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THE RELATIONSHIP OF SELF-CONCEPT TO
ADOLESCENT'S MUSICAL PREFERENCES AND
LEVEL OF INVOLVEMENT WITH MUSICAL LISTENING

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of the Ohio State University

By
William D. Blackburn, B.S., M.S.W.

* * * * *

The Ohio State University
1983

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Finally, I wish to dedicate this work to my wife, Cindy, and daughter, Abbey, who have supported and encouraged me throughout the writing of this dissertation.
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CHAPTER I

Introduction

The period of adolescence has long been established as a significant aspect of the human developmental span. The time between attainment of sexual maturity at puberty and the complete assumption of adult behaviors and responsibilities is a time comprised of a multiplicity of changes. The nature and degree of such changes involve virtually every aspect of a young person's life.

Puberty begins with the action of sex hormones that result in the appearance of the secondary sex characteristics, and associated intensification of emotions. In Piaget's cognitive developmental theory the adolescent is entering the stage of formal operations. At this time the individual is capable of truly abstract thought and may be approaching the peak of his or her reasoning powers. These newly developing cognitive abilities facilitate advances in the social areas. Adolescents begin to have mature relationships among each other in intellectual, emotional and sexual areas.

The adolescent is often preoccupied with self. The adolescent's physical appearance is being drastically
revised because of a growth spurt and hormonal changes, sexual drive increases and he or she becomes concerned about sexual attractiveness, peer acceptance and intimate relationships. The adolescent's cognitive competencies allow him or her to consider conceptions of the self as abstractions. The development of a self identity becomes an important "task" for the adolescent. Horrocks (1976) states: "It is fair to say that the main business of adolescence is that of building and confirming a stable concept of self." The "main business" of adolescence may not always result in the "storm and stress" version advocated by G. Stanley Hall (1904), but in our culture it can be an anxiety-producing developmental process presenting difficulty in adjustments at best.

Interests and activities of adolescents have varied greatly over the years, but a seemingly universal interest in popular music has remained constant for the last two decades, at least. All people, including teenagers, have specific and individual tastes (Denisoff, 1976). With the onset of radio and television their advertisers began to cater to particular audiences. Stations now specialize in "Top 40," soul, country/western, rock, folk, "beautiful music," and other styles (Peterson and Davis, 1974).

A major musical preference phenomenon has been the development of separate American music cultures during the past quarter century. From about 1930 to the early 1950's
popular music was aimed predominantly at white middle-class culture. Music popular with one generation was usually popular with another. Prior to the 1950's, country/western, black and folk styles were alive and well, but had only regional appeal. Since that time, through the mass media, country, soul and folk styles have acquired national audiences; rock music became the music of youth. Each musical style has its own values and sociological bases (Radocy and Boyle, 1979).

Group musical preferences narrow with advancing grade level. First, second and third graders will listen to brief excerpts of a variety of musical styles without undue protest. In the fourth grade and beyond, students will cringe, cover their ears, and check if peers are doing the same (Radocy and Boyle, 1979). The preferred music becomes rock. An increasing preference for rock music with advancing grade level has clearly been demonstrated (Greer, Dorow and Randall, 1974; Greer, Dorow and Hanser, 1973; Greer et al., 1973). The assessment of attitudes towards music, conducted as part of the National Assessment of Educational Progress1, supports the trend

---

1The National Assessment of Educational Progress is a project of the Educational Commission of the United States. It was developed in collaboration with the National Center for Educational Statistics of the Department of Health, Education and Welfare. The music assessment was conducted in 1971-72.
noted by Greer et al. It reveals an increased preference for rock from nine-year-olds to thirteen-year-olds to seventeen-year-olds (Radocy and Boyle, 1979).

James Coleman's massive 1961 survey of American adolescents confirmed that music was the most popular form of entertainment and that "rock 'n roll" was their most popular form of music (Frith, 1981). Teenagers' interest in pop music was found to determine the television programs they watched, the magazines they read, the cafes and dances they went to, and the "necessary tools" (radio, stereo, tape recorder, guitar) they sought to own (Coleman, 1961). A Harris poll has revealed that 87 percent of teenagers listen to rock music, many from early morning until night, and a survey by the Media Information Department of the McManus, John and Adams agency found that young adults listen to rock music on the radio an average of over five hours a day. They spend less than half that time watching television (Fuller, 1981).

The social importance of rock is also sustained by the sales statistics. By the mid-1970's well over four billion dollars was being spent annually in the world on musical products. In America the sales of records and tapes easily outgrosses the returns on movies and sports (Frith, 1981). Popular music is a fifty billion dollar-a-year business (Toohey, 1982).
Psychologists and Sociologists could not ignore the record players, tape recorders and radios found in just about every household by the 1960's. Thus records and radios became included in textbook lists of mass media. Media analyses have focused on problems derived from studies of television. Albert Bandura's influential demonstrations regarding the media's (visual) affect on aggressiveness (Bandura, Ross and Ross, 1961, 1963) have become "classics." The Surgeon General of the United States issued a report on television and its effects in 1974. Although, as Murray et al. (1970) and others have pointed out, TV plays an insignificant role in the life of the adolescent. Adolescents watch television, of course, but it tends to be too static a form for their active lives. During adolescence, home often becomes confining and seems restrictive. They are often not motivated to sit in front of the TV for long periods, and TV does not cater to their interests as does radio.

Considerable research interest has been concerned with the social effects of popular music, either as an agent of socialization, or as a reflection of the attitudes of its listeners. Fox and Williams (1974) were concerned about the relationship between political orientation and musical preferences. A music involvement dimension was measured by questions on rock concert attendance and record purchases. Music preferences were measured on rating scales. Their
results indicated that a weak association existed between political orientation, music involvement and preferences for particular musical styles. They reported that such relationships were maintained even after controls for demographic variables were introduced. Mashkin and Volgy (1975), in a similar study, focused on political alienation, social alienation and female sex stereotyping factors affecting preferences for rock, folk and country/western music. The authors noted significant differences on political orientation and sex stereotyping with respect to music taste.

The cause-effect relationships of the variables in these studies have not been explored in a systematic fashion. The lack of longitudinal analysis in these studies prohibits firm conclusions, but Mashkin and Volgy (1975) suspect that "prolonged exposure to the lyrical content of music has some definite reinforcing, or acquisitive consequence" (p. 458). Toohey (1982), in a similar vein, is concerned with social conditioning via mass media. The author considers the importance of adolescence as a developmental stage from the theoretical position of Eric Erikson. Taking into account Eric Erikson's eight stages of personality development, specifically "identity versus role confusion," he believes lyrics in popular music could contribute to personality development. The results of Toohey's survey (with college and high school students)
confirm that students believe that music lyrics have a significant influence on shaping values.

The assumption underlying these studies is that the effectiveness of the music requires that its lyrical content be properly understood by listeners. Various studies have shown that a large majority of listeners fail to correctly interpret the meaning of message songs. Robinson and Hirsch (1972) studied Michigan high school students in the late 1960's. Only ten to thirty percent of the students were able to adequately describe the song's themes. Similar findings have been documented by Denisoff and Levine (1972). College student respondents were asked to describe the meanings of two popular anti-war songs, "Eve of Destruction" and "Universal Soldier." Only fourteen to eighteen percent of the subjects were able to correctly interpret their meanings. This evidence is not entirely contrary to the idea that message songs effectively communicate political messages. In the Denisoff and Levine (1972) study, many listeners were able to partially understand the songs' messages. Denisoff and Levine conclude that "the propaganda songs of the Top Forty" appear to get across to the listeners, but not to the degree of intensity or impact proposed by proponents and critics alike.

American Popular music has always had its detractors since the advent of jazz, at least. Certain rebellious elements in the white population have at various times been
attracted to jazz forms (Esman, 1954). Esman mentioned adolescents and Bohemians who were "seeking liberation and individuality" as jazz listeners. Leonard (1962) has presented a detailed description of such groups concerning the popularity of jazz in the twenties. Riesman (1957) noted that a similar minority audience existed among teenagers for hot jazz in the forties. He stated that "the hot jazz lovers are protestors. They are individualists who reject contemporary majority conformities." Howard Hanson was concerned with general effects of music on listeners. His concern was that the youth were exposed to "vast quantities" of "hot jazz" by radio listening, and "if the mass production of this aural drug is not curtailed, we may find ourselves a nation of neurotics which even the skill of a psychiatrist may be hard pressed to cure" (Schullian and Schoen, 1948, p. 265). Kamin (1975) has presented evidence which supports that a minority teenage audience existed in the fifties that listened to rhythm and blues rather than hot jazz. He characterized this audience as "predominantly working class" and "quasi-deviant" by middle class standards. An influential disc jockey in Cleveland, Ohio popularized the term "rock 'n roll." When Alan Freed first used the term rock 'n roll he was applying it to rhythm and blues music (Gilbert, 1970). Since that time, rock 'n roll, or later simply referred to as "rock," has become popularized by an adolescent mass audience, as
Jazz and rock music first originated as black musical forms and styles. Black music has always been central to "pop" and "rock 'n roll." The impact of the rhythm and blues on youth music in the 1950's and 1960's was another example of the continuing process through which white popular music has been invigorated by styles and values drawn from black culture. Simon Frith, sociologist and music critic, comments on black music:

"Black music makes obvious the potential chaos of sexual feeling and rock's black-based dance forms have always been perceived by moralists as a threat to respectable codes of behavior. The media censors realized immediately that Elvis Presley's rock 'n roll was a form of sexual display. Black music, in short, became a means for the public expression of normally private sensations for white teenagers in the 1950's, but the institutions in which black musicians played had always had an atmosphere of risk and excitement and promise; they offered the young people drawn to them symbols of rebellion." (Frith, 1981, p. 19)

The notion that popular music, especially "rock," may have a corrupting influence on youth has been ubiquitous. Media attention was focused on popular music during the "payola" problems involving radio programming in the late 1950's. Payola was outlawed by a Federal Bribery Act in 1960 after an extensive, muckraking Senate investigation that was partly designed to show that rock 'n roll was corrupting youth (Frith, 1981). The function and social effects of popular music have received considerable
public criticism. The Cuban regime, at one time, declared all forms of rock music subversive to the government (Mashkin and Volgy, 1975). Former Vice President Spiro T. Agnew argued that rock music is an opinion formation device, capable of "hypnotizing and brainwashing" American teenagers (Denisoff and Peterson, 1972), and leading youth down the path to drugs and immorality (Johnson, 1971). Similar opinions are apparently held by current Secretary of the Interior, James Watt. This year he cancelled the Beach Boys concert at the Annual Fourth of July Celebration in Washington, D. C. His reasoning was that "rock bands attract an undesirable element."

Members of the Moral Majority and the radical right have portrayed rock music as an effective propaganda technique. Reverend David Noebel has authored a number of works dealing with rock from this perspective. Noebel claims that "international communism" is making use of rock music. He alleges rock music has a subliminally persuasive effect by its use of lyrics dealing with drugs, sex, politics and generational conflicts, also "extremely primitive and sensual rhythms" (Levine and Harig, 1975).

A recent anti-rock book by John Fuller, a novelist, concerns itself with the deaths of eleven young people who were asphyxiated at a rock concert in Cincinnati. The young people were crushed by the crowd pressing into the Cincinnati Coliseum for the notorious 1979 "Who" concert.
Fuller draws a distinction between "hard-rock" and other popular styles. He is concerned with "mass hypnosis, the mechanics of crowd psychology, and posthypnotic suggestions." Fuller claims the "kids" are victims of an unconscious death wish that is an integral aspect of hard rock (Fuller, 1981). The current controversy regarding rock music involves "heavy-metal," a form of hard rock. Arkansas Representative Jack McCoy earlier this year proposed legislation concerning the use of "back-masking." This term refers to the inclusion of backward Satanic messages recorded onto the records of various heavy-metal bands. The proposed legislation would require that albums supposedly containing "back-masking" bear warning stickers. This bill has passed the House Committee on Public Health, the House and the Senate. McCoy's bill was sent back to the House for concurrence on amending the penalty to a Class A misdemeanor, where it was tabled on February 9, 1983. Speaking of the bill, McCoy has declared, "We don't want this stuff in our houses, backward, forward or sideways, and I find that hard to argue with" (Bashe, 1983).

The aforementioned concerns and criticisms of rock are widespread and only a representative listing has been provided. The question arises: what scholarly evidence exists to substantiate such views? Empirical evidence is limited and such generalized concerns have not been adequately substantiated. The basic issues have been
researched in more focused lines of inquiry. Research investigators have considered the social and emotional effects of rock and popular music. These studies can be generally divided into those that study music as an agent of socialization or affective change, and those that study music preferences as a reflection of the personality of its listeners.

The previously mentioned studies by Fox and Williams (1974) and Mashkin and Volgy (1975) would be classified as studies that see music preferences as a reflection of the attitudes of its listeners, even though the authors suspect that music lyrics could influence sociopolitical attitudes. The lack of cause-effect evaluation in these studies does not provide adequate evidence for music as an agent of socialization. Previous research has suggested that most young people are unable to correctly interpret the meanings of song lyrics, but these studies have found that preferences for musical styles are associated with ideological orientations. The nature of the associations are unknown because of the dearth of longitudinal work in the area of musical preferences and subsequent absence of long-term panel designs.

Various other differences in personality characteristics have been documented in terms of musical preferences. Personality is clearly reflected in musical preferences (Fisher and Fisher, 1951; Cattell and Anderson, 1953;
Hahn, 1954; Keston and Pinto, 1955; Payne, 1967). Personal insecurities, anxieties and fears have been shown to influence an individual's musical preferences (Fisher and Fisher, 1951). Aesthetic values and needs for sensual pleasure have been associated with preferences (Hahn, 1954). Musical training, music recognition, and introversion have been related to a preference for classical music (Keston and Pinto, 1955). Persons that differ on stability/neurotic scores on a personality inventory differ on musical preferences (Payne, 1967). Ninth graders who are more dependent and more in need of social approval tend to alter expressed musical preferences to conform to acknowledged peer leaders (Inglefield, Note 1). Butler (1968) has found significant positive relationships between radicalism and unconventionality subscales of a personality test and receptivity for electronic music. Individuals with manifest conflicts about interpersonal interactions have been shown to have a higher involvement in music listening (Ridgeway, 1976).

In contrast to the literature regarding personality factors which are determinants of musical preferences, a body of literature exists which has shown music to be an agent of affective change. Many of these studies have been conducted with the interests of music therapy in mind. It has been clearly demonstrated that music can evoke mood responses in listeners (Schoen and Gatewood, 1927; Herner,
1935; Sopchach, 1955; Eagle, 1971), and increase or reduce anxiety (Greenberg and Fisher, 1966; Smith and Morris, 1970; Jellison, 1975). Generalizations can not yet be made concerning the interaction of mood and music (Eagle, 1971), and it is not clear what type of music will increase or reduce anxiety (Haack, 1980).

The literature reveals that personality characteristics are reflected in musical preferences. In contrast to the various criticisms of rock and popular music, substantial evidence does not exist to suggest that music is instrumental in effecting attitude, values, or personality development. The mechanisms by which music reflects a listener's orientation need further exploration. One possible avenue to explore lies in the area of affective change in which music has been shown to be effective, in relationship to adolescents' use of music.

Little is currently known about listeners' conscious use of music and why adolescents find popular music so satisfying. Frith (1981) has documented information on teenagers' use of music in a small British town. Class and cultural differences were found to be interwoven with sex and age differences. Girls tended to be more interested in dancing and were more concerned with lyrics, especially romantic lyrics. Male consumers tend to identify with rock performers. This identity is expressed in sexual terms and is related to the musician's dominance.
and power, confidence and control. Popular music (rock) is seen as reflecting an emotionally intensified sense of self as artists are heard to articulate the listener's own fears and feelings. Frith believes that "rock has been used simultaneously as a form of self-indulgence and individual escape and a source of solidarity and active dissatisfaction."

Complementary information has been documented in the United States in several attempts to classify themes in popular music, and in interviews with adolescents about their interests in music. Fuller (1981) in interviews with adolescents found "that rock gave them a communication of their own, a release from the harsh or routine lives that many lived. They felt it attacked the shame and hypocrisy of a world gone sour." Horton (1957) classified popular music of the mid-1950's according to the relationship of the lyrics to five stages of adolescent love-making: prologue, courtship, a honeymoon period, a downward course, and an abandoned lonely stage. The lyrics provided a conventional language for formulating adolescent expectations and self-conceptions. Hey (1974) also classified lyrics from popular songs in the 1950's. He organized the themes under two general categories: insecurity and generational conflict. He sees the "complexities of insecurity as dissolving through a love relationship, a special party, or a group identity." Hey further
suggests that "taken as a whole, the songs of insecurity offer a temporary dream vision for the listener whose concepts of a hostile world may parallel the song's lead characters, whose lost loves, forgotten affairs, or cruel fathers oppress their freer instincts" (1974, p. 321). The "group identity" furthers the conflict between age groups and is lyrically represented in common adolescent experiences.

