elderly populations. The present study attempted to determine how participation in music therapy sessions would affect the perceived state of affect among residents of a retirement center.

Twenty subjects from a retirement center in East Lansing, Michigan, were randomly assigned to either an experimental or control group. Ten subjects of the experimental group agreed to participate in seven weekly sessions. All twenty subjects completed the Affect Balance Scale, developed by Bradburn (1969), as pretest prior to the first music session. Out of ten experimental subjects, only five participated in more than four sessions. After seven sessions had been completed, the Affect Balance Scale was again administered to 19 subjects. However, four experimental subjects who did not participate in sessions frequently, had to be eliminated from the statistical analysis. One subject completely dropped from the project.

A Mann Whitney U Test was used to determine the difference between the two groups in the changes from the pretest scores to the posttest scores. The result indicated that there was no significant difference between both these

groups. A Wilcoxon Matched-Pairs Signed-Ranks Test was computed to examine the difference between the pretest scores and the posttest scores of the experimental group. No significant difference was found between the two scores.

Conclusions

From the results of this study, the following conclusions were reached to the stated null-hypotheses.

1. The seven weekly music therapy sessions resulted in no significant difference between the experimental and the control groups in their changes from the pretest scores to the posttest scores.
2. There was no significant difference between the pretest and posttest scores in the experimental group.

Lack of significant results has lead to the following conclusion: The participation in music therapy sessions over seven weeks produced no significant effect on perceived state of affect among the residents of a retirement center under the conditions used in this study.

Discussion

There is a need to discuss several factors which might have influenced the outcome of the present study. These are the limitations which were related to subjects, the measurement instrument, research design and the experience of the researcher.

First, there were problems with subjects. Although all of them were living in an independent unit of the

retirement center, many of them were limited in their mental, as well as physical, capabilities. The average age of all subjects was 83.9 years. Siegel and Davidson (1984) referred to a term of the frail aged as an age group 80 and over. Most of the subjects from the present study would fit this description, not only because of their age but also of their frail appearance. Most of them could at least carry on daily routines around the unit such as dressing, going to the dining room and taking care of other personal matters. It was apparent, however, that many of them had considerable difficulty remembering something new and adjusting to a new situation, as evidenced by problems in the initial procedure as well as by having needed reminders and escorts to the session every week. Some of them still missed the session because they could not remember the place or time in spite of reminders about 30 minutes before the session start. Three of the experimental subjects who participated more than four times exhibited extremely poor short-term memory.

Chronic disease was another hindrance in this project. Subject No. 6 only attended the last two sessions because of illness. Subject No. 9 was recovering from a major surgery. Although he appeared to be physically and mentally active, he had problems in the morning because of medication.

Next, scores of the Affect Balance Scale were obviously

influenced by the aforementioned problems of some subjects. Observation during the pretest and particularly during the posttest indicated that some subjects seemed not to have fully understood the longer questions. Repetition or rephrasing of the questions was sometimes necessary. Although the researcher frequently repeated the sentence of "During the past few weeks", some subjects talked about their experiences from the past months or even years. The items of "Pleased about having accomplished something?", "Proud because someone complimented you on something you had done?" and "Upset because someone criticized you?" seemed to cause some distant associations in the past. Problems in administering the scale were also represented in the time spent on the administration. While some could complete it within a few minutes, three needed almost an entire hour to finish it because of extreme distractability.

The Affect Balance Scale itself showed certain limitations under the current experimental condition. The revision itself seemed to be helpful in many occasions. Although there were many spontaneous answers with "Yes" or "No", having had the choice of "Sometimes" seemed to have made decisions easier for many subjects when they were unsure of the answers. How utilization of the original scale with dichotomous answers would have affected the results remains beyond the scope of this study. Besides the problems with the longer questions mentioned above, the question

of "On top of the world?" seemed to be less reflective of what this study was looking for. Many subjects reacted to this item with confusion, a chuckling or a comment on it as being silly. The result indicated that average scores of this item (See Table 1) were lower than any of the other scores in the positive affect scale. Beiser (1974) could observe in his longitudinal study over five years that this item confirmed the impression that it was a meaningless idiom in his setting with three age groups including persons over 65.

Another consideration with the scale is its applicability to elderly populations. The item of "So restless that you couldn't sit long in a chair?" seemed to be less suitable for elderly persons because many of the subjects indicated that they spend most of their time in their chairs any way. Although the Affect Balance Scale has been suggested to be applicable to older populations, studies previously done indicate that there was a discrepancy between the functioning levels of subjects in their studies and those in the present study. Moriwaki's validity study (1974) with two aged samples did not indicate the average age of subjects. From the statement that the subjects were over 60 years and that one group was drawn from a normally functioning community population, one can suspect that at least subjects of this group were younger and much higher functioning than those in the present study. Gaitz and

Scott (1972) included an age group of subjects over 75 years in their study. However, all subjects were non-institutionalized community residents. Graney (1975) also studied with community residents who were in good health at the beginning of the study.

A significant problem in the experimental design was that the posttest could not be done immediately after the last session because of the upcoming weekend. Since three subjects from the experimental group had extremely poor short-term memory, the relapse of three days between the last session and the posttest was surely too long of a period for them to sustain some effects if there were any related to the sessions. Another consideration is that seven weekly sessions were possibly not frequent and long enough to cause significant effects on subjects' perceived state of affect. It took at least a few weeks to get to know each other since experimental subjects were not socializing very much outside the sessions.

Last, there were certain limitations which were inherent to this researcher. Coming from a different cultural background was certainly a handicap when working with very old people in order to recognize subtle details in ongoing sessions. Despite the eight-month volunteer work in the music therapy programs at the same retirement center, mostly in the health care unit, prior to the project, she failed to estimate accurately the functioning level of many

residents from the independent unit. Certain criteria for choosing subjects instead of assigning randomly from the entire unit would have helped to reach a more significant result.

Recommendations for Future Research

Selecting a suitable sample for a study is a difficult task when working with geriatric populations. The age ranges widely from approximately 60 to sometimes over 100 years. Observation over the entire project confirmed that age alone does not necessarily correlate well with how people function and how they feel about themselves as suggested in the literature. It seems to be important to set certain criteria before selecting subjects. When using a self-report as a measurement tool as in this study, mental alertness should be checked in terms of orientation with time and reality. In this study, it was unclear how well the subjects in the control group were functioning mentally because of the limited interactions with them. Problems with some experimental subjects became obvious as weeks passed by. It is, therefore, strongly recommended to have some information about the target population in regard to mental capabilities. If there is no written information available, a discussion with staff members at the institution would be valuable. The researcher, however, should definitely indicate the need and reason for limiting the target

population.

A researcher should also be prepared for some unexpected obstacles. For example, at least 45 minutes were needed to remind all subjects and escort some of them to the session room before each session. At the same time, 45 minutes were too long for others to remember the time and place. It is recommended that one have help getting people together before the session.

Limiting subjects to those who exhibit mental alertness would increase the usability of the Affect Balance Scale. Use of this scale also should be carefully examined. A pilot study may be helpful in eliminating unsuitable persons from the study. At the same time, future researchers should look for revisions of this scale adapted for elderly persons, or use another instrument which might be more powerful in detecting the perceived state of affect. Another suggestion is to track each person's state of affect more frequently during a research project since the administration of this scale takes just a few minutes when persons are alert and able to read.

Practical session periods should be extended. Since it takes at least three to four sessions until everyone feels comfortable with other participants as well as the leader of the group, at least ten sessions are recommended. Two sessions a week might be more desirable if such scheduling is possible. The size of the group should be bigger

because of the fragility of this population. If the sessions occur beyond ten weeks, it is likely some subjects will drop from the study.

A helper would be valuable for organizational reasons, as well as for offering more variety in activities which require more detailed attention for each person such as movements or playing instruments. It would also add more stimulation to activities.

To have experience in working with elderly people seems to be a must in order to conduct a research project with them. It helps to know typical problems that these people show, to know how to cope with them, and to develop a confidence in dealing with them. It will also help elderly persons develop trust in the researcher when the face is already familiar to them before participating in a project.

Based on the study findings and observations over the whole project, it is recommended that further research be conducted to study the effects of music therapy on elderly person's affective state with the following suggestions.

1. Narrow the population sample with some criteria such as mental, sensory, or physical functioning level.
2. When using the Affect Balance Scale, apply it more frequently.
3. Look for an alternative instrument to measure a person's perceived state of affect when there is evidence of limited mental capability in the study sample.