Replicating Horton's (1957) content analysis of popular song lyrics, Carey (1969) has reported a considerable increase in both range of themes and portrayals of different values and controversial issues during the 1960's. Cole (1971) analyzed the lyrics of the annual "Top 10" songs for each year of the 1960's. He found a marked increase in the frequency of social protest themes through the decade. During 1974 Mashkin and Volgy (1975) conducted a content analysis of the "Top 40" singles and "Top 20" albums on the charts at that time. They found "few total references to politics, sex-role orientation, or condemnations of materialistic life-styles." They concluded that major changes had occurred in the content of popular music lyrics and radical themes had been replaced with more "entertaining stories of adventure and personal experience." Fox and Williams (1974) concur with these findings and conclude that "contemporary lyrics usually stress adolescent problems to the virtual exclusion of social problems."
Rock and popular music has more or less always stressed adolescent problems and issues. The recording companies do as much as possible to identify tastes and issues of young people and reflect them back in the records, in fact, many of the writers and musicians of popular music are adolescents themselves working from their own perspective (Vulliamy, 1975). It should also be mentioned that much of the appeal for popular music among adolescents is related to visual cues and the structure and style of the music. To assume that music could be studied in only one dimension (lyrics, for example) is to lose some other essential character of this popular art (Hey, 1974). To quote Denisoff and Levine (1971): "the deviant aspect of Presley was entirely visual and tied to his hybrid musical genre, rock-a-billy, rather than the lyrical content which did little more than elaborate the sentiments of Shakespeare's youthful rebels, Romeo and Juliet." (p. 911). The emphasis of rock music has been seen to be protest; "protest against the static forms, verbal cliches, tired harmonies, instrumental limitations and the vapid romanticism of Tin Pan Alley song" (Shaw, 1971, p. 208).

The present study is concerned with the connections that have been shown to exist between a given musical style and the attributes of its listeners. Music per se has not proven to produce significant effects in attitude, values, or personality factors, but music has been shown
to be an agent of affective change. This study will attempt to determine if a relationship exists between an adolescent's level of involvement and preference for a given musical style and the conceptual area of self-concept which is associated with mental health and adjustment. Given the nature of rock and popular music, specifically the lyrical emphasis on adolescent issues and problems, and structural and stylistic "deviations" of the music and its practitioners, it would seem reasonable that such a relationship may exist. Troubled adolescents experiencing adjustment or other problems suffer from emotional disorders. The connection between musical preferences, level of involvement with music, and listener attributes may bear some relationship to music's demonstrated ability to alter an individual's affective state.

Definitions

**Rock** - For the purpose of this study, Rock is defined as popular music that appears on the "Rock" charts for *Billboard* magazine, and is aired on radio stations that feature "contemporary rock," and "album-oriented rock" program formats.

**Hard Rock** - Popular music that is classifiable as such by music industry press (such as *Billboard*), operationalized in this study in terms of the subjects' rated preferences under "Hard Rock," and "Heavy Metal" categories on the Music Involvement Questionnaire (MIQ).

**Pop Rock** - For the purpose of this study all other forms of Rock music defined by music industry press. Pop Rock is operationalized in this study in terms of the subjects' rated preferences under "New-Wave Rock," "Country-Rock," and "Soft Rock/Pop"
categories on the MIQ.

**Non-Rock** - For the purpose of this study all other styles of music that are not Rock, such as music that appears on the "Jazz," "Disco," "Country," and "Soul" charts of Billboard. Also music that is aired on radio stations featuring "Adult Contemporary," "Contemporary Country," "Middle of the Road," "Popular Rhythm and Blues/Jazz," "Beautiful Music," and "Contemporary Christian" program formats. Non-Rock is operationalized in this study as subjects' rated preferences under "Country," "Jazz," "Disco," "Classical," and "Other" categories on the MIQ.

**High Involvement** - For the purpose of this study a grouping of subjects that score high (above the mean) on the involvement scale of the MIQ.

**Low Involvement** - A grouping of subjects that score lower (on or below the mean) on the involvement scale of the MIQ.

**Assumptions**

The design of this study rests on assumptions drawn from previous research in the field, as reviewed in Chapter 2. The most important assumptions are:

1. Adolescent music listeners have different and distinct music preferences.

2. Adolescents are generally quite interested and knowledgeable about popular music.

3. Individuals that have different music preferences differ significantly in terms of certain psychological dimensions.

**Hypotheses**

The present study was designed as an exploratory survey to test a number of general hypotheses. These multiple hypotheses can all be seen to comprise a pair of
research questions: Will self-concept scores, in conjunction with the variable of sex, differentiate to a significant degree between adolescents who prefer hard rock music versus pop rock music? Will these same variables differentiate to a significant degree between adolescents who are highly involved in music listening versus those who are not so highly involved?

These questions are operationalized below as a series of null hypotheses:

1. There is no difference between the scores of the male hard rock preference group and the male pop rock preference group on any of the Tennessee Self Concept Scale subscales chosen for evaluation.

2. There is no difference between the scores of the male high involvement group and the male low involvement group on any of the TSCS subscales chosen for evaluation.

3. There is no difference between the scores of the female hard rock preference group and the female pop rock preference group on any of the TSCS subscales chosen for evaluation.

4. There is no difference between the scores of the female high involvement group and the female low involvement group on any of the TSCS subscales chosen for evaluation.

Limitations

There are a number of limitations to this study which must be kept in mind when interpreting the results and when attempting to generalize the results to other contexts. The most important are listed:
1. The present sample represents only white, suburban adolescents that volunteered to participate in this survey. Thus the sample is not random, or representative of all teenagers in the United States. The fact that these subjects chose to be a part of this study may introduce bias of an unknown nature.

2. The data used is exclusively self report information. Customary caution must be used when considering the findings.

3. The survey does not follow respondents to see if preferences or levels of involvement change. The duration of an adolescent's high involvement in music, for example, is unknown. Also unknown is the stability of an individual's stated preference.

Significance of the Study

Considerable community and academic interest has been concerned with the social effects of popular music as an agent of socialization. It has not been adequately demonstrated that music per se is a causative factor in terms of attitudes, values, or personality variables, but individuals with different musical preferences have been shown to vary on these dimensions. The mechanisms by which music reflects a listener's orientation need further exploration given the communities' concerns regarding illicit behavior control and potential misuses of music. Additional information in this area may also be of significant value to the educational and therapeutic community.

The present study is exploratory in nature and concerns itself with a relationship between adolescents'
self-concepts, musical preferences, and level of involvement with music listening. The level of involvement dimension is included as an important independent variable that has been associated with liberalism (Fox and Williams, 1974), and conflicts about interpersonal interactions (Ridgeway, 1976). This study will utilize the Tennessee Self Concept Scale, an instrument by which an individual's self-concept scores have been demonstrated to be directly related to his or her general personality and state of mental health. This instrument will identify "deviant" individuals from a normative standpoint. The test employs an assumption that certain positive self-statements reflect a healthy self-concept and are correlated with adjustment.

Adolescents suffering from adjustment problems usually experience emotional distress in varying degrees of anxiety or depression. Adolescents' use of rock and popular music may bear some relationship to music's demonstrated ability to alter an individual's emotional state. This study does not provide a direct test of such a relationship. No casual connections are designed between the principle variables of investigation, but open ended questions are asked of the subjects regarding the purposes for their interest or lack of interest in music. An evaluation of these responses will augment the findings, and serve as tentative explanations to direct future investigations.
The primary purpose of this study is to determine if a relationship exists between an adolescent's state of mental health and his or her interests in music. If significant relationships are found to exist, the importance of clarifying the nature of these associations could generate future research investigations. If significant relationships are not found to exist then many of the generalized criticisms of rock and popular music would seem to lose creditability.

Adolescence is a time of many developments in psychological, sociological and biological areas, and is considered to be a significant aspect of the human developmental span. It has been documented that adolescents spend a considerable amount of time listening to rock and popular music. This study seeks to investigate possible connections between types of adolescents and their interests in music, in an attempt to document the importance of continued investigations concerning young people and their use of popular music.
CHAPTER II

Literature Review

Psychology of Music

The psychology of music has more recently been referred to as music psychology and represents a rapidly developing inter-disciplinary field. Traditional domains of study include musical preferences, psychoacoustics, measurement and prediction of musical ability, functional music, music learning, the affective response to music, and the psychological foundations of rhythm, melody and harmony. The areas of musical preferences, and affective response to music (including physiological measures, mood responses and experimental aesthetics) have direct relevance to this study. A historical and representative review of these areas will be presented. A supplementary review of the principles of music therapy will also be included to aid in integrating the research literature.

Music Preferences

Research on music preferences that have relevancy to this study can be broadly categorized into two major
dimensions. The first would include personal characteristics and personality factors that comprise individual determinants of preferences. The second category involves a variety of social determinants. The use of the term "preference" in this review refers to the selection of one musical composition or style over another. A distinction between "musical taste," usually considered to be long-term commitments to styles of music, and music preferences, often related to short-term choices, has not been made in this review. Roeckle (1968) in a summary of writings on musical taste has noted that various authors have provided evidence that music tastes are not static. People vary in their preferences for sensory experience in which a choice is involved. Personal preferences for certain styles of music are rooted in individual biological needs, cultures, training and experience. Farnsworth (1969) defines musical taste as a person's overall attitude toward collective musical phenomena.

The effect of personality on music preferences has generated considerable research interest over the years. An early contribution in this area is the Music Preference Test of Personality developed by Cattell and Anderson (1953). The test was designed to measure personality traits by subjects' preferences to 100 brief musical selections. Steenberg (1959), in a review of the test, commented that the instrument appeared to discriminate between
normal and abnormal subjects as well as different categories of psychopathology. The reliability of the test with normal college-age subjects was examined by Lang (1968). The subjects were tested under differing mood conditions of relaxation or anxiety, and it was concluded that the Music Preference Test of Personality does reliably measure the music preferences and more enduring aspects of personality of normal subjects.

Fisher and Fisher (1951) studied the effects of two personality variables, insecurity and internal anxiety, on preferences for "unfamiliar dramatic music." The results showed that subjects with marked personal insecurity responded in a favorable or unfavorable way to the music, while other subjects made more moderate preferences. The authors believe that personal insecurities, anxieties and fears may influence a person's response to music. In another study which examined personality factors, Hahn (1954) compared personality assessments of students at a university counseling center with their musical preferences. Personality was reflected in individual musical choices which also depended on aesthetic values and needs for sensual pleasure. Aesthetic values in turn were dependent upon cultural background, musical training, and the general attraction of music.

Keston and Pinto (1955) investigated the preferences of college students in terms of relationships between
preference, as indicated by preferential choices of musical excerpts, and eight variables: introversion - extroversion, masculinity - femininity, age, educational level, sex, formal music training, music recognition ability and intelligence. Musical training, music recognition and introversion were related to a preference for classical music. In a more recent investigation, Payne (1967) conjectured that individuals that differed on stability-neurotic scores on a personality inventory would differ on musical preferences. She hypothesized that people with stable temperaments would more likely prefer classical music. Classical music was considered to be music that focused on form as opposed to "romantic music" that focused on feeling. The subjects were both adults and college-age individuals. Her results lend some support to her hypothesis, but the relationship reported is not strong.

Inglefield (Notel) studied the relationship between personality variables and conformity behavior with musical preferences. Using experimental groups, under different social pressure situations similar to the Asch (1956) conformity experiments, he found that ninth graders showed a tendency to alter expressed preferences to conform to acknowledged peer leaders. Those subjects who were more outerdirected than innerdirected, more in need of social approval, and more dependent than independent, as identified
by personality tests, tended to be the greater conformers.

Butler (1968) also focused on personality factors in an examination of receptivity for electronic music. Personality characteristics were measured using the Cattell 16 Factor Personality Test. The results revealed significant positive relationships between the radicalism and unconventionality subscales of the test and Butler's measure of receptivity for electronic music.

The sex of the subject is an easily recorded personal characteristic that is often included in studies of music preferences. Studies seldom have focused on sex as the primary variable of investigation. Most studies (Birch, 1963; Baumann, 1960; Appleton, 1970; Skipper, 1975) show significant differences in the musical preferences of male and female subjects for a variety of styles of music. These studies have sampled students in the age range from high school to college. The literature suggests that males in this age range prefer jazz or rock more than females, and females prefer classical music more than males.

Social class factors have also been included in studies of music preferences. Schuessler (1948) contends that socioeconomic background interacts with other variables such as musical training or being exposed to certain forms of music to produce differences in musical taste. Bauman (1960) investigated socioeconomic status as a determinant of teenage music preferences during the middle 1950's.
His results suggested that students from high socioeconomic groups prefer classical music more than students from lower socioeconomic groups. A recent survey (Frith, 1981) examined musical preferences of 105 fourteen to eighteen-year-olds in England. This investigation discovered that rock music listening was common to all young people studied. The author identified different patterns of music use and taste within the customary teenage framework. Class, academic and cultural differences were interwoven with sex and age differences. Girls tended to be more interested in dancing and were more concerned with lyrics, especially romantic lyrics. Male consumers tend to identify with rock performers. This identity is expressed in sexual terms and is related to the musician's dominance and power, confidence and control. Greer, Dorow and Randall (1974) found a growing preference for rock music over nonrock music with successive grade levels in the United States. Skipper (1975) compared American and Canadian college students and reported that, with Canadian students, little class effect was observed on music preferences. Definite class effects were apparent among the American students. Classical and folk styles were favored by students from upper-class backgrounds, and hard rock and rhythm and blues favored by lower socioeconomic students.
Several studies have focused on the relationship between sociopolitical attitudes and musical preferences. Mashkin and Volgy (1975) focused on political alienation, social alienation, and female sex stereotyping factors affecting preferences for rock, folk and country/western music. The authors noted significant differences on political orientation and sex stereotyping with respect to music taste. Folk music listeners were most likely to reject traditional sex-roles, country/western listeners were least inclined to reject traditional sex roles, and rock listeners were very similar to the country/western group. A similar pattern held for political alienation. Folk listeners were most alienated, country/western listeners the least, and rock listeners were close to the folk group in this case. Fox and Williams (1974) also studied the relationship between political orientation and musical taste. These authors utilized a music involvement measure that was comprised of rock concert attendance and record purchases. Their results suggest that a weak relationship exists between music involvement and preferences for different styles of music. Conservative students showed a greater preference for current popular hits, while liberals tended to prefer folk music. Liberal students also tended to be more involved with music than conservative students. It should be mentioned that the cause-effect relationships of the variables in these studies have
not been explored in a systematic fashion. The lack of longitudinal analysis in these studies prohibits firm conclusions, but Mashkin and Volgy (1975) state, "on the basis of our data, we do suspect that prolonged exposure to the lyrical content of music has some definite reinforcing, or acquisitive consequence. Assuming the rejection of many of the conventional agents of socialization on the part of many college students, we would argue that even the reinforcing function of music should be highly salient for students' growth and development" (p. 458). This statement and subsequent focus of the last studies reviewed merges with the second broad category of musical preferences studies, referred to as social determinants. These studies suggest that factors other than personal characteristics may affect taste.

Toohey (1982) along with Fox and Williams (1974) and Mashkin and Volgy (1975) is concerned with social conditioning via mass media. He has explored the concepts that university and high school students have concerning the influence of popular music in shaping social values. One hundred undergraduates and one hundred high school students responded to a questionnaire designed to measure these concepts and to assess their knowledge of popular lyrics. The author considers the importance of adolescence as a developmental stage from the theoretical position of Eric Erikson. He asserts that lyrics in pop music could
contribute to personality development. The majority of the university students believed that music lyrics have a significant influence on shaping values. Of the one hundred high school students, only 18% felt that music lyrics have a significant influence on shaping social values, and 52% felt that popular music did produce a minor influence on values. This is an interesting finding since this age group represents a primary market for popular music. Toohey's conclusion is that the effects of popular music and lyrics and the "related associations between use and influence of popular music on personality development and social values" is deserving of future investigations. Future investigations are needed as scant empirical evidence exists to confirm this widespread notion.

Skipper (1975), in an aforementioned study, focused on massification and the influence of the United States on the musical tastes of Canadian university students. His results suggest that both American and Canadian students demonstrated a diversification of musical tastes, and the mass media is not producing a standardized mass taste, although a clear and increasing preference with grade level has been demonstrated for rock music in the United States (Greer, Dorow and Randall, 1974; Greer, Dorow and Hanser, 1973; Greer et al., 1973).
Teacher approval has been found to influence children's preferences (Greer, Dorow and Hanser, 1973). Children changed to a post-test preference for symphonic music. In a similar study, Pantle's (1977) results did not provide evidence that teacher influence effected preferences for classical music. Alpert's (1980) data revealed that "respected adults," both teachers and disc jockeys, that were in high approval roles had greater influence on classical musical attitudes of fifth grade students than did peers playing similar roles. Peer influence has been believed to play an important role in music preferences among adolescents. Johnstone and Katz (1957) found that teenage girls' musical preferences were influenced by their peers. Highly popular girls conformed more closely to neighborhood norms regarding particular songs. In higher socioeconomic neighborhoods the girls who dated frequently preferred songs suggesting the "blues" and deprivation. Girls who dated infrequently preferred songs suggesting happy or "indulgent" love. Pera (1965) noted that peer group influence appeared to decline with increasing age. Peer group influence, especially that of class leaders, was most notable at the seventh grade level, and less so at the eleventh grade level. A symposium on new patterns of musical behavior of the young generation sought to examine the phenomenon of "pop music" and its sociological implications (Bontinch, 1972). These
symposium papers reflected informal surveys, personal observations and speculation, but it was apparent that popular music is associated with a particular youth subculture in most nations represented. The extent to which these subcultures influence musical preferences of youth in the respective societies is unclear, but the authors suspect that such influences are great.

The influence of disc jockeys on the listening behavior of adolescents has been thought to be substantial. Booker (1968) sampled almost 1,000 teenagers, and 90% revealed a favorable attitude toward disc jockeys. The author also found that the 75 music teachers he surveyed regarded disc jockeys as a bad influence on students. Tanner (1976) studied college students who revealed that disc jockey approval of music positively influenced their musical preferences.

Affective Response to Music

Within this large category of research exists a vast number of studies in which the effects of music have been investigated. A representative review will be presented under three general headings: A) Physiological measures, B) Mood responses, and C) Experimental aesthetics.

A. Physiological measures

Many of the physiological responses to music selections were investigated during the 1950's and 1960's by
music therapists working to secure a scientific-research basis for their profession. Gaston (1951) provided a framework for organizing such studies by his definitions of stimulative and sedative music. Stimulative music emphasizes rhythm rather than melody or harmony. This music is characterized by loud staccato passages with wide pitch ranges and unpredictable changes. Sedative music emphasizes melody and harmony more than rhythm. This music is characterized by soft, legato passages with narrow pitch ranges and predictable changes (Hodges, 1980). A popular notion, and often tested hypothesis is that stimulative music will increase physiological responses and sedative music will decrease such responses. This hypothesis can not be unanimously accepted.

Considerable efforts have focused on heart and pulse rates, blood pressure, respiration, skin responses, and muscular responses. These physiological responses will be reviewed sequentially relying heavily on Radocy and Boyle's (1979), Daniow's (1977), and Hodges' (1980) recent reviews and syntheses.

Stimulative music tends to increase heart rate and sedative music tends to decrease heart rate (Coleman, 1920; Hincke, 1970; Landreth and Landreth, 1974). Stimulative and sedative music will cause changes in heart and pulse rate, but the changes are not predictable (Bierbaum, 1958; Sears, M., 1954). Any type of music will show a tendency
to increase heart and pulse rate (Binet and Courtier, 1895; Shatin, 1957; Ellis and Brighouse, 1952). Other studies (Barger, 1979; Coutts, 1965; Zimny and Weideneffler, 1963) have revealed that music had no effect on heart or pulse rate. These contradictory conclusions are typical in these areas of investigation.

Blood pressure has been found to vary in music listening situations (Dogiel, 1880; Foster and Gamble, 1906; Wascho, 1948). One study (Trenes, 1973) has provided data to the contrary. It is apparently unknown whether stimulative or sedative music produces significantly different changes (Hodges, 1980).

Music that is considered to be personally enjoyable tends to increase respiration (de Jong et al., 1973; Poole, Goetyinger, and Rousey, 1966; Ries, 1969). Any form of music tends to increase respiration (Binet and Courtier, 1895; Dogiel, 1880). Sedative music appears to decrease respiration and stimulative music tends to increase respiration (Ellis and Brighouse, 1952; Foster and Gamble, 1906; Johnson, 1964; Wilson and Aiken, 1977).

Significant changes in galvanic skin responses (GSR) were reported in a number of studies. A significant relationship between verbal reports of preference and GSR readings was documented by de Jong et al. (1973), and Peretti and Swenson (1974). Ries (1969) reported the opposite conclusion. Stimulative music has produced
greater GSR deflections than sedative music (Michel, 1952; Shrift, 1955), and GSR readings have decreased during stimulative music (Zimny and Weidenfeller, 1963).

Various studies have investigated the relationship between muscular responses and music listening. Stimulative music has been recorded (electromyography, EMG) to increase muscular activity (Sears, W., 1952, 1960). Lord (1968) reported no significant difference in muscular activity during stimulative or sedative music listening conditions. Specific emotions caused by listening to music produce distinct, differential muscle movements in the fingertips according to the results of a study by Clynes (1978). In a somewhat similar type of study, modern popular music that would be classified as "hard rock" showed a weakening of muscle groups and the thymus (Diamond, 1979). This is an overall effect that the author calls "body reversal." Diamond tests for this reversal by a deltoid muscle test which amounts to exerting sudden downward pressure on a subject's wrist when the arm is extended from the shoulder. Under neutral conditions for most subjects, the shoulder muscle will test strong when the subject is asked to repeat positive statements, and weak for negative statements. The same subjects after exposed to a few minutes of hard rock music showed a "reversal." Their muscles tested weak for positive statements and strong for negative statements.
He believes that one of the major causes is what he refers to as a "stopped anaplectic beat." This rhythm is characteristic of hard rock music, and thought to be counter to the body's normal physiological rhythm. Other factors, most notably high decibel levels, contribute to this "body reversal." Neher (1962), an anthropologist, has explored unusual behavior in ceremonies involving drums. He demonstrated in a laboratory setting that rhythmic drumming can produce muscle twitching and unusual perceptual reports. Reviewing anthropological reports he contends that drum rhythms of about 8 to 13 cycles per second in various cultures are associated with, if not the cause of, unusual behavior. Music has been shown to be effective in raising the pain threshold (Jacobsen, 1956; Melzach, Weisz and Sprague, 1963) and ineffective in raising the pain threshold (Lancaster, 1956). Music has also been shown to cause more pilomotor or "gooseflesh" responses in psychotic patients than in normal subjects (Gray, 1955).

It is clear from the data presented that listening to music does alter an individual's physiological responses. It is not clear what the nature of this influence is. Daniow (1977) suggests that physiological research to date has provided limited insight into the affective response to music because of multiple methodological problems. Particular concerns which he notes are instructions to subjects, loudness of musical stimuli, suppression of response due to
fear of disturbing electrodes, measures of the psychological variable, and diversity of physiological variables. Hodges (1980) adds that the definitions of stimulative and sedative music may be too general and not allow for clear distinctions between the two types of music. The present state of physiological research prohibits making any predictions or generalizations about affective responses to musical stimuli.

B. Mood responses

An overview of the major theoretical positions with regard to emotion and music will aid as a preface to this section. Two primary positions exist concerning the association of meaning with music. The view that meaning in music is related to its structure is a formalistic (Reimer, 1970) or isolationist (Schwadron, 1967) position regarding musical aesthetics. All art has properties which are able to arouse people. The "collative" variables of novelty, surprise, complexity and ambiguity related to form and structure influence the response of one who listens to music. In contrast to an isolationist position is a referential or contextual aesthetic position: Music is meaningless except to the extent that it communicates extramusical messages. Hamm, Nettle and Byrnside (1975) tie music to society and culture and allow for individual utility and personal identification. A similar distinction has been
made between a formalist versus expressionist aesthetic theoretical position (Hodges, 1980). The formalists see meaning in music as primarily intellectual, and the expressionists argue that meaning in music is primarily emotional.

One of the most influential theories over the last twenty years combines both dichotomies of formalist and expressionist. Meyer (1956, 1964) has applied information theory to the analysis of emotion and meaning in music. Meyer suggests that if a musical unit is so well-organized that what follows is highly expected then little value is attached to the music. As musical consequences become less predictable then more information is contained in the music and the music's value increases. Meyer's theory of emotion is a theory of expectation which has cultural and stylistic presuppositions. He states, "Affect or emotion felt is aroused when an expectation, a tendency to respond, activated by the musical stimulus situation, is temporarily inhibited or permanently blocked" (Meyer, 1956, p. 31). His "expectancy theory" has guided many empirical researchers in studies of meaning and emotion in music.

A second major theoretical position with regard to emotion and music is derived from psychoanalytic theory. Pinchas Noy (1966, 1967 A, B, C, D) has presented a series of articles in the *Journal of Music Therapy* which describe
the meaning in music as related to psychoanalytic theory. Psychoanalytic theory is complex, and a discussion of such is beyond the scope of this presentation. The theory suggests that the connection between music and emotions depends on the unconscious significance of music and the transformation of music through ego functions. Two schools of thought are represented among the psychoanalytic theorists with regard to emotion and music. "Libido" theorists see music as an activity stemming from instinctual energy, and "dream" theorists are concerned with the transformation of deep contents and unconscious wishes. The transformation is conducted according to super-ego demands. In the psychoanalytic approach music is considered to convey symbolic sexual meaning.

A final theoretical position that will be presented concerns neurophysiological explanations for the processes in which music can evoke emotional responses in listeners. It is thought that enjoyment and discomfort of music may be related to the functioning of the brain's limbic system. Roederer (1975) asserts that the limbic system can react to neural information processing unrelated to the immediate environment. Thinking about music can conceivably arouse reward and punishment. The limbic system includes the hypothalamus which is considered to be a "reward" center as demonstrated by electrical stimulation of animal brains. The limbic system does not function independently of the
brain's other parts, and a more detailed understanding must await more general data of brain functioning (Issacson, 1974).

Musicians, psychologists, and laymen agree that music can evoke mood responses in listeners. Mood response involves learning. Different cultural groups learn that music with certain elements evoke specific moods. Moods in this line of inquiry are described as "relatively transient states, which can be cognized by individuals and designated with words" (Eagle, 1971). Eagle (1971) notes that mood response has been studied primarily in terms of verbal descriptions of moods in the form of adjective check lists, rating scales, and the semantic differential.

Early studies on mood effects were conducted by Schoen and Gatewood (1927). Different musical selections were used with 20,000 listeners to obtain data which suggested that changes in mood could be attributed to a musical stimulus. The studies investigated the effects of melody, timbre, and harmony on mood effects. Without statistical evaluation it was concluded that mood effects are dependent on definite musical elements. Havener (1935) developed an adjective checklist which served as the basis for much subsequent research on mood response to music. She conducted a series of studies in the thirties to ascertain the effects of various elements of music (rhythm,
tempo, harmony, melody and pitch) on mood response. She
concluded that the major mode is "happy, graceful, and
playful"; the minor mode is "sad, dreamy, and sentimental";
firm rhythms are "vigorous and dignified"; dissonant har­
monies are "exciting, agitating, vigorous and inclined
towards sadness." She also reported that responses were
generally the same for listeners of all types, intelligent
and less intelligent, trained and untrained. Affective
meanings were most influenced by tempo, then modality,
followed by pitch level.

Sopchak (1955), using the adjective check list method,
had 553 college sophomores respond to fifteen compositions;
classical, popular, and folk styles being represented.
Subjects were also asked to classify their moods on a
three-point scale. It was found that a higher percentage
of gloomy subjects responded to sorrow, joy, calm, love,
eroticism, jealousy, wonder, and cruelty. Sopchak con­
cluded that gloomy subjects have many tensions and thus
more readily project into the music, while cheerful sub­
jects may have less need to project into the music.

Wallach and Greenberg (1960) deviated from the estab­
lished method of depending on overt judgements by the
listener. In a projective story telling task the subjects' responses were analyzed within a psychoanalytic framework.
Four groups were selected to listen to the musical selec­
tions and write a four minute story which the selections
suggested to them. Two hypotheses were confirmed by the study: 1) Those subjects high in admitted anxiety level, describing themselves as socially introverted, displayed a greater degree of symbolic sexual arousal to music than those calling themselves socially extroverted; 2) Those subjects low in admitted anxiety level, calling themselves socially introverted, displayed a lesser degree of symbolic sexual arousal to music than those considering themselves socially extroverted. The subjects were all female undergraduates.

Crickmore (1968) used a profile test to measure affective responses to music. British college students listened to selections that included popular and "serious music." The selections were rated on a seven-point scale according to how much they enjoyed each selection. The subjects also indicated on other scales their interest, mood, tenseness, desire to talk, satisfaction, and presence of mental images. Crickmore contended positive affect towards music was suggested by a pattern of high liking, sustained interest, a positive mood, relaxed, a desire to remain quiet, high satisfaction, and no mental images.

The "iso-moodic" principle employed in music therapy maintains that a listener's mood can be influenced most effectively by first matching the music to the existing mood, and then changing the mood of the music in the desired direction. (Altshuler, 1948). Eagle (1971) used
the semantic differential technique in a study which sought to answer three questions: 1) Does existing stated mood effect rated responses to music? 2) Does presentation order of music effect rated mood responses? 3) Do similarly rated mood responses hold true for both vocal and instrumental music? Subjects were 274 undergraduate and graduate music majors. The musical selections included rock, folk, country, hymns, jazz, and classical styles. He found that existing mood of the listener does influence mood response to music, but not order of presentation. He also found that a person responds differently to vocal music than to instrumental music, although both reflect the same mood qualities. Shatin (1970) examined the ability of music to alter the mood of "normal" subjects. His investigation was also based on the "iso-principle." College age males reported their mood/emotions on four verbal scales. Their responses indicated that significant changes in verbal reports of mood/emotion occurred on all four scales.

Even though a large amount of research has been conducted on mood response to music, Eagle (1971) states that there continues to be a "need for many carefully designed and analyzed investigations before generalizations can be made concerning the interaction of mood and music."

Abeles (1980) asserts that the entire area of affective-mood responses to music can benefit from new as well as
replicative work because of significant changes that have taken place as a result of new musical sound sources and styles.

Though not dealing with mood per se, a study by Ridgeway (1976) concerns itself with affect in the area of interpersonal interactions. Music is considered to be a structural representation, or "symbolic model" of social interaction. Musical style and social structure (the correspondence of) has been empirically examined by Lomax (1968), and the results are supportive. The style and structure of folk songs produced by a society are seen as a reflection of the normative structures of everyday interaction in that society. Adorno (1973) has also assumed a direct connection between the structure of social action and the structure of music. Ridgeway borrows from Meyer's (1956) theory and suggests that his analysis allows a proposal that music models not only social interaction, but also the affective dimensions of interaction. Ridgeway was interested in the relationship between the level of absorption (high or low) of music listeners, and their use of musical listening as an aid in dealing with interpersonal interactions. The subjects were college-age and were categorized as high or low music listeners by employing several measures. The subjects rated the level of listening absorption they usually maintained during usual listening experiences. The subjects were also rated on a
"TAT-type" measure of interpersonal affective orientation. Her results suggest that exposure to an affective interaction situation increases high music listeners' absorption in music, and high absorption music listeners are likely to describe music effects in terms of symbolic participation in group processes. Ridgeway states, "Some people may take advantage of this aspect of music listening to help them manage their conflicting positive and negative response associations with interpersonal interaction within a socially acknowledged and acceptable pattern of behavior" (1976, p. 426).

C. Experimental aesthetics

Experimental aesthetics in comparison to the other approaches reviewed has a relatively short history, although Berlyne (1974) traces its roots to the work of Fechner in the 1860's. Experimental aesthetics is the study of aesthetic behavior through observation using methods and objectives similar to empirical science. Research in music using the theory and methodology of experimental aesthetics has been conducted by J. B. Crozier (1974). In the United States, McMullen appears to be the chief proponent. Two examples of this type of research are as follows:

1974 - Crozier sought to analyze levels of uncertainty in melodic structure. Dependent variables included verbal rating scales in four classes - descriptive, evaluative,
internal-state and stylistic. Two behavior variables - listening time and exploratory (listening) choice. He found that variations in information (levels of uncertainty) affected subjects' ratings of "pleasingness" and "interestingness." He also reported a high degree of interpredictability between mean verbal ratings and non-verbal measures of exploratory behavior. (Crozier, 1974)

1976 - McMullen and Arnold examined the effects of distributional redundancy on preference and interest response for rhythmic sequences. They concluded that preference tended to increase as redundancy decreased to a point after which preference began to decrease. Interest generally increased as redundancy decreased. (McMullen and Arnold, 1976)

Music Therapy

Many of the studies thus far reviewed under the section of affective responses were conducted with the interests of music therapy in mind. The National Association for Music Therapy (NAMT) was founded in 1950, and has always been concerned with having a strong research base.

The principles which underlie therapeutic uses of music are:

"1. The establishment of reestablishment of interpersonal relationships.

2. The bringing about of self-esteem through self-actualization.

3. The utilization of the unique potential of rhythm to energize and bring order" (Gaston, 1968, p. v).
Music therapists have two specific uses of music with which to work:

1. The basic power of music to stimulate or soothe activity.

2. Music's traditional functional values as a socializing agent and as a symbol or vehicle for expressing patriotism, religion or fraternity. (Michel, 1976, pp. 11-13)

Music therapists function in a variety of settings with mentally retarded children, physically disabled children, adults with emotional and behavioral disorders, children and adolescents with emotional and behavioral disorders, and geriatric patients. Music is used as a medium to help influence desirable behavioral and emotional changes in individuals. The music therapist often selects musical activities which are based on the stimulative and socializing strengths of music to assist the patient become more actively involved. At the same time the therapist is working towards meeting desirable behavioral and emotional goals. Music therapists are essentially concerned with either stimulating or suppressing activity. The type of music selected for influencing the desired behaviors usually reflects the different structural characteristics of stimulative or sedative music that have been described. The literature related to these effects has been reviewed, but a few additional studies are worth mentioning.
The effect of music on anxiety has been of considerable interest in the field of music therapy and music psychology. Greenberg and Fisher (1966) and Fisher and Greenberg (1972) have noted that stimulative music produced more anxiety and aggression than calm music. Smith and Morris (1970) concerned themselves with the effects of stimulative and sedative music on test anxiety. Their results suggested that stimulative music significantly increased anxiety and sedative music did not, although test performance was not affected in either condition. Jellison (1975) examined the effects of music (physiological and verbal responses) in a stress situation involving college-age males. His results revealed no difference in physiological measures between the groups of subjects, but the verbal report data showed that both music groups (stimulative and sedative) demonstrated significantly less anxiety than a "white noise" group. This result contrasts with the other reported studies in that there was no difference in reported anxiety between stimulative and sedative music conditions.