4. Study the relationships of quality and intensity of activity to person's perceived state of affect.
5. Study the relationship of other variables such as health, socioeconomic states, or living conditions to quality and intensity of activity.
6. Use a larger sample size.
7. Use an aid or co-therapist.
8. Plan a longer period for the project.
9. Allow a warming up period for a few weeks until everyone feels comfortable in the new setting.
10. Know the population as much as possible prior to the study and have basic skills and strategies in dealing with elderly people through volunteer works, etc.

Studies which can increase understanding of the effects of music therapy activities on old people's perception of their affects will be valuable so that more effective treatment programs can be developed in effort to improve these people's quality of life.

APPENDICES

APPENDIX A

LIST OF CASSETTE TAPES USED IN SESSIONS

LIST OF CASSETTE TAPES USED IN SESSIONS

Singalong Songfest

Hal Leonard Publishing Corporation, Winona, MN, 1983.

Familiar Singalongs

Hal Leonard Publishing Corporation, Winona, MN, 1983.

Shenandoah

From an unpublished cassette tape with a recording of a choir concert of the State Singers at Michigan State University, November 1984.
Available from the school of music, Michigan State University, East Lansing, MI.

APPENDIX B

LIST OF SONGS USED IN SESSIONS

LIST OF SONGS USED IN SESSIONS

Agay, D. (1975). Best loved songs of the American people.
Garden City, NY: Doubleday.

Shenandoah

Brown, F., & Ptack, D. (1984). Come join the Geri-Tones.
(Available from Geritones, 287 W. Laurel Ave., Lake
Forest, IL 60045).

America the beautiful
I've been working on the railroad
Let me call you sweetheart
My wild Irish rose
She'll be comin' round the mountain
Take me out to the ballgame
The good old summer time
When Irish eyes are smiling
While strolling through the park one day

Johnson, C. (Ed.). Happiness is a song. Burnsville, NC:
World Around Songs.

Make new friends
Shalom Chaverim

Miller, M. (1961). With Mitch. NY: Random House

Let the rest of the world go by

Personal arrangements

Hi there, hello there - adapted by this author from
"Twinkle"
Introduction song - adapted by A. Rose from "Clemen-
tine"

Tent and trail songs. (1979). Burnsville, NC: World Around
Songs.

Row your boat.

APPENDIX C

EXAMPLE OF A SONG SHEET

EXAMPLE OF A SONG SHEET

IN THE GOOD OLD SUMMER TIME

IN THE GOOD OLD SUMMER TIME, IN THE GOOD OLD SUMMER TIME,
STROLLING THRO' THE SHADY LANES WITH YOUR BABY MINE.
YOU HOLD HER HAND AND SHE HOLDS YOURS,
AND THAT'S A VERY GOOD SIGN.
THAT'S SHE'S YOUR TOOTSEY WOOTSEY
IN THE GOOD OLD SUMMER TIME.

TAKE ME OUT TO THE BALLGAME

TAKE ME OUT TO THE BALLGAME,
TAKE ME OUT TO THE CROWD.
BUY ME SOME PEANUTS AND CRACKER JACK,
I DON'T CARE IF I NEVER GET BACK.
SO IT'S ROOT TOOT TOOT FOR THE HOME TEAM.
IF THEY DON'T WIN IT'S A SHAME.
FOR IT'S ONE, TWO, THREE STRIKES YOU'RE OUT
AT THE OLD BALLGAME.

APPENDIX D

QUESTIONS AND SCORING SHEET
USED IN PRETEST AND POSTTEST

QUESTIONS AND SCORING SHEET
USED IN PRETEST AND POSTTEST

PLEASE CHOOSE ONE ANSWER FOR THE FOLLOWING QUESTIONS AND
MAKE AN X-MARK FOR EACH OF THEM.

DURING THE PAST FEW WEEKS DID YOU EVER FEEL:
DEPRESSED OR VERY UNHAPPY?

- ☐ OFTEN
- ☐ SOMETIMES
- ☐ NEVER

SO RESTLESS THAT YOU COULDN'T SIT LONG IN A CHAIR?