It is apparent from the several studies reported that music can affect anxiety. The data are not consistent with regards to what type of music will produce what specific effect. Stimulative music tends to increase anxiety and sedative music tends to reduce anxiety, but not consistently. Haack (1980), in a recent review,
asserts that major questions in this area are still unanswered. The questions involve the duration of the effects on anxiety and the classification of music into the categories of stimulative and sedative.

Self-Concept

The concept of self has a long and rich history in psychology. Over the years it has been variously defined, and has become one of the central constructs of personality theory. There are two distinct usages of the term "self" in modern psychological theory (Miskimins, Note 2). One usage refers to self-as-object, the set of attitudes, perceptions and evaluations a person has of himself. The other usage reflects the self-as-process, the complex processes which govern individuals' internal and manifest behavior. In an early comprehensive review of self-as-object Wylie (1961) established the convention of referring to this aspect of the self as self-concept.

A variety of instruments have been developed over the years to measure the self-concept of an individual. These instruments have each been developed to measure self-concept as defined within a specific theory of self and personality. Self-concepts have been measured in various ways: through the use of rating scales and questionnaires (Berger, 1952); Leary, 1957; Fitts, 1965); through the sorting of cards with the names of traits on them
(Stephenson, 1953); and through the coding of verbal behavior in interviews (Raimy, 1948; Lipkin, 1954; Vargas, 1954). Some of these measures utilize a normative approach, implying an assumption that certain positive self-statements reflect a healthy self-concept and are correlated with adjustment. Other instruments have assumed a non-normative approach and measure the level of adjustment as related to the discrepancy between the perception of the self and the subject's "ideal" self.

To this writer's knowledge self-concept scales have not previously been utilized in studies dealing with music preferences. Dimensions of personality have been investigated as this review reveals, but not self-concept per se. Self-concept is chosen for this study because of its centrality to adolescent development, and for its ability (specifically the Tennessee Self Concept Scale) to distinguish between groups of subjects in a large variety of contexts.

The Tennessee Self Concept Scale was developed by Fitts (1965). The original purpose was to develop a scale that would contribute to the difficult criterion problem in mental health research. This scale is intended to be "simple for the subject, widely applicable, well standardized and multi-dimensional in its description of the self-concept." How a person perceives himself or herself has proven to be useful in evaluations of individuals. People
who see themselves as undesirable, or worthless tend to act accordingly. Those individuals who have very deviant self-concepts tend to behave in deviant ways.

Personality theory and research suggest that groups which differ on specific psychological dimensions should also differ in self-concept. Significant differences have been demonstrated to exist between psychiatric patients and non-patients, and between delinquents and non-delinquents using the Tennessee Self Concept Scale.

Statistical analyses were performed in which a large group of psychiatric patients were compared to the original norm group of the scale (Fitts, 1965). These demonstrated highly significant (mostly at the .001 level) differences between patients and non-patients for almost every score utilized on the scale. Various studies have demonstrated similar patient versus non-patient differences (Havener and Izard, 1962; Piety, Note 3; Wayne, Note 4).

The Tennessee Self Concept Scale (TSCS) has been used extensively in the area of juvenile delinquency. Dietche (Note 5) studied 50 delinquent boys of 15 and 16 years of age. A matched non-delinquent control group was utilized from a local school population. The groups were matched for intelligence, age, ethnic origin, and stability of the home. He concluded that the self-concept of the delinquent group was significantly more negative than the non-delinquent group.
Using the TSCS, Lefeber (Note 6) examined the effect incarceration has on the self-concept of the delinquent male. The sample consisted of three groups of 58 youths; non-delinquents, first offenders and recidivists, matched for sex, social economic status, age, mental health, and ethnicity. Significant differences were reported between all three groups at the .05 level.

Watson (Note 7) used the TSCS and various other instruments in a study of male juvenile delinquents. He formed a high, middle, and low personality integration group using test data. Watson found a significant correlation at the .01 level between self-concept and behavior of the offender within the institution.

Using the TSCS in a study with delinquent girls, Kalman (Note 8) compared the self-concept of institutionalized girls. Kalman found significant differences in the expected direction. The institutionalized girls had lower self-concepts. Along these same lines, working with girls, Epstein (1962) utilized an experimental form of the TSCS. She found that the delinquent's self-concept is significantly lower than that of her non-delinquent counterpart.
This study was exploratory in nature, and utilized a cross-sectional survey. The purpose of this research was to determine if a relationship exists between an adolescent's level of involvement and preference for a given musical style and the conceptual area of self-concept. From clinical observations and pilot interviews conducted by this writer, it appeared that adolescents in the fourteen to seventeen year age group, that were highly interested/involved in rock music, experienced more adjustment problems than a similar group that was less involved with popular music. The original intention of this study was to compare three preference groups. These groups were classified as: hard rock, pop rock, and non-rock. Not enough subjects in the non-rock group (N=7) emerged from the total sample to include them in the statistical analysis. Four major groups were identified by the subjects' responses on the Music Interest Questionnaire. These groups included two preference classifications (hard rock and pop rock), and two levels of involvement (high and low).
These groupings were further augmented by the variable sex.

Subjects

The subjects for this survey consisted of 97 adolescents; 50 males and 47 females. The subjects ranged in age from 14 to 17 years, and were in the ninth, tenth, or eleventh grade at various suburban schools in the Columbus, Ohio area. All subjects were Caucasian.

This sample is not representative of all teenagers in the United States, but represents only white, suburban students that voluntarily participated in this study.

Instruments

Two instruments were used for the collection of data in the study. The Tennessee Self-Concept Scale was utilized as a measure of self-concept. The Music Interest Questionnaire was used to classify subjects in terms of musical preferences, level of involvement, and to gather additional information about adolescents' interests in music.

The Tennessee Self-Concept Scale

The Tennessee Self-Concept Scale (TSCS) was developed by William Fitts. This scale was designed to be simple for the subject, widely applicable, well standardized, and multi-dimensional in its description of the self-concept.
Fitts began the developmental work on this scale with the Tennessee Department of Mental Health in 1955. His original intention was to develop a research instrument that would contribute to the difficult criterion problem in mental health research. It has since become one of the most widely used and accepted psychometric tools for both research and clinical applications. The pool of items for the scale was originally selected from earlier work by such writers as Taylor (Note 9), Engle (Note 10), and Balester (Note 11). Items were also included that were obtained from self-descriptions from both psychologically disturbed and normal subjects. Ninety items were selected to comprise the body of the instrument. In addition, ten questions make up a self-criticism scale. The self-criticism items are all MMPI Lie scale items, which measure the test-takers' ability to admit to negative traits.

The principal questions of this scale are grouped into fifteen cells, which are arranged conceptually in a 3x5 matrix. The columns and rows of this matrix provide the eight principal subscales of the TSCS. The five columns represent five aspects of life in which the self is observed: in terms of personal self, social self, family self, physical self, and moral-ethical self. The three rows represent three phenomenological aspects of self: behavior, identification with self, and identity. In addition, major corresponding scores are derived:
Self-criticism Score; Total Positive Score, reflecting the overall level of self-esteem; Variability Scores, reflecting the amount of consistency from one area of self-perception to another; and Distribution Score, a measure of extremity response style. Also the Clinical and Research Form yields scores for True-False Ratio, a measure of response style; Net Conflict Score, reflecting responses to positive versus negative items; Empirical Scales for group discriminations; and Number of Deviant Signs Score, a count of the number of deviant features of all other scores.

In the present study five of these scores were used: Self-criticism Score, Total Positive Score, Self-Satisfaction Score, Social Self Score, and Number of Deviant Signs Score. These five scores were chosen from the total of twenty-nine because of their relevance to the study, and because of statistical considerations to minimize the possibility of Type I or alpha errors.

Specifically, with the number of subjects in the study (N=97), the dependent variables used in a multivariate analysis of variance must be kept to a minimum. The chances of a null hypothesis being rejected when it should not have been increases in proportion to the number of dependent variables.

Bentler (1972) has presented reliability and validity data for the TSCS. He reports variability in the test
retest reliability of the various scores, but the average reliability for the major subscales is in the neighborhood of .80. Bentler has also reported construct validity through correlation with the Taylor Anxiety Scale and MMPI subscales; in the .50 to .70 range. His review criticizes that scale for the author's lack of any research into the internal consistency of the subscales. Without this data it cannot be assumed that each subscale is uni-dimensional. Suinn (1972), in his review of the scale, also believes that the lack of research into the internal consistency of the subscales is a serious problem. Factor analysis by Vacciano and Strauss (1968) and Rentz and White (1967) do not support the empirical subscales described by Fitts. Suinn's review concludes, however, that there exists an immense body of literature that has shown the ability of the major subscales to distinguish between groups in a large variety of contexts. He further asserts that the Tennessee Self Concept Scale is one of the most-effective measures of self-concept available.

The Music Interest Questionnaire

The Music Interest Questionnaire (MIQ) was developed by this writer to serve three primary functions: To identify music preferences of adolescents, to provide a measure of "involvement" in music listening, and to gather additional information about teenagers' interest in music.
This section will describe these three areas in detail.

To assess the respondent's musical preference, he or she is first asked to check "Rock" or "Non-Rock," not both. The Rock category includes all styles of rock music, and similarly the Non-Rock category includes all forms of music that would not be considered rock. The subject is then asked to list his or her favorite musical groups, performers, composers, and song or composition. Following this is a listing of all styles or categories of music arranged on seven point semantic differential rating scales. The subject is asked to rate the music he or she actually listens to on a weekly basis. In addition, a blank beside each category was provided for the subject to list an example of that style of music. This was done to assess the adolescent's knowledge of popular and other categories as identified by music industry publications and standards. Also it was decided that a specific example of each style would not be provided for the subject, because the risk of influencing or altering the response was thought to be too great. The problem resides in the global category of rock music. Within this large category are included five styles of rock music for this study. These include: Hard-Rock, New-Wave Rock, Heavy-Metal, Country-Rock, and Soft Rock/Pop. These specific styles of rock music each have a devout following among the young. In pilot interviews conducted by this writer it became
immediately apparent that most adolescents will express a clear preference for one of these styles, and quite negative feelings for one or more of the others. Their preferences are seldom stated in a dispassionate tone, rather they tend towards emotional extremes suggesting a great deal of ego or self involvement with their chosen style. This appears most pronounced among the males, as they often expressed quite specific and idiosyncratic, although seldom incorrect, views as to the distinction between styles of rock music. The males were sensitive to these distinctions and often resisted the interviewer's attempts to include additional songs or performers within their chosen style. The interviewer's additional suggestions were not incorrect according to music industry standards, but the males, and females to a lesser extent, were resistive and often insulted in a way that suggested self identity involvement with their chosen favorites. It is because of these reasons, and consultations with various radio programmers in the area, that specific examples were not provided.

The area of preferences within the Rock category remains a problem. These categories are not clear cut by any means. Radio station programmers and music industry representatives would be in general agreement, but differences in opinion will exist over specific selections. The problem in terms of adolescent fans of rock music
appears to be that they tend to favor specific performers or musical groups rather than a style dimension per se. For the most part this is not a problem because many popular musical groups conform to a specific style of rock music. Notable exceptions exist, though, such as the Rolling Stones. This rock group has been highly popular for the last twenty years and is usually associated with Hard-Rock, but their music also represents the additional categories of Soft Rock/Pop, and even Country-Rock. Twenty years ago the music of the Rolling Stones was the "new-wave" music and categories such as Hard-Rock did not exist. These styles and categories are not static and continue to evolve. Preferences for popular music, by definition, can only be evaluated with temporal restrictions.

The determination of an individual subject's music preference is composed of a number of elements. First, whether or not the subject checked Rock or Non-Rock general categories and an evaluation of his or her favorite performers and songs. The subjects' selections were validated by checking their appearance on the corresponding "chart" from Billboard magazine. Billboard is an international entertainment newsweekly that is accepted by the Recording Industry Association of America, and recognized by the music industry as the authority on popular music. This publication ranks popular music
selections by categories in terms of products showing the greatest airplay and sales strength.

The next step in specifying the subject's preference is an evaluation of his or her ratings on the semantic differential scales for styles of music. These preference categories are: Hard-Rock, Country, New-Wave, Jazz, Disco, Heavy-Metal, Classical, Country-Rock, Soft Rock/Pop, and Other. Those styles a subject listens to are rated on a 1 to 7 scale from Least Preferred to Most Preferred. In addition, a listing of all local radio stations is included. The subject is asked to rate his or her preference of the stations he or she actually listens to on a weekly basis. These stations each feature specific programming that roughly corresponds to music preference categories.

For a subject to be classified in the Hard-Rock group he or she will need to meet four requirements that provide an operationalized categorization for Hard-Rock in this study. Rock would be checked as a general category, and these selections would be verifiable as Hard-Rock. Hard-Rock or Heavy-Metal would receive the highest preference rating with the other receiving the second highest rating. Also, the subject's favorite Columbus area radio station would be QFM96 which features "album-oriented Rock" programming that features Hard-Rock selections. It should be mentioned that Heavy-Metal is a form of Hard-Rock and thus included in this grouping. For a subject to be
classified in the Pop-Rock group he or she will need to meet the same four requirements that provide an operationalized categorization of Pop Rock for this study. The subject's highest preference ratings will need to appear in two of the other Rock styles, and his or her chosen radio station will feature a "Contemporary Rock" programming format. For subjects to be included in the Non-Rock group he or she will need to meet the first three requirements that provide an operationalized categorization of Non-Rock for this study. The radio station preference was dropped because the responses did not conform to the overall intended scheme. This is understandable as contemporary radio programming is overrepresented by rock music. The subject's highest preference ratings will need to appear in two of the Non-Rock styles. These include: Country, Jazz, Disco, Classical, and Other.

The second primary function of the MIQ was to identify a "high involvement" group and a "low involvement" with music group. This dimension would appear to be an important, or even essential, one in an evaluation of music preferences. It has been known that adolescents spend a good amount of time listening to music as a general category of individuals. It is important to differentiate which adolescents have the highest level of interest and exposure from those who have only a modest or passing interest in music. This is critical because almost all
adolescents will say they listen to and enjoy some form of popular music. That information alone is not sufficient for a more complete understanding.

Two previous studies have utilized such a dimension. Fox and Williams (1974) identified "high", "medium", and "low involvement with music" groups. These groups were chosen on the basis of questions relating to: rock concert attendance, record purchases, record listening and radio listening. Ridgeway (1976) constructed a measure of "listening involvement" to identify people who listen intensely to music and make music listening an important part of their lives. Her "musical involvement index" contained three factors: listening frequency, degree of listening absorption, and breadth of musical interest. Listening frequency was assessed with Robert's and Ridgeway's (1969) instrument which consisted of the subject's self-reported estimate of hours per week engaged in no other activity than listening to music. Listening absorption was measured with self-estimates of the level of absorption most frequently maintained during music listening (100%, 50% or 0%). Breadth of music interest was measured by rating scale responses to 39 music selections on tape. The tape contained 20 classical selections, and 19 popular selections. Subjects were classified as "high listeners" or "low listeners" on the three factors if they scored above or below the sample
A scale was developed for the present study to differentiate a high involvement group from a less involved group. Three questions were asked to identify adolescents that consider music listening to be an important part of their lives. The three questions were: How "in-to" your favorite music would you say you are?, How important to you is listening to music every day?, and How important to your life in general (well-being, mood, relaxation, self-understanding, etc.) is your favorite music? These questions were derived from pilot interviews with adolescents concerning their use of music, and interests in music. The respondent is asked to circle the answer that most accurately reflects his or her feeling on the item. The possible responses are: not much at all, a little, a lot, and very important or very "in-to" it. These items are then scored from 0 to 3 (not much at all = 0, through very important = 3). Total scores for the scale range from 0 to 9. The mean for the sample on the involvement scale was 6.28. To differentiate the high involvement group from the low involvement group, the sample was split at the mean. Those subjects who scored at the mean or lower (6 or less) formed the low involvement group. Their involvement with music is not really low in a literal sense, but would be more accurately represented as less involved. The high involvement group are truly
interested in music, and are selected for that group by scoring 7 or higher on the involvement scale.

For purposes of validation, a second (behavioral) scale was developed. This "listening" scale consisted of two questions: How many hours a day would you say you listen to music on the radio?, and How many hours a day would you say you listen to records/tapes at home or at a friend's house? These questions were derived from a larger pool of eight questions that were developed from pilot interviews with adolescents. It was discovered that these were the only questions that the subjects uniformly responded to. The means for these questions are as follows: Radio listening, 3.35 hours; and listening at home, 1.9 hours. The raw data for these questions was then converted to a nominal scale. For each question the subject received from 0 to 3 points based on the means for each item. On the radio listening question a subject would receive the score of 0 for 0 to 1 hour of listening, 1 for 1.5 to 3 hours, 2 for 3.5 to 5 hours, and 3 for 5.5 or more hours. On the listening to records or tapes question, a subject would receive the score of 0 for 0 hours listening, 1 for .5 to 1.5 hours, 2 for 2 to 3 hours, and 3 for 3.5 or more hours. An individual subject for this scale could then receive a score from 0 to 6.

The scores for the three items on the involvement scale are highly intercorrelated. "How 'in-to' your
favorite music would you say you are?" is correlated with "How important to you is listening to music every day?" (.70) and "How important to your life in general is your favorite music?" (.60). Additionally, listening every day is correlated with how important in general at .64. The level of significance for all intercorrelations is greater than the .001 level, and the internal consistency of the scale is .84. The scores for the two items on the behavioral scale are also significantly correlated (.52 greater than the .001 level), and the internal consistency of this scale is .68.

An important consideration as to the validity of the involvement scale involves its correlation with the behavioral/listening scale. An adolescent's exposure to music would not necessarily be associated with how important he or she feels music is in their lives. A young person may listen to music for many hours a day just because of proximity to friends, siblings, or others who play music. The adolescent experience in general tends to feature popular music as a background to daily activities. On the other hand, it would seem reasonable that an individual who rated high on involvement (music listening being important in their life) would also spend a good amount of time actually listening to music. The involvement scale and the behavioral scale are highly correlated with each other (.52, greater than the .001 level). The
items from the involvement scale and the behavioral scale, combined, have an internal consistency of .62. This suggests the involvement dimension, as designed in the study, demonstrates face validity.

The third function of the MIQ was to gather additional information about adolescents' interests in music. The subjects were asked to rate the percentage of time they spend listening to music alone and with friends. It was thought that this variable could be used to further differentiate the groups. In addition, the subjects were asked three open ended questions: Why is or is not music an important part of your life?, What does listening to your favorite style of music do for you?, and Any additional comments you may have about your interest or lack of interest in music? These questions were loosely structured to maximize their yield, in line with the exploratory nature of this study. Very little is actually known in these areas. It was hoped that the subjects' responses would aid in interpretation of the findings, and possibly suggest future research directions. These responses will be discussed and categorized as part of the results.

In conclusion, the MIQ can be used to assess an individual's musical preference, level of involvement with music, and gather additional information about adolescents' musical interests. Face validity for the preference and
involvement sections has been demonstrated. Data on reliability have not been generated. There is no reason to assume that this information would be reliable in a psychometric sense for any long period of time, albeit it could be reliable over a period of weeks or months. Longitudinal studies of music preferences do not exist. Over the entire period of adolescence it would be reasonable to assume that music preferences would change considerably, and involvement level may be even more variable.

**Selection of Subjects**

The subjects for this study, as previously discussed, were attending the ninth, tenth, or eleventh grades in various suburban school districts in the Columbus, Ohio area: Grandview, Upper Arlington, Hilliard, Worthington, and Westerville. All of these school systems were requested to participate in the study, but only Grandview High School chose to formally be involved (23 students participated). School officials, teachers, and students from the other districts assisted in identifying and contacting adolescents that would be interested in participating in the study. Two junior English classes participated from Westerville through the assistance of their teacher who was interested in the proposal. School personnel who were familiar with the proposal from the other districts were called by the researcher to recommend
individual students or groups that would be interested. Interested students from Worthington High School were identified by teachers and combined with a youth group at the Methodist Church in Worthington in which some students were members. School personnel and parents from the remaining school districts (Hilliard and Upper Arlington) assisted the researcher in locating additional subjects. The investigator works in the mental health field in the northwest area of Franklin County, and consequently was known to various school personnel and community minded parents. These individuals contacted interested students, and the students, in turn, enlisted the participation of their friends and classmates. The only requirements for participation in this research were age (14-17 years old), and signed consent from both student and parent.

Administration of the Instruments and Data Collection

The subjects who agreed to be involved from Grandview High School were tested as a group during a study hall period. The consent forms were collected prior to that time by school officials to verify that each student had received parental consent. In addition to the consent form, the subjects were provided with both a verbal and written explanation of the questionnaires and the purpose of the study. The assistant principal, John Caronis, witnessed the verbal explanation. The students were each
handed a packet that included the TSCS and the MIQ. These packets were coded numerically and requested only the student's grade, age, and sex. The experimenter instructed the students not to place their name on the forms. No link between the consent form and the two questionnaires was made.

Both the MIQ and the TSCS are self-administered forms and require no instruction beyond those contained within. The presence of the researcher during the duration of the testing was hoped to impact on the motivation and sincerity of the subjects' responses.

The subjects from the remaining school districts (N=74) were administered the questionnaires in small to class sized groups (5 to 19). To insure procedural standardization the researcher was present at all of these testing sessions, which followed the same format as the session at the high school. These sessions were convened at individual student's homes, the researcher's home, and in one case the Methodist Church in Worthington.

Teachers, parents, and students assisted the researcher in organizing the groups in the various locations. A parent or adult was present at the administrations, and he or she verified the accuracy and completeness of the consent forms. These individuals also witnessed the oral explanation. As with the subjects tested at the high school, no method existed to link specific students with
their questionnaires or consent forms. The anonymity of the subjects in this study was guaranteed.

Analysis of Data

The two categories of each primary classification (preference and involvement) were analyzed individually for each sex using a multivariate analysis of variance. The five dependent variables chosen from the TSCS were analyzed within a 2x2 factorial model that contained two levels of preference (hard rock or pop rock) and involvement (high or low) for each sex.

Hypothesis one states that there is no difference between the scores of the male hard rock preference group and the male pop rock preference group on any of the chosen TSCS subscales. Hypothesis two states that there is no difference between the scores of the male high involvement group and the male low involvement group on any of the chosen TSCS subscales. These hypotheses will be analyzed together. This allows the determination not only of a significant variation in dependent variables between the two categories of each classification for males, but also the assessment of an interaction between the variables of classification. An interaction exists when there is a strong variation between one of the possible combinations of the two independent variables and the other cells of the table.
Hypothesis three states that there is no difference between the scores of the female hard rock preference group and the female pop rock preference group on any of the chosen TSCS subscales. Hypothesis four states that there is no difference between the scores of the female high involvement group and the female low involvement group on any of the chosen TSCS subscales. These hypotheses are analyzed together for the females, using the same method as discussed for hypotheses one and two.

Interactions that continue to exist at the final point of the analysis will be subjected to further multivariate analysis of variance tests. Differing levels of the primary classification variables will be analyzed for each sex to clarify the interactions.

Information that was gathered about adolescents' interests in music will also be analyzed. The results to the question about what percentage of time they spend listening to music alone and with friends will be presented. The results to the three open ended questions will be categorized and compared to the findings of the hypotheses testing procedure to aid the interpretation of data.
CHAPTER IV

Results

In the present study, adolescents ranging in age from fourteen to seventeen were studied to observe the relationship between self-concept as measured by five selected subscales on the Tennessee Self Concept Scale (TSCS), and various other factors. Specifically tested was the relationship between self-concept scores and types of adolescent music listeners.

The sample consisted of 97 students with a mean age of 15.5 years and a standard deviation of .94. The subjects were all Caucasian and attending the ninth, tenth or eleventh grade at various suburban schools in the Columbus, Ohio area. The students had a mean grade level of 10.2 with a standard deviation of .77. Figures 1 and 2 indicate a more complete breakdown of the age and grade levels of the sample.

The original intention of the study was to analyze three music preference groups. These groups were classified as hard rock, pop rock, and non-rock according to the operational definitions set forth in the study. When the questionnaires were scored the non-rock group was
Figure 1. Age Level in Years

Sample Number

<table>
<thead>
<tr>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Percent of Total Sample
Figure 2. Grade Level
found to be too small ($N=7$, 7.3% of total sample) to be included in the statistical analysis. The means and standard deviations for these subjects will be presented for comparison to the other groups later in this chapter. The remaining 90 subjects in the stratified sample were divided nearly equally into hard rock ($N=40$), pop rock ($N=50$), high involvement ($N=43$), low involvement ($N=47$), male ($N=45$), and female ($N=45$) groupings. Figure 3 displays the breakdown of the sample into the 8 cells of the complete $2 \times 2 \times 2$ factorial model.

Hypotheses 1 and 2

Hypothesis 1 stated there is no difference between the scores of the male hard rock preference group and male pop rock preference group on any of the chosen TSCS subscales.

Hypothesis 2 stated that there is no difference between the scores of the male high involvement group on any of the chosen TSCS subscales.

These two hypotheses were tested simultaneously using a $2 \times 2$ multivariate analysis of variance design, with the two levels of preference and the two levels of involvement for males. This procedure permits observation of possible interactions between the two variables of classification.

The program computes three statistics used for multivariate significance tests: Pillai's criterion, Hotelling's trace, and Wilk's lambda. These significance tests are all
<table>
<thead>
<tr>
<th></th>
<th>Male Subjects</th>
<th>Female Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Involvement</strong></td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td><strong>High Involvement</strong></td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td><strong>Pop Rock</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Male</strong></td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td><strong>Female</strong></td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td><strong>Hard Rock</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Male</strong></td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td><strong>Female</strong></td>
<td>6</td>
<td>10</td>
</tr>
</tbody>
</table>

Figure 3. Group Division of Sample
functions of the eigenvalues of the matrix. In addition, univariate F-tests are provided for each dependent variable.

The two way interaction (preference by involvement) was found to be non-significant for all three multivariate tests. The main effects for preference proved to be significant at the .05 level for the three multivariate tests. The univariate tests of significance revealed one scale (SSA, self-satisfaction) to be significant at the .01 level. This data is presented in table 1. The means and standard deviations for the five TSCS subscale scores for males by preference groups are displayed in table 2. The males in the hard rock preference group scored higher on the self-satisfaction scale than the males in the pop rock preference group. The self-satisfaction subscale on the TSCS is derived from the items where the individual describes how he feels about the self he perceives. In general this score reflects his level of self-satisfaction or self-acceptance.

The main effects for involvement were also significant at the .01 level for the three multivariate tests. The univariate tests of significance revealed one scale (NDS, Number of Deviant Signs) to be significant at the .001 level, as can be seen in table 3. In table 4 the means and standard deviations for the five TSCS subscale scores are presented for males by involvement groups. The males
Table 1

Multivariate Analysis of Variance of Five Self-Concept Subscales by Music Preference for Males

### Multivariate Tests of Significance

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Approx. F</th>
<th>Hypoth. DF</th>
<th>Error DF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillais</td>
<td>.29360</td>
<td>3.0756*</td>
<td>5.00</td>
<td>37.00</td>
</tr>
<tr>
<td>Hotellings</td>
<td>.41562</td>
<td>3.0756*</td>
<td>5.00</td>
<td>37.00</td>
</tr>
<tr>
<td>Wilks</td>
<td>.70640</td>
<td>3.0756*</td>
<td>5.00</td>
<td>37.00</td>
</tr>
</tbody>
</table>

*P > .05

### Univariate F-Tests With (1,41) D.F.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hypoth.SS</th>
<th>Error SS</th>
<th>Hypoth.MS</th>
<th>Error MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>16.8397</td>
<td>799.6389</td>
<td>16.8397</td>
<td>19.5034</td>
<td>.8634</td>
</tr>
<tr>
<td>TOT</td>
<td>1896.2683</td>
<td>31160.9722</td>
<td>1896.2683</td>
<td>760.0237</td>
<td>2.4950</td>
</tr>
<tr>
<td>SSA</td>
<td>1462.8571</td>
<td>8122.4722</td>
<td>1462.8571</td>
<td>198.1091</td>
<td>7.3841*</td>
</tr>
<tr>
<td>SOS</td>
<td>90.6683</td>
<td>1854.7500</td>
<td>90.6683</td>
<td>45.2378</td>
<td>2.0043</td>
</tr>
<tr>
<td>NDS</td>
<td>418.5433</td>
<td>13933.3889</td>
<td>418.5433</td>
<td>339.8388</td>
<td>1.2316</td>
</tr>
</tbody>
</table>

*P > .01
### Table 2

**Tennessee Self-Concept Scale Subscale Scores for Males by Preference Groups**

<table>
<thead>
<tr>
<th>TSCS Scales</th>
<th>Pop Rock Mean</th>
<th>Hard Rock Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>36.65</td>
<td>38.08</td>
</tr>
<tr>
<td></td>
<td>(4.67)*</td>
<td>(3.95)</td>
</tr>
<tr>
<td>TOT</td>
<td>317.26</td>
<td>330.58</td>
</tr>
<tr>
<td></td>
<td>(30.84)</td>
<td>(24.76)</td>
</tr>
<tr>
<td>SSA</td>
<td>96.90</td>
<td>108.33</td>
</tr>
<tr>
<td></td>
<td>(11.82)</td>
<td>(15.11)</td>
</tr>
<tr>
<td>SOS</td>
<td>63.46</td>
<td>66.08</td>
</tr>
<tr>
<td></td>
<td>(5.17)</td>
<td>(7.66)</td>
</tr>
<tr>
<td>NDS</td>
<td>18.90</td>
<td>23.87</td>
</tr>
<tr>
<td></td>
<td>(14.33)</td>
<td>(18.30)</td>
</tr>
</tbody>
</table>

*Parenthesis indicates standard deviation

**TSCS Scales:**  
- SC - Self-Criticism  
- TOT - Overall Level of Self-Esteem  
- SSA - Self-Satisfaction  
- SOS - Social Self  
- NDS - Number of Deviant Signs
Table 3

Multivariate Analysis of Variance of Five Self-Concept Subscales by Music Involvement for Males

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Approx. F</th>
<th>Hypoth. DF</th>
<th>Error DF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillais</td>
<td>.33091</td>
<td>3.6599*</td>
<td>5.00</td>
<td>37.00</td>
</tr>
<tr>
<td>Hotellings</td>
<td>.49458</td>
<td>3.6599*</td>
<td>5.00</td>
<td>37.00</td>
</tr>
<tr>
<td>Wilks</td>
<td>.66909</td>
<td>3.6599*</td>
<td>5.00</td>
<td>37.00</td>
</tr>
</tbody>
</table>

*P > .01

Univariate F-Tests With (1,41) D.F.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hypoth.SS</th>
<th>Error SS</th>
<th>Hypoth.MS</th>
<th>Error MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOT</td>
<td>1088.7198</td>
<td>31160.9722</td>
<td>1088.7198</td>
<td>760.0237</td>
<td>1.4325</td>
</tr>
<tr>
<td>SSA</td>
<td>369.2326</td>
<td>8122.4722</td>
<td>369.2326</td>
<td>198.1091</td>
<td>1.8638</td>
</tr>
<tr>
<td>SCS</td>
<td>22.5659</td>
<td>1854.7500</td>
<td>22.5659</td>
<td>45.2378</td>
<td>.4988</td>
</tr>
<tr>
<td>NDS</td>
<td>4983.2422</td>
<td>13933.3889</td>
<td>4983.2422</td>
<td>339.8388</td>
<td>14.6636*</td>
</tr>
</tbody>
</table>

*P > .001
Table 4
Tennessee Self-Concept Scale Subscale Scores for Males by Involvement Groups

<table>
<thead>
<tr>
<th>TSCS Scales</th>
<th>Low Involvement Mean</th>
<th>High Involvement Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>38.00 (4.53)*</td>
<td>36.74 (4.09)</td>
</tr>
<tr>
<td>TOT</td>
<td>328.66 (24.98)</td>
<td>319.18 (30.62)</td>
</tr>
<tr>
<td>SSA</td>
<td>105.29 (10.99)</td>
<td>99.94 (15.95)</td>
</tr>
<tr>
<td>SOS</td>
<td>64.00 (5.75)</td>
<td>65.54 (7.08)</td>
</tr>
<tr>
<td>NDS</td>
<td>12.93 (7.87)</td>
<td>24.03 (24.76)</td>
</tr>
</tbody>
</table>

*Parenthesis indicates standard deviation

TSCS Scales: SC - Self-Criticism
            TOT - Overall Level of Self-Esteem
            SSA - Self-Satisfaction
            SOS - Social Self
            NDS - Number of Deviant Signs
in the high involvement group manifested a significantly greater number of "deviant signs" than the males in the low involvement group. The Number of Deviant Signs subscale is the test's single best index of "psychological disturbance," which will be described in Chapter V. Null hypotheses 1 and 2 were both rejected.

**Hypotheses 3 and 4**

Hypothesis 3 stated there is no difference between the scores of the female pop rock preference group on any of the chosen TSCS subscales.

Hypothesis 4 stated there is no difference between the scores of the female high involvement group and the female low involvement group on any of the chosen TSCS subscales.

These hypotheses were tested simultaneously, utilizing the same procedure as used with hypotheses 1 and 2. The two way interaction (preference by involvement) was found to be significant for all multivariate tests at the .01 level. The univariate F-tests showed two dependent variables to be involved in the interaction. The variables were SC, or self-criticism subscale (significant at the .05 level), and SOS, or social self subscale (significant at the .001 level). This data is presented in table 5. This interaction was subjected to further multivariate analysis of variance controlling for levels of preference to specify the interactions. The pop rock preference group was first
Table 5
Multivariate Analysis of Variance of Five Self-Concept Subscales by Music Preference and Level of Involvement for Females

Multivariate Tests of Significance

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Approx. F</th>
<th>Hypoth. DF</th>
<th>Error DF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillais</td>
<td>.72557</td>
<td>19.5647*</td>
<td>5.00</td>
<td>37.00</td>
</tr>
<tr>
<td>Hotellings</td>
<td>2.64388</td>
<td>19.5647*</td>
<td>5.00</td>
<td>37.00</td>
</tr>
<tr>
<td>Wilks</td>
<td>.27443</td>
<td>19.5647*</td>
<td>5.00</td>
<td>37.00</td>
</tr>
</tbody>
</table>

*P > .01

Univariate F-Tests With (1,41) D.F.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hypoth.SS</th>
<th>Error SS</th>
<th>Hypoth.MS</th>
<th>Error MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>79.8551</td>
<td>702.4490</td>
<td>79.8551</td>
<td>17.1329</td>
<td>4.6609a</td>
</tr>
<tr>
<td>TOT</td>
<td>1659.7661</td>
<td>32637.4314</td>
<td>1659.7661</td>
<td>796.0349</td>
<td>2.0850</td>
</tr>
<tr>
<td>SSA</td>
<td>50.9890</td>
<td>6449.0814</td>
<td>50.9890</td>
<td>157.2947</td>
<td>.3242</td>
</tr>
<tr>
<td>SOS</td>
<td>1219.2823</td>
<td>1569.6206</td>
<td>1219.2823</td>
<td>38.2834</td>
<td>31.8488b</td>
</tr>
<tr>
<td>NDS</td>
<td>110.0601</td>
<td>5512.3412</td>
<td>110.0601</td>
<td>134.4474</td>
<td>.8186</td>
</tr>
</tbody>
</table>

aP > .05
bP > .001
compared on the involvement levels. Significant multivariate tests (.001 level) were obtained for involvement. The univariate tests of significance revealed both variables (SC, and SOS) were significant at the .05 level. This data is presented in table 6. The means and standard deviations for the five TSCS subscales for females by preference and involvement groups is presented in table 7. In contrasting the involvement levels for the pop rock preference group, the results showed that high involvement is associated with elevated scores on self-criticism and social self subscales. High scores on the self-criticism subscale indicate a normal, healthy openness and capacity for self-criticism. The social self subscale refers to the self as perceived in relation to others that are not family members, and elevated scores on this subscale indicate a positive feeling about a person's social self. Thus, the females in the pop rock preference group with high involvement in music are more open and feel more positive about themselves in relation to others than the females that prefer pop rock in the low involvement group.