- ☐ OFTEN
- ☐ SOMETIMES
- ☐ NEVER

ON TOP OF THE WORLD?

- ☐ OFTEN
- ☐ SOMETIMES
- ☐ NEVER

PROUD BECAUSE SOMEONE COMPLIMENTED YOU ON SOMETHING
YOU HAD DONE?

- ☐ OFTEN
- ☐ SOMETIMES
- ☐ NEVER

UPSET BECAUSE SOMEONE CRITICIZED YOU?

- ☐ OFTEN
- ☐ SOMETIMES
- ☐ NEVER

PLEASED ABOUT HAVING ACCOMPLISHED SOMETHING?

- ☐ OFTEN
- ☐ SOMETIMES
- ☐ NEVER

VERY LONELY OR REMOTE FROM OTHER PEOPLE?

- ☐ OFTEN
- ☐ SOMETIMES
- ☐ NEVER

BORED?

- ☐ OFTEN
- ☐ SOMETIMES
- ☐ NEVER

THAT THINGS WERE GOING YOUR WAY?

- ☐ OFTEN
- ☐ SOMETIMES
- ☐ NEVER

PARTICULARLY EXCITED OR INTERESTED IN SOMETHING?

- ☐ OFTEN
- ☐ SOMETIMES
- ☐ NEVER

APPENDIX E
EXAMPLE OF SCORING

EXAMPLE OF SCORING

Questions	Answers	Scores given
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During the past few weeks did
you ever feel:

Pleased about having accomplished something?	sometimes	1
that things were going your way?	often	2
proud because someone complimented you on some- thing you had done?	often	2
particularly excited or interested in something?	sometimes	1
on top of the world?	never	0
<u>Sum of the positive affect scores</u>		<u>6</u>

so restless that you couldn't sit long in a chair?	never	0
bored?	sometimes	1
depressed or very unhappy?	often	2
very lonely or remote from other people?	never	0
upset because someone criticized you?	never	0
<u>Sum of the negative affect scores</u>		<u>3</u>

Computation of the total score of the Affect Balance Scale
in a revised form

sum of positive affect scores - sum of negative affect
scores + a constant of 10 = affect balance score

Scoring of the example above

6 - 3 + 10 = 13 affect balance score = 13

APPENDIX F
EXAMPLE OF A SESSION

EXAMPLE OF A SESSION

Singing

"Hi there, hello there"
 "Introduction song"
 "The good old summer time"

Exercise in chair to music

"Red River Valley"

Playing instrument (tone bars)

"Row your boat"
 "Make new friends"
 "She'll be comin' round the mountain"

Singing

"Farewell, good friends" (Shalom Chaverim)

APPENDIX G

RAW DATA AND DEMOGRAPHIC INFORMATION EXPERIMENTAL GROUP

RAW DATA AND DEMOGRAPHIC INFORMATION EXPERIMENTAL GROUP

Participation: 1 = present at the 1st session, 2 = present at the 2nd session, etc., . = absent
Sex: 1 = male, 2 = female

Difficulty in testing: 1 = very easy, 2 = with some problems, 3 = very difficult

Administration of testing: 1 = filled by subject, 2 = filled by the examiner

Visual problems: 1 = no, 2 = yes

Hearing problems: 1 = no, 2 = yes

Ambulatory problems: 1 = can walk without aids, 2 = with aids, 3 = wheel chair

Marital state: 1 = married, 2 = widowed, divorced or separated, 3 = single

Test: 1 = pretest, 2 = posttest

Subject's No.	Partic.	Sex	Age	Dif	Adm	Vis	Hear	Amb	Mar	Test	+	score	-	score	total
1	123...	7	2	83	1	2	2	1	2	3	1	0	3	7	
2	1234.67	2	75	3	2	2	1	1	3	1	2	2	5	7	
3	1234567	2	91	1	2	2	1	2	3	1	6	1	1	17	
4	1234.67	2	71	1	1	1	1	1	1	1	2	3	0	16	
5	1...567	2	79	1	1	1	1	1	2	1	8	5	5	13	
6*67	2	83	1	2	2	2	2	2	1	6	2	2	11	
7	.2...5..	2	76	2	2	1	1	2	2	1	7	1	1	14	
8	12.....	1	91	2	2	2	2	2	2	1	5	0	0	15	
9	1.....	1	87	1	1	1	1	1	2	1	8	0	0	18	
10	2	85	1	2	2	1	1	2	1	6	0	0	16	
											7	1	4	16	
											5	4	1	11	
											2	1	1	11	
											3	1	1	12	
											6	5	5	11	
											9	4	4	15	
											2	0	0	12	
											2	—	—	—	