Continuing to control for preference, the hard rock group was compared on the involvement factor. The multivariate tests were significant at the .001 level, and of the univariate tests one scale, SOS, was significant at the .001 level. Of the females in the hard rock preference group, those with low involvement scored more favorably on
Table 6
Multivariate Analysis of Variance of Two Self-Concept Scales by Level of Involvement for Females, Pop Rock Preference

Multivariate Tests of Significance

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Approx. F</th>
<th>Hypoth. DF</th>
<th>Error DF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillais</td>
<td>.44710</td>
<td>10.5123*</td>
<td>2.00</td>
<td>26.00</td>
</tr>
<tr>
<td>Hotellings</td>
<td>.80864</td>
<td>10.5123*</td>
<td>2.00</td>
<td>26.00</td>
</tr>
<tr>
<td>Wilks</td>
<td>.44710</td>
<td>10.5123*</td>
<td>2.00</td>
<td>26.00</td>
</tr>
</tbody>
</table>

*P > .001

Univariate F-Tests With (1,27) D.F.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hypoth.SS</th>
<th>Error SS</th>
<th>Hypoth.MS</th>
<th>Error MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>163.0027</td>
<td>583.5490</td>
<td>163.0027</td>
<td>21.6129</td>
<td>7.5419*</td>
</tr>
<tr>
<td>SOS</td>
<td>207.1415</td>
<td>1264.7206</td>
<td>207.1415</td>
<td>56.8415</td>
<td>4.4222*</td>
</tr>
</tbody>
</table>

*P > .05
Table 7
Tennessee Self-Concept Scale Subscale Scores for Females by Preference and Involvement Groups

<table>
<thead>
<tr>
<th>TSCS Scales</th>
<th>Involvement</th>
<th>Pop Rock Mean</th>
<th>Hard Rock Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC Low</td>
<td>36.35 (5.54)*</td>
<td>38.00 (1.89)</td>
<td></td>
</tr>
<tr>
<td>TOT Low</td>
<td>335.12 (32.59)</td>
<td>322.00 (3.16)</td>
<td></td>
</tr>
<tr>
<td>SSA Low</td>
<td>101.12 (13.05)</td>
<td>96.00 (1.26)</td>
<td></td>
</tr>
<tr>
<td>SOS Low</td>
<td>66.82 (7.84)</td>
<td>77.00 (1.26)</td>
<td></td>
</tr>
<tr>
<td>NDS Low</td>
<td>14.94 (12.21)</td>
<td>12.17 (3.49)</td>
<td></td>
</tr>
<tr>
<td>SC High</td>
<td>41.16 (2.88)</td>
<td>37.10 (3.34)</td>
<td></td>
</tr>
<tr>
<td>TOT High</td>
<td>329.17 (31.90)</td>
<td>290.00 (22.13)</td>
<td></td>
</tr>
<tr>
<td>SSA High</td>
<td>97.08 (13.88)</td>
<td>87.40 (13.32)</td>
<td></td>
</tr>
<tr>
<td>SOS High</td>
<td>72.25 (5.04)</td>
<td>60.10 (5.74)</td>
<td></td>
</tr>
<tr>
<td>NDS High</td>
<td>21.17 (13.85)</td>
<td>25.10 (10.30)</td>
<td></td>
</tr>
</tbody>
</table>

*Parenthesis indicates standard deviation

TSCS Scales: SC - Self Criticism  TOT - Overall Level of Self-Esteem  SSA - Self-Satisfaction  SOS - Social Self  NDS - Number of Deviant Signs
social self than those in the high involvement group. This data is presented in table 8.

The main effects for preference for the females were found to be significant at the .001 level for the multivariate tests. The univariate tests of significance revealed two scales (TOT, or total positive, at the .001 level, and SSA, or self-satisfaction, at the .05 level) to be significant. This data is presented in table 9. The means and standard deviations for the five TSCS subscale scores for females by preference groups are displayed in table 10. The females in the pop rock preference group scored higher on total positive (self-concept) and self-satisfaction subscales. This indicates their overall level of self esteem and degree of self-acceptance is better than the hard rock preference group.

The main effects for involvement for the females were found to be significant at the .05 level for all multivariate tests. The univariate tests of significance revealed one scale (NDS, Number of Deviant Signs) to be significant at the .05 level. This data is presented in table 11. The means and standard deviations for the five TSCS subscale scores for females by involvement groups are presented in table 12. As with the males, the females in the high involvement group manifested a significantly greater number of "deviant signs" than the females in the low involvement group, although the level of significance
Table 8

Multivariate Analysis of Variance of Two Self-Concept Scales by Level of Involvement for Females, Hard Rock Preference

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Approx. F</th>
<th>Hypoth. DF</th>
<th>Error DF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillais</td>
<td>0.78071</td>
<td>23.1406*</td>
<td>2.00</td>
<td>13.00</td>
</tr>
<tr>
<td>Hotellings</td>
<td>3.56010</td>
<td>23.1406*</td>
<td>2.00</td>
<td>13.00</td>
</tr>
<tr>
<td>Wilks</td>
<td>0.21929</td>
<td>23.1406*</td>
<td>2.00</td>
<td>13.00</td>
</tr>
</tbody>
</table>

*P > .001

Univariate F-Tests With (1,14) D.F.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hypoth. SS</th>
<th>Error SS</th>
<th>Hypoth. MS</th>
<th>Error MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>3.0375</td>
<td>118.9000</td>
<td>3.0375</td>
<td>8.4929</td>
<td>.3577</td>
</tr>
<tr>
<td>SOS</td>
<td>1071.0375</td>
<td>304.9000</td>
<td>1071.0375</td>
<td>21.7786</td>
<td>49.1785*</td>
</tr>
</tbody>
</table>

*P > .001
Table 9
Multivariate Analysis of Variance of Three Self-Concept Subscales by Music Preference for Females

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Approx. F</th>
<th>Hypoth. DF</th>
<th>Error DF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillais</td>
<td>.61289</td>
<td>11.7160*</td>
<td>5.00</td>
<td>37.00</td>
</tr>
<tr>
<td>Hotellings</td>
<td>1.58325</td>
<td>11.7160*</td>
<td>5.00</td>
<td>37.00</td>
</tr>
<tr>
<td>Wilks</td>
<td>.38711</td>
<td>11.7160*</td>
<td>5.00</td>
<td>37.00</td>
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</table>

*p > .001

Univariate F-Tests With (1,41) D.F.

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<th>Variable</th>
<th>Hypoth. SS</th>
<th>Error SS</th>
<th>Hypoth. MS</th>
<th>Error MS</th>
<th>F</th>
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<tbody>
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<td>TOT</td>
<td>9689.7594</td>
<td>32637.4314</td>
<td>9689.7594</td>
<td>796.0349</td>
<td>12.1725a</td>
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<tr>
<td>NDS</td>
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<td>77.0031</td>
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<td>.5727</td>
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</table>

*ap > .001
bp > .05
Table 10

Tennessee Self-Concept Subscale Scores for Females by Preference Groups

<table>
<thead>
<tr>
<th>TSCS Scales</th>
<th>Pop Rock Mean</th>
<th>Hard Rock Mean</th>
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<tbody>
<tr>
<td>SC</td>
<td>38.76</td>
<td>37.55</td>
</tr>
<tr>
<td></td>
<td>(4.22)*</td>
<td>(2.62)</td>
</tr>
<tr>
<td>TOT</td>
<td>332.14</td>
<td>306.00</td>
</tr>
<tr>
<td></td>
<td>(32.23)</td>
<td>(12.65)</td>
</tr>
<tr>
<td>SSA</td>
<td>99.10</td>
<td>91.70</td>
</tr>
<tr>
<td></td>
<td>(13.45)</td>
<td>(7.29)</td>
</tr>
<tr>
<td>SOS</td>
<td>69.54</td>
<td>68.55</td>
</tr>
<tr>
<td></td>
<td>(6.45)</td>
<td>(3.50)</td>
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<tr>
<td>DS</td>
<td>18.05</td>
<td>18.63</td>
</tr>
<tr>
<td></td>
<td>(18.30)</td>
<td>(13.03)</td>
</tr>
</tbody>
</table>

*Parenthesis indicates standard deviation

TSCS Scales:  SC - Self-Criticism  
              TOT - Overall Level of Self-Esteem  
              SSA - Self-Satisfaction  
              SOS - Social Self  
              NDS - Number of Deviant Signs
Table 11
Multivariate Analysis of Variance of Three Self-Concept Subscales by Music Involvement for Females

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Value</th>
<th>Approx. F</th>
<th>Hypoth. DF</th>
<th>Error DF</th>
</tr>
</thead>
<tbody>
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<td>2.4239*</td>
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<td>37.00</td>
</tr>
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<td>Hotellings</td>
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<td>2.4239*</td>
<td>5.00</td>
<td>37.00</td>
</tr>
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<td>Wilks</td>
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<td>2.4239*</td>
<td>5.00</td>
<td>37.00</td>
</tr>
</tbody>
</table>

*P > .05

Univariate F-Tests With (1,41) D.F.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hypoth.SS</th>
<th>Error SS</th>
<th>Hypoth.MS</th>
<th>Error MS</th>
<th>F</th>
</tr>
</thead>
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<td>SSA</td>
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<td>6449.0814</td>
<td>340.8521</td>
<td>157.2947</td>
<td>2.1670</td>
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<td>NDS</td>
<td>789.8401</td>
<td>5512.3412</td>
<td>789.8401</td>
<td>134.4474</td>
<td>5.8747*</td>
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*P > .05
Table 12
Tennessee Self-Concept Scale Subscale Scores for Females by Involvement Groups

<table>
<thead>
<tr>
<th>TSCS Scales</th>
<th>Low Involvement Mean</th>
<th>High Involvement Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>37.18 (3.72)*</td>
<td>39.13 (3.66)</td>
</tr>
<tr>
<td>TOT</td>
<td>328.56 (17.88)</td>
<td>309.58 (27.01)</td>
</tr>
<tr>
<td>SSA</td>
<td>98.56 (7.16)</td>
<td>92.24 (13.60)</td>
</tr>
<tr>
<td>SOS</td>
<td>71.91 (4.55)</td>
<td>66.18 (10.79)</td>
</tr>
<tr>
<td>NDS</td>
<td>13.55 (9.10)</td>
<td>23.13 (21.34)</td>
</tr>
</tbody>
</table>

*Parenthesis indicates standard deviation

TSCS Scales: SC - Self-Criticism
TOT - Overall Level of Self-Esteem
SSA - Self-Satisfaction
SOS - Social Self
NDS - Number of Deviant Signs
is lower (.001 males vs. .05 females). The results reveal that both hypotheses 3 and 4 are rejected.

Summary of Hypotheses Testing on Stratified Sample

Of the male group one variable, self-satisfaction, was found to distinguish between the hard rock group and the pop rock group, and one variable, number of deviant signs, was found to distinguish between the high involvement and low involvement groups. The males in the hard rock group had significantly higher self-satisfaction scores, and the males in the high involvement group had a significantly greater number of deviant signs.

Of the female group five scales were found to distinguish between the preference and involvement groups. The females in the pop rock preference group scored higher on total positive (self-concept) and self-satisfaction than the females in the hard rock group. The variables self-criticism and social self were involved in a preference by involvement interaction. The females in the pop rock, high involvement group scored higher on the self-criticism and social self scales than the females in the pop rock, low involvement group. The females in the hard rock, low involvement group scored higher on the social self scale than the females in the hard rock, high involvement group. Additionally, the females in the high involvement group had a significantly greater number of deviant
signs than the females in the low involvement group.

**Non-Rock Group Comparison**

The means and standard deviations for the non-rock group are compared to the other preference groups in table 13. This table includes all five scales from TSCS and a breakdown into high and low involvement groups. The scores of the non-rock group were not statistically compared because of the small number. The adolescents in this study that preferred music that is not rock comprised only 7.3% of the total sample. It cannot be assumed that this number would be representative since the sample was not random.

Of the non-rock categories of music, three types were chosen. Three males and two females chose classical music as their favorite, one male chose country music, and another male preferred disco music. As evidenced from their comments on the MIQ, the classical group were all serious students of music. Four mentioned their musical instruction, and their desire to pursue a musical career. One male played a trumpet, French horn, and flugelhorn, and was not interested in music played on the radio. One female hoped to someday become a concert bassoonist in a symphony orchestra, and another female had studied piano for ten years. Several of these subjects mentioned their desire to major in music in college. Their comments were of a different quality than the subjects that preferred pop
Table 13
Tennessee Self-Concept Scale Subscale Scores for Various Types of Music Listeners

<table>
<thead>
<tr>
<th>TSCS SCALES</th>
<th>INVOLVEMENT</th>
<th>MUSIC PREFERENCES</th>
<th>Pop</th>
<th>Rock</th>
<th>Hard Rock</th>
<th>Non-Rock</th>
<th>Mean</th>
<th>Mean</th>
<th>Mean</th>
<th>Mean</th>
<th>Mean</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Males</td>
<td>Females</td>
<td>Males</td>
<td>Females</td>
<td>Males</td>
<td>Females</td>
<td>Males</td>
<td>Females</td>
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</tr>
<tr>
<td>SC</td>
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<td>38.08</td>
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<td>(5.51)*</td>
<td>(5.54)</td>
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<td>(6.43)</td>
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</tr>
<tr>
<td>TOT</td>
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<td>322.00</td>
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<tr>
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<td>(26.60)</td>
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<td>(41.55)</td>
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<td>(32.52)</td>
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<tr>
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<td>(19.70)</td>
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<td>---</td>
<td>(23.33)</td>
<td>---</td>
<td>(23.33)</td>
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<tr>
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<td>65.00</td>
<td>72.25</td>
<td>66.08</td>
<td>60.10</td>
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<td>67.00</td>
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<td>(5.04)</td>
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<td>(8.48)</td>
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<td>(8.48)</td>
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<td>36.67</td>
<td>25.10</td>
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<td>(4.94)</td>
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<tr>
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<td>(10.30)</td>
<td>---</td>
<td>(4.94)</td>
<td>---</td>
<td>(4.94)</td>
<td>---</td>
</tr>
</tbody>
</table>

*Parenthesis indicates standard deviation

TSCS Scales: SC - Self Criticism
            TOT - Overall Level of Self-Esteem
            SSA - Self-Satisfaction
            SOS - Social Self
            NDS - Number of Deviant Signs
music. One male in responding to what interested him about music wrote: "I could get along fine without music, or I should say rock music. I like to anticipate the next notes that will be performed during complicated passages."

The males in the classical group, and two other non-rock categories were all measured as low involvement. The two remaining females (classical) were both in the high involvement classification. Comparing the scores of the non-rock groups to the other groups on table 13, the non-rock groups fare well.

The scores of the female group are especially high, with the exception of "social self" that does not appear to be different. This group would seem to be very well adjusted. The number of deviant signs is quite low, and this is a high involvement group. The number of deviant signs for the male classical group are also very low with the exception of one individual that scored 53 which dramatically increased the mean. These results can not be considered too seriously because of the small numbers of subjects, but suggest that real differences may exist on self-concept scores between adolescents that prefer classical music versus popular music.
Results of Listening to Music Alone or With Friends

A question on the MIQ asked the subjects to rate what percentage of the total time they spend listening to music is spent alone, or with friends. It was thought that this variable would permit further differentiation of the primary groups in the study. An adolescent that spends a great deal of time listening to music alone in his room could have different purposes for his interest in music than an adolescent that listens to music primarily in social settings. The subjects in this study did not differ substantially on this dimension. The majority of the subjects (68%) circled 25% with friends and 75% alone. Using the criteria of 75% or more time spent alone, the majority of all subjects in all groups were represented. All groups, with the exception of two, had 70 to 85 percent of their members listening to music mostly alone at the 75% or more level. These were: the male, pop rock, high involvement group at 57%; and the female, pop rock, low involvement group at 59%. No group had a majority of subjects listening to music mostly with friends. Thus, further differentiation of the primary groups, and subsequent analysis was not indicated.

Analysis of Open Ended Questions

Three questions on the MIQ were included to gather additional information about adolescent interest in music.
The response sections were left unstructured in line with the exploratory nature of the study. These three questions were: Why is or is not music an important part of your life?, What does listening to your favorite style of music do for you?, and Any additional comments you may have about your interest or lack of interest in music? The subjects' answers were evaluated and categories developed to include the majority of responses. Eight major categories were developed. These categories will be discussed individually.

The largest category that a majority of subjects commented about was relaxation. Fifty-one percent of the sample made a comment about how music is an aid to relaxation. Some examples follow: "It helps me relax," "It calms me down," "It helps me relax and escape the world," "Music is relaxing and a change from the pressures at school," "Music is helpful by ways of a sedative," "Soothing, a great release of tension." Forty-eight percent of the subjects made a comment about how music can improve a person's mood. For a response to be included in this category an improvement in mood had to be noted. Some examples follow: "It improves my mood," "Gets me into a good mood," "Picks me up when I get down or sad," "Gives me a natural high," "Music can make you feel better if you give it a try and it's a lot cheaper and better for you than drugs," "It's the only thing that can change my mood.
in a short period of time." Another similar category includes a comment about music making the subject feel "good" or "happy" without the mention of "improvement" of mood. Forty-six percent of the sample made such a comment. Some examples follow: "Makes me happy," "Makes me feel good," "I enjoy it," "It delights me."

The fourth category involves a response related to the stimulating value of music. Forty-five percent of the subjects responded that music was of some value in terms of stimulation. Some examples follow: "It gets me rowdy," "Helps me hurry up when I need it," "Sometimes the beat will lift you up and make you feel like working," "Gets me hyper," "It's like a strong cup of coffee, makes you alert, makes me want to get going." The next category involves the experiencing of emotions and music's ability to bring about affective responses. Forty-one percent of the subjects made a comment to this effect. Some examples are as follows: "It helps me express my feelings," "Gives me a variety of feelings," "Music is the only pure expression of raw emotions and feeling and through music you can reach new depths," "An outlet for my emotions better left unexpressed," "Gives me a freedom I can't express anywhere else, around my friends it's hard to open up, music that I can relate to gives me the chance to cry if I want to," "Allows me to feel emotions I might not let out otherwise."
The sixth category involves self-understanding. Thirty-nine percent of the subjects made a comment that indicated that music aids in self-understanding. Some examples are: "The words or lyrics relate to my life, I can express my cares and worries in listening to the songs," "It lets me unlock my inner self and find more meaning in life," "It helps me understand myself," "Listening to the Beatles and Paul McCartney has helped me learn more about myself," "Music gives insight into oneself." The seventh category involves socialization, and how interest in music can improve friendships and peer relations. Thirty percent of the subjects made a comment of this sort. Some examples are: "It is something I have in common with others my age," "I listen to popular music to keep current to what my friends like," "Music is a big part of my life, my friends and I have had a lot of fun with music." The last category that a good number of subjects responded to involved the use of music with homework. Twenty percent indicated they used music with homework, usually as an aid. Some examples follow: "Music can help people do homework," "Gives me a 'background' for homework," "I listen to music because I have homework to do," "Fun to listen to while doing homework," "Helps me study."

The remainder of responses from the subjects were more idiosyncratic and not so easily classified. Not all of the subjects were especially interested in music and
various comments were made to this effect: "I like other things, too, music is not my most important pastime," "Music isn't important because I have no musical hobbies," "Music does nothing for me." Very few of the respondents mentioned their use of music for "entertainment" purposes (less than 5%), and very few mentioned its use in reducing boredom (4%).

One fifteen year old female wrote a long, thought provoking comment that was rather atypical but quite interesting. She wrote:

"I feel the reason most kids (teenagers) like rock and heavy metal is because their parents don't want them to. They just rebel and want to do what their parents don't want them to do. Cause if you look at most pop stars they are rebellious and radical. They have what teenagers want. Society's acceptance to be different. They have power and the ability to make thousands of people clap their hands and stomp their feet in time to the music. They have ultimate control. It is something every teenager wants. It's a great feeling to know when you snap your fingers or walk across a stage people will scream and shout and faint for you. I hope you understand and this helps. It's just that teenagers always want to be the one noticed to stand out, but still be the same. Like rock stars feel great when there on stage and see drunk, high, really messed up people yelling and fighting and they feel great. But wouldn't they feel guilty or sorry down inside? I don't understand that!"

Comments that mentioned the word rebellion were few (less than 3%) among the total sample. Thus, she may not be representing the group's feelings on this issue, but her thoughts on power and control are typical, specifically
on the identification with "rock stars" and some resulting confusion that follows. I believe she clearly portrays the reasons behind an adolescent's identification with "rock star" models.

The eight primary classifications of responses were considered with respect to the design of the study, specifically in relationship to the four main hypotheses. The differences in percentage of subjects within groups that made certain comments were compared. Multiple comparisons are possible, and many differences were found to exist. The groups used for comparison purposes were the groups in which significant results were obtained on the self-concept scores. The purpose was to augment and clarify earlier findings. The presentation, and subsequent discussion, of findings will be restricted to those that bear a direct relationship to previous findings, and demonstrate substantial differences in responses to various categories of comments.

In the hypotheses testing procedure the males were found to differ on preference and involvement. The percentages of males in these four groups were calculated to ascertain substantial differences, in responses to the eight categories of comments. No substantial differences were found when comparing preference groups, but differences were evidenced on "relaxation" and "improves mood" on the involvement dimension. A higher percentage
of males in the high involvement group versus the low involvement group commented that music helps them relax and improves their mood. These results are illustrated in figure 4.

In the hypotheses listing procedure the females were found to differ on preference, involvement and interactions were evidenced. The percentages of females in the various groups were calculated to ascertain substantial differences in responses to the eight categories of comments. Various differences were found. The results which bear a relationship to earlier findings are discussed. The females differ on the involvement dimension on "relaxation," "improves mood" and "experiences emotions." A greater percentage of the females in the high involvement group made comments in these categories. Results are illustrated in figure 5. The females differ on the preference dimension on "self-understanding" and "improves socialization." A greater percentage of the females in the pop rock group made comments in these categories as can be seen in figure 6. The "improves socialization" comments were found to involve an interaction between preference and involvement variables for females. The female, pop rock, high involvement group represented a greater percentage of these responses than the female, pop rock, low involvement group. The results are illustrated in figure 7.
Figure 4. Percentage of Males Commenting about Relaxing and Mood Improving Effects of Music by Involvement Groups
Figure 5. Percentage of Females Commenting about Relaxing, Mood Improving, and Experiencing Emotions Effects of Music by Involvement Groups
Self-Understanding Implies Socialization

Figure 6. Percentage of Females Commenting about Improving Self-understanding and Socialization Effects of Music by Preference Groups
Figure 7. Percentage of Females Commenting about Improving Socialization Effects of Music. Pop Rock, High Involvement Group Contrasted to Pop Rock, Low Involvement Group.
CHAPTER V

Summary and Discussion

The present study was designed as an exploratory survey to test a number of general hypotheses, and gather information about adolescents' interests in music. The pair of research questions that were investigated were: Will self-concept scores, in conjunction with the variable sex differentiate to a significant degree between adolescents who prefer hard rock music versus pop rock music? Will the same variables differentiate to a significant degree between adolescents who are highly involved in music listening versus those who are not so highly involved?

Considerable community and academic interest has been concerned with the social effects of popular music as an agent of socialization. It has not been adequately demonstrated that music per se is a causative factor in terms of attitudes, values, or personality variables, but individuals with different musical preferences have been shown to vary on these dimensions. The mechanisms by which music reflects a listener's orientation need further exploration given the communities' concerns regarding illicit behavior.
control and potential misuses of music by adolescents.

This study utilized the Tennessee Self Concept Scale, an instrument by which an individual's self-concept scores have been demonstrated to be directly related to his or her general personality and state of mental health. The intention of this study was to determine if a relationship exists between an adolescent's state of mental health and his or her interests in music. This writer thought such a relationship could exist for two reasons. First, adolescents suffering from adjustment problems usually experience emotional distress in varying degrees of anxiety or depression and music listening has been demonstrated to alter an individual's emotional state. Second, the nature of rock and popular music features the lyrical emphasis on adolescent issues and problems and structural and stylistic "deviations" of the music and its practitioners.

To explore the existence of a relationship between adolescents' musical interests and a mental health variable appeared to be a practical method to support the importance of clarifying the nature of these associations in future research, or diminishing the generalized criticisms of rock and popular music.

The findings of this study support the aforementioned relationship and suggest the area of adolescents' musical interests is deserving of future research investigations.
Summary of Results

Hypotheses Testing

1. Of the male group one variable, self-satisfaction, was found to distinguish between the hard rock group and the pop rock group. The males in the hard rock group had significantly higher (P > .01) self-satisfaction scores on the Tennessee Self Concept Scale (TSCS). The males in the hard rock group were more satisfied with their self.

2. Of the male group one variable, number of deviant signs, was found to distinguish between the high involvement and the low involvement groups. The males in the high involvement group scored significantly higher (P > .001) on the number of deviant signs subscale of the TSCS than the males in the low involvement group.

3. Within the female groups, the variables self-criticism and social self were found to be involved in a preference by involvement interaction. The females in the pop rock, high involvement group scored significantly higher (P > .05) on the self-criticism and social self TSCS subscales than the females in the pop rock, low involvement group. The females in the hard rock, low involvement group scored significantly higher (P > .001) on the social self subscale than the females in the hard rock, high involvement group.

4. Of the female group two self-concept variables were found to distinguish between the hard rock preference
group and the pop rock preference group. The females in the pop rock preference group scored significantly higher ($P > .001$) on total positive (self-concept) and self-satisfaction ($P > .05$) on the TSCS than the females in the hard rock preference group.

5. Of the female group one variable, number of deviant signs, was found to distinguish between the high involvement and the low involvement group. The females in the high involvement group scored significantly higher ($P > .05$) on the number of deviant signs subscale of the TSCS than the females in the low involvement group.

**Non-Rock Group Comparison**

1. The TSCS scores of the non-rock group were not statistically compared because of the small number ($N=7$, 7.3% of sample).

2. Compared to the scores of the other groups, the non-rock group scores were favorable.

3. Real differences may exist on self-concept scores between adolescents that prefer classical music versus popular music.

**Listening to Music Alone or With Friends**

1. No substantial differences between groups were evidenced on this dimension.
Open Ended Questions

1. Fifty-one percent of the subjects made a comment about how music was used as an aid to relaxation.

2. Forty-eight percent of the subjects made a comment about how music can improve a person's mood.

3. Forty-six percent of the sample made a comment about music making the subject feel "good" or "happy."

4. Forty-five percent of the subjects responded that music was of value in terms of stimulation.

5. Forty-one percent of the subjects made a comment about music's ability to bring about affective responses.

6. Thirty-nine percent of the subjects made a comment that indicated music lyrics aid in self-understanding.

7. Thirty percent of the sample indicated that interest in music can improve friendships and peer relations.

8. Twenty percent of the subjects indicated that they used music with homework, usually as an aid.

Comparison of Comments from Music Interest Questionnaire to Results from Hypotheses Testing Procedure

1. A substantially higher percentage of males in the high involvement group versus the low involvement group commented that music helps them relax and improves their mood.

2. A substantially higher percentage of females in the high involvement versus the low involvement group
commented that music helps them relax, experience emotions, and improves their mood.

3. A substantially higher percentage of females in the pop rock preference group versus the hard rock preference group made comments that musical interest and listening improves self-understanding and socialization.

4. The female, pop rock, high involvement group represented a greater percentage of comments about "improves socialization" than the female, pop rock, low involvement group.

The remainder of this chapter will focus on a discussion, and implications of these findings by sections. First considered will be general implications relating to the two classifications studied: music preferences and level of involvement. Second, discussion will be presented relative to the failure to find substantial differences on the "listening alone or with friends" dimension. The third section will focus on future research suggestions, and the last section involves a discussion of the practical applications of these findings.

General Implications

The finding that significant differences in self-concept scores among types of adolescent music listeners exist is notable. This is important considering these self-concept scores are closely associated with general state of
mental health. The finding that the high involvement groups evidenced significantly more signs of "psychological disturbance" is especially noteworthy. Considerable caution must be used in evaluating these findings if errors in generalization are to be avoided.

The present study was exploratory in nature and utilized a non-random sample. It was intended as a first step into a relatively ignored area of investigation. The design of the study does not permit the evaluation of cause and effect relationships. Almost no evidence exists from past studies to attribute personality or other psychological differences as influenced by music per se. It would be a serious error at this point to attribute the observed differences, in this study, as caused by the music. Linear, antecedent-consequent conceptions of causality would prove to be too simplistic in this area, even though the critics of rock music have usually focused on the "effects" of music on teenagers. The conception of causality is assumed to be linear, when in reality a dialectical, contextual conception of causality would appear more reasonable, albeit more complex. The adolescent music listeners cannot be thought of as a passive audience and the record industry cannot be considered to be a simple cause. The music industry is highly effected by the adolescents themselves. The industry caters to adolescent interests and experiences, many of the artists are
adolescents themselves writing from their own perspective. The adolescents influence the form and style of popular music, and the music in turn could influence the adolescents.

Music Preferences

The topic of music preferences within the general category of rock music is rather confusing, and needs to be evaluated carefully. The adolescents in this study do have different and distinct preferences that can be categorized as hard or pop by music industry standards. One form is almost always clearly favored over the other, but the form and style of the music is very similar. To confuse the matter further music industry press have recently been referring to another form of rock music termed "hard pop." This form of rock music has consistently sold well among rock fans. Considine (1981) has coined the term, hard pop: "hard, because its sound derives from the contours of hard rock and heavy metal; pop, because its formal structure is oriented towards popsong melodicism." Many subjects in this study favored this form of music and it was classified as pop on the Music Interest Questionnaire responses. The subjects usually listed examples of this form in the "Pop Rock" category, but they also appeared under "hard rock" and "heavy metal" categories. These selections (songs or artists) were the only ones that the
subjects were not quite so knowledgeable about. The
subjects' general understanding of music industry stan-
dards in terms of styles of music was excellent. Music
is important to these subjects as evidenced by their com-
ments and knowledge.

For the purpose of discussion and clarity a few
generalizations about pop rock and hard rock need to be
made. Hard rock usually features an electric guitar based
instrumental format, with a prominent, throbbing drum beat,
and a muscular tenor voice. The tempo of the music is
relatively fast, and the lyrics are often non-conformist
in content. The difference between hard rock and heavy
metal is slight, the determining factor being the tone of
the electric guitar. In heavy metal the guitar is often
very "fat" (prominent and dominating) and always quite
distorted. Pop rock relies more heavily on melody in its
structure, and instruments other than guitars are featured
(piano, organ, string sections, horns). The tempo of this
music varies from slow "rock ballads" to faster selections.
The lyrical content is not so non-conformist, and usually
involves "romantic" themes. The important elements in
hard rock are rhythm and energy, usually complemented by
non-conformist lyrics. In pop rock music the dominant
elements are melody, and harmony, usually complemented by
romantic lyrics.
The males in this study that favored hard rock had significantly higher scores on self-satisfaction than the males in the pop rock group. The self-satisfaction subscale on the TSCS is derived from the items where the individual describes how he feels about the self he perceives. In general this score reflects his level of self-satisfaction or self-acceptance. This finding, and the other differences on the preference variable in this study are difficult to understand completely. At this point only tentative assumptions can be made in lieu of more detailed information. Such subscales should be evaluated on an individual basis given the salient features of the total profile. Group comparisons must be made with caution.

The eight categories of comments on the MIQ are not of help in understanding this finding because no real differences were evidenced between the pop and hard groups. The content of individual comments does present a clue. One male in the hard rock group wrote: "I like it loud, with snotty lyrics and abusive language." Other comments along these lines were: "It's powerful," "It fits my image," "It's bad" (meaning good), "Makes me a little unique," "Cotta have it SDR&R" (sex, drugs, rock 'n roll). These comments, combined with the nature of hard rock, suggest it suits their tougher, more powerful masculine identity. Sexual stereotypes still very much exist in our
culture and are often exaggerated among the young because of their identity struggles. Hard rock is dominated by male performers that portray aggressive, powerful, sexually dominant images. The dominance of hard rock over pop rock in terms of these elements is similar to the distinction between masculine and feminine stereotypes. The adolescent males in this study that identify with the "hard rock" image may feel more self-satisfaction because it coincides with cultural stereotypes of masculinity.

The females in this study that favored pop rock had significantly higher scores on total positive (self-concept) and self-satisfaction subscales than the females that preferred hard rock. Additionally, these groups differed on the MIQ comments: "improves self-understanding," and "improves socialization." A greater percentage of females in the pop rock group commented on these items. The total positive subscale on the TSCS is the single, most important measure of overall self-esteem. Pop rock is less rebellious in its lyrical and musical content, and may cater more to females' interest in romantic themes. The majority of "rock stars" are males, but more female artists are evident in pop rock. Nevertheless, the females in this study mention their "romantic" interest in the male performers. The females identify with the male performers in terms of idealized sexual images and romantic themes. This interest in pop music and male singers is not new and dates
back to Frank Sinatra at least. The males, as were mentioned, also identify with the same male performers. Their reasons could also be considered in sexual terms related to the musician's dominance, power and control.