* Subject 6 through 10 were dropped from the statistical analysis because of their poor attendance in sessions

APPENDIX H

RAW DATA AND DEMOGRAPHIC INFORMATION
CONTROL GROUP

RAW DATA AND DEMOGRAPHIC INFORMATION
CONTROL GROUP

Subjects's No.	Sex	Age	Dif	Adm	Vis	Hear	Amb	Mar	Test	+ score	- score	total
11	2	83	1	2	2	1	1	3	1	0	2	8
				1					2	6	4	12
12	2	82	1	2	2	1	1	2	1	2	1	11
				1					2	5	4	11
13	2	97	3	2	2	1	3	2	1	4	2	12
									2	8	2	16
14	2	85	2	2	1	1	1	1	1	3	1	12
				1					2	5	2	13
15	2	91	2	2	2	1	1	3	1	4	8	6
									2	7	4	13
16	2	65	1	1	1	1	1	2	1	8	3	15
									2	8	0	18
17	2	82	1	1	1	1	1	2	1	8	0	18
									2	6	0	16
18	1	92	2	2	2	2	2	2	1	6	3	13
									2	1	1	10
19	1	96	1	1	1	2	1	2	1	7	3	14
									2	7	3	14
20	1	83	3	1	1	1	2	1	1	3	0	13
			2						2	0	1	9

APPENDIX I

RAW SCORES OF THE AFFECT BALANCE SCALE

RAW SCORES OF THE AFFECT BALANCE SCALE

Subject No. Test

Experimental Group

1	1	0	0	0	0	0	0	0	2	0	1	0	3	7	0
	2	1	0	0	1	0	2	0	2	1	2	0	5	7	
2	1	2	2	2	1	2	9	0	0	0	1	1	2	17	-1
	2	2	1	2	2	1	8	1	0	0	0	1	2	16	
3	1	2	0	2	2	0	6	0	0	1	0	0	1	15	-2
	2	1	0	1	1	0	3	0	0	0	0	0	0	13	
4	1	2	2	2	1	1	8	1	1	1	1	1	5	13	-2
	2	1	2	1	1	1	6	1	1	1	1	1	5	11	
5	1	1	1	1	2	1	6	0	1	0	0	1	2	14	+1
	2	1	2	0	2	0	5	0	0	0	0	0	0	15	

Control Group

11	1	0	0	0	0	0	0	0	1	1	0	0	2	8	+4
	2	1	1	2	1	1	6	1	1	1	1	0	4	12	
12	1	1	0	1	0	0	2	0	0	1	0	0	1	11	0
	2	2	1	1	0	1	5	0	1	2	1	0	4	11	
13	1	2	2	0	0	0	4	0	0	0	0	2	2	12	+4
	2	1	2	1	2	2	8	0	1	0	0	1	2	16	
14	1	2	0	0	1	0	3	0	0	1	0	0	1	12	+1
	2	1	1	1	1	1	5	0	1	1	0	0	2	13	
15	1	1	1	1	1	0	4	1	2	1	2	2	8	6	+7
	2	2	2	1	1	1	7	1	1	1	0	1	4	13	
16	1	2	1	2	2	1	8	0	0	1	1	1	3	15	+3
	2	2	1	2	2	1	8	0	0	0	0	0	0	18	
17	1	2	2	1	1	2	8	0	0	0	0	0	0	18	-2
	2	1	1	2	1	1	6	0	0	0	0	0	0	16	
18	1	1	2	2	1	0	6	0	1	2	0	0	3	13	-3
	2	1	0	0	0	0	1	0	0	0	1	0	1	10	
19	1	2	1	1	2	1	7	0	1	1	1	0	3	14	0
	2	2	2	1	1	1	7	1	1	0	1	0	3	14	
20	1	1	0	0	2	0	3	0	0	0	0	0	0	13	-4
	2	0	0	0	0	0	0	1	0	0	0	0	1	9	

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