The females in the pop rock group mentioned that their interest in this music improves self-understanding and socialization. Given the nature of pop rock lyrics, self-understanding would be in part related to sexual feelings and boy/girl relationships. Improves socialization would be related to relationships with same sex friends and males. The design of this study does not permit the evaluation of cause and effect relationships between the preference variables and comment variables. The females that prefer pop rock music have a higher sense of self-esteem and self-satisfaction. This is likely to be related to their improved sense of self-understanding and competencies in peer relations, which are highly valued by girls. Whether or not their interest in music has increased their self-concept scores, or their high scores in these areas account for their choice of musical style cannot be evaluated. These influences could likely be interactive. The TSCS is an instrument that was developed with certain normative behaviors in mind. Deviations from social norms will result in lowered scores. Pop rock music would appear to be more compatible with "normal" adolescent females' interests and feminine
stereotypes, when contrasted with the salient elements of hard rock. Thus, the finding that the females preferring pop rock scored higher on these self-concept variables is not surprising.

The females in the pop rock, high involvement group scored significantly higher on the self-criticism subscale and social self subscale than the females in the pop rock, low involvement group. The self-criticism subscale on the TSCS is composed of ten mildly derogatory statements that most people admit as being true for them. High scores indicate a normal, healthy openness and capacity for self-criticism. The social self subscale refers to the self as perceived in relation to others that are not family members.

The females in the pop rock high involvement group also represented a greater percentage of comments about "improves socialization" on the MIQ than the females in the pop rock low involvement group. This relates directly to their higher scores on the social self subscale. Their high involvement in music is associated with higher scores on the Number of Deviant Signs subscale, which refers to more "psychological disturbance" (discussed in next section). The pop rock membership is desirable, but the high involvement is not. The members of this group have signs of psychological disturbance, but their sense of social self and self-criticism are high. Self-criticism in
this context is positive and is similar to non-defensiveness. These females are less defensive which may be associated with their perceived competencies in peer relations. A less defensive, open attitude is important in developing and maintaining relationships with others. Their high interest/involvement in popular music could be related to purposes of improving and developing peer relationships. This group may be attempting to diminish their problems through social contexts that involve popular music. This suggestion must be considered quite tentative, as data is not available to adequately understand this finding. Ridgeway's (1976) study is related to this issue. Her findings suggest that "high involvement listeners" respond to a connection between music and social processes, and highly involved music listeners are ambivalent about participating in the affective dimensions of group interaction. The findings from the present study confirm the connection between music and social processes, but would appear to run contrary to the connection between high involvement listeners and conflict about social interaction. Ridgeway suggests that her subjects use music as a means of dealing with their ambivalent feelings about social interaction. The subjects in this group would not appear to be ambivalent about social interaction. The instruments used in Ridgeway's study and the present study are not necessarily synonymous and conclusions cannot be
drawn. The connection between music and social processes in terms of high involvement listeners needs further investigation.

The females in the hard rock low involvement group scored significantly higher on the social self subscale contrasted with the hard rock high involvement group. The females in this hard rock group may have elevated scores on social self because of their relationship with males. Their preference for hard rock music may serve as a vehicle in their relationship with boys. The females that prefer hard rock music also idolize male performers, albeit ones that have less socially desirable images. A performer that was mentioned more than once was Ozzie Osborne, who has been known to bite the heads off of live bats during concerts. These girls are most likely less conformist than their pop rock counterparts, and may prefer boys that are also more rebellious. Again, these suggestions are only offered as speculation, as data is not available to adequately explain this finding.

The adolescents favoring music that was not considered rock were few in this study. The letter explaining the purpose of the study referred to music, not specific styles of music. Nothing contained in this description would have favored one form of music over another. The subjects read this description and voluntarily chose to participate. It is not a surprising finding that most
subjects preferred rock music, but one would think the other forms of music would have been more represented. Five of these seven subjects favored classical music. The other categories that were represented were "disco" and "country." Disco music was very popular about five years ago, but its appeal has dropped off sharply. Country music has always been popular in the United States, and in recent decades has dramatically increased its listening audience. Teenagers in other parts of the country and more rural areas would likely be more interested in this form of popular music. The subjects that favored classical music were all aspiring musicians. These adolescents showed less interest in popular music. As was mentioned in chapter 4, evidence exists suggesting these adolescents may differ on self-concept scores in a positive direction.

The findings related to music preferences are not clear cut by any means. The results present as many questions as answers. This study has used comments from the MIQ to augment the findings from self-concept measures. These comments make some assumptions possible, but must be viewed as speculatory pending additional research.

The classification of styles of rock music by music industry labels such as "hard rock" is possibly the wrong technique to utilize in studies of rock music. Other salient elements could be identified that could be more
revealing. The content of favored lyrics, type of identification with the artists, aggressiveness of the musical stimulus would be a few such suggestions. If salient musical or extra-musical elements of this sort could be identified, more could be understood about an individual's preference for one form of rock music over another.

Level of Involvement

The level of involvement dimension was developed by this writer to identify adolescents that were highly interested/involved in music. The impetus for this project originated from clinical work with adolescents who were experiencing adjustment disorders. It appeared that these adolescents were uniformly highly involved with rock music interests.

The males in this study in the high involvement group scored significantly higher (P > .001) on the number of deviant signs subscale on the TSCS than the males in the low involvement group. This finding was also true for the females at the .05 level of significance.

The number of deviant signs (NDS) subscale of the TSCS is an empirical measure that represents a count of the number of deviant features on all other scores. This score is based on the theoretical formulation of Berg (1957) referred to as his "deviation hypothesis." This position states that individuals who deviate sharply from
the norm on minor behaviors are likely to be deviant on major aspects of behavior. The NDS score has proven to be the scale's single best index of "psychological disturbance." This scale alone identifies deviant individuals with about 80% accuracy (Fitts, 1965). As part of the validation of the TSCS the NDS score was used to discriminate between groups. Four groups were used to compare the NDS score: One Ohio State University student group; and three patient groups; an Ohio State hospital group, community mental health center group, and a VA psychiatric hospital group. A raw score of 10 is used as the maximum normal score for NDS. Twenty percent of the original norm group score above the cutoff point as compared with a mean of 80% of the three patient groups (Fitts, 1965). Fitts maintains that the NDS score is the scale's best overall summary score as far as general level of mental health is concerned. The TSCS also has empirical scales that differentiate between patient groups. These groups include a psychotic group, neurotic group, personality disorder group, defensive group, and personality integration group. These subscales were not used in this study because factor analysis by Vacciano and Strauss (1968) and Rentz and White (1967) did not support the validity of these subscales.

The more psychological disturbance that is evidenced the higher the NDS score. Very disturbed individuals will
score 80 or more on this scale. The subjects in this research in the low involvement group (males) had a mean score on this subscale of 11.00. The males in the high involvement group had a mean score of 31.88. The females in the low involvement group had a mean of 13.55, and high involvement group mean was 23.13. The low involvement groups' means were very close to the maximum normal score for NDS (10), and the high involvement groups were significantly higher. For a careful interpretation of these findings the scores would need to be considered on an individual basis, but as a group the mean high involvement scores can be defined as mild psychological disturbance. The scores are higher than the maximum cutoff score, but not extremely high. Psychiatric diagnosis is not possible, of course, but these adolescents are likely experiencing adjustment disorders and not more severe forms of psychological or psychiatric disturbance. The sample was chosen from a regular school population, and no clinical subjects were intentionally included.

The males and females in the high involvement groups also made substantially more comments about music's ability to help them relax and improve their mood, than the subjects in the low involvement groups. Additionally, the female high involvement group commented that music helps them "experience emotions" more so than the female low involvement group. These adolescents appear to be using
music as a form of therapy.

The healing, soothing and persuasive effects of music have been expounded on throughout the history of our civilization. Michel (1976) notes that music therapists have two particular uses of music with which to work: "The basic power of music to stimulate or soothe activity, and music's traditional functional values as a socializing agent and as a symbol or vehicle for expressing patriotism, religion, or fraternity." These subjects recognize the ability of music to soothe (aids relaxation) and to stimulate (improve mood), also to improve socialization.

These subjects may be experiencing emotional difficulties and use music as a source of comfort, escape and identification. Whether this use of music helps them cope more effectively with their problems is not known. The argument could also be made that this high exposure to rock music is responsible for their difficulties. This writer is not sympathetic with that position, as scant evidence exists to suggest such a relationship, but it would be reasonable to assume that music could contribute to as well as diminish their emotional conflicts. This question cannot be evaluated given the nature of this study's design.

These findings on the involvement dimension are among the most important in this study. This sort of
documentation is what the study hoped to accomplish, but its meaning is far from understandable at this point. Various essential questions exist. Would these findings hold true for a large random sample? Do adolescents with adjustment problems cope more effectively with their troubles by using rock music?, or does their exposure to this material aggravate their condition? More research is needed.

Listening Alone or With Friends

A few comments need to be made about the failure to find substantial differences on this dimension. It is a surprising result that the majority of adolescents in the study report that they listen to music mostly alone. It would be reasonable to assume that many adolescents would listen to music mostly in social gatherings, or with friends in the car, or at home. Still, it is known that adolescents do use music as a background to their daily activities. Music that is used as a background in various contexts often goes unnoticed, because it is not attended to. When the subjects interpreted "listening to" on this question they may have had more intense listening in mind, as listening to music is an important activity to them. Thus, they could have discounted music played in social settings and recalled the occasions on which they deliberately listened to music. Music played in the background
of social activities would often not be the most salient aspect of the activity. This is offered as a possible explanation for this finding, as more data is needed. This dimension may prove to be nonessential in evaluations of adolescents' interests in music.

Suggestions for Future Research

The sample in this study was not random, but rather adolescents that voluntarily chose to participate from larger pools of students. The important findings of this study, especially in the area of level of involvement, should be replicated using a random sample of adolescents in the same age range. The fact that the adolescents in this study were self-selected may have introduced bias of an unknown origin or degree, and the results cannot be generalized to a larger context. Also, a very large sample would appear to be indicated if the non-rock categories of music are to be adequately represented. Additional research is needed to compare the non-rock styles as evidence exists to suggest differences in self-concept scores may be evidenced in adolescents that prefer classical music.

Future investigations of rock music are needed to clarify the findings of this study. It would be desirable to abandon music industry labels for styles of rock music, and develop classificatory variables that have direct relevance to adolescent identification with specific forms of
music. The distinctions between hard rock and pop rock according to music industry standards appears to have little relevancy to teenagers' interest in the material.

The most important finding of this research (high involvement in rock music is associated with mild "psychological disturbance" as identified by Tennessee Self Concept Scale scores) demands additional research. Other psychometric or demographic variables that are correlated with high involvement need to be identified. These variables could then be related to other factors that are known to play a causative role in adjustment problems, such as divorce, or loss of a loved one. Having identified the factors which relate to high involvement in rock music listening, further research should be directed to assess the cause and effect relationships between these variables, and move toward establishing predictive functions. This could best be done by longitudinal studies that followed a population of rock music listeners for a period of time. Studies of this sort are essential to add more specificity to the findings. At this point high involvement in rock music alone may identify groups of adolescents with more problems, but not an individual case with any degree of certainty. Investigations related to adolescents' use of rock music as a form of self administered therapy to alleviate adverse affective states would appear to be a promising focus for future research.
Practical Implications

The practical applications at present are quite limited. The findings and design of this study must be kept in mind if errors in generalization are to be avoided. The lack of cause and effect assessment and randomization in the present study are critical. It would be a mistake at present to assume that an adolescent is experiencing emotional problems simply because of his or her high involvement in rock music, and a more serious mistake to assume that involvement in rock music is causative. This application will need to await the establishment of predictive functions, or at least the identification of additional variables that are correlated with high involvement. At that point such a "musical assessment" could have great utility in child guidance and school settings in terms of identifying high risk individuals.

An understanding of popular music, especially rock, may be of assistance to school personnel and psychologists working with adolescents. Music is very important to these individuals, and possibly most important to the ones who may need help. To be able to communicate at some level about their musical interests may facilitate the development of a treatment relationship. The development of such relationships can be difficult with adolescents, but its establishment is essential to the outcome. This writer has used the subtle introduction of music interests
with success in terms of establishing a sense of rapport and trust. To show a genuine interest and listen is most important. When an adolescent speaks about his or her musical interests, important material is being conveyed. Their interest in music is often not superficial, and their sense of self is involved.
November 29, 1982

Ms. Jennifer Malone
Northwest Mental Health
1560 Fishinger Road
Columbus, Ohio 43221

Dear Jennifer:

The intent of this letter is to confirm that William Blackburn completed a survey with 23 of our students on November 24, 1982.

Sincerely,

John P. Caronis
Assistant Principal

JPC:mjh

1587 West Third Avenue
Grandview Heights
Columbus, Ohio 43212
(614) 488-9755
APPENDIX B

THE OHIO STATE UNIVERSITY

Protocol No. 8200090

CONSENT FOR PARTICIPATION IN
SOCIAL AND BEHAVIORAL RESEARCH

I consent to participating in (or my child’s participation in) research entitled:

Adolescent's Musical Preferences and Level of Involvement with Music Listening in Relationship to Self-Concept and Locus-of-Control

Henry R. Angelino, William Blackburn or his/her authorized representative has explained the purpose of the study, the procedures to be followed, and the expected duration of my (my child’s) participation. Possible benefits of the study have been described as have alternative procedures, if such procedures are applicable and available.

I acknowledge that I have had the opportunity to obtain additional information regarding the study and that any questions I have raised have been answered to my full satisfaction. Further, I understand that I am (my child is) free to withdraw consent at any time and to discontinue participation in the study without prejudice to me (my child). The information obtained from me (my child) will remain confidential unless I specifically agree otherwise by placing my initials here ____________.

Finally, I acknowledge that I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date: ___________________________ Signed: ___________________________
          (Participant)
          (Student)

Signed: ___________________________ Signed: ___________________________
        (Principal Investigator or his/her Authorized Representative)
        (Person Authorized to Consent for Participant - If Required)
        (Parent)

Witness: ___________________________

HS-027 (Rev. 12-81) - To be used only in connection with social and behavioral research.

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APPENDIX C

Purpose of the Study
Parent's and Student's Consent Form

I am a psychology graduate student at Ohio State University working on a research project for my dissertation. Also, I am the Administrator of Family Counseling Northwest, a counseling center for northwest area residents. This study concerns teenagers and their interest in music.

It is known that many young people listen to their favorite style of music (rock, country, etc.) for many hours during the day. Music is often their most popular form of entertainment, but very little academic attention has been directed to the study of young people's interest in music.

I am interested in why music is or is not an important part of a person's life, and what listening to music does for you. I am also interested in different types of music listeners in relationship to mental health and personal adjustment.

I am asking for your participation in this project that will be conducted at your school, and for your parents consent to allow your participation. If you choose to be a part of this study you will fill out three questionnaires during regular school hours. The first involves the selection of your favorite style of music, and how important listening to music is to you. The second and third forms are to gather information regarding how you feel about yourself and how much control you feel you have over what happens in your life. The results will be strictly confidential. No names will be required on any of the questionnaires.

The possible benefits of this project are to eventually understand more fully the reasons for a person's interest in music, and to gather needed information from this ignored area of investigation.

If you wish to participate in this study, and parents, if you agree to allow your son or daughter to participate, please sign the attached form (both parent and student) and return it to the school. Please note that you will not be rewarded or penalized in any way for participating or not participating. Also note that this permission can be withdrawn from the project at any time by parent or student.

Thank you for your cooperation. If you have any questions or would like further information regarding this study, please feel free to contact Bill Blackburn at 457-8237.
APPENDIX D

Music Interest Questionnaire

Age ______
Sex F/M
Grade ______

The purpose of this questionnaire is to determine what type of music you enjoy most, and how important musical listening is to you.

My favorite type of music is:
(Choose Rock or Non-rock, not both)
☐ Rock (Any style you favor; hard, pop, Heavy-Metal, New-Wave, etc., would be included in this general category.)
☐ Non-Rock (Country, Disco, Jazz, Classical, etc.)

Who is your favorite musical group, performer, or composer at this time?
__________________________________________________________
__________________________________________________________
__________________________________________________________

List three other favorites ____________________________________
__________________________________________________________
__________________________________________________________

What is your all-time favorite song or composition, and who performed it, if you know?
__________________________________________________________

Below is a list of different styles or categories of music. Of the different types of music you actually listen to on a weekly basis rate your preference by circling the appropriate number, and list an example of that style you enjoy (Group, composer, etc.).

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</tr>
<tr>
<td>Jazz: (example: _____________________)</td>
<td>Jazz: (example: _____________________)</td>
</tr>
<tr>
<td>Least (example: _____________________)</td>
<td>Most (example: _____________________)</td>
</tr>
<tr>
<td>Preferred /1/2/3/4/5/6/7/ Preferred</td>
<td>Preferred /1/2/3/4/5/6/7/ Preferred</td>
</tr>
<tr>
<td>Disco: (example: _____________________)</td>
<td>Disco: (example: _____________________)</td>
</tr>
<tr>
<td>Least (example: _____________________)</td>
<td>Most (example: _____________________)</td>
</tr>
<tr>
<td>Preferred /1/2/3/4/5/6/7/ Preferred</td>
<td>Preferred /1/2/3/4/5/6/7/ Preferred</td>
</tr>
</tbody>
</table>
1. How many hours a day would you say you listen to music on the radio? ________
2. How many hours a day would you say you watch Music Television (MTV)? ________
3. How many record albums do you own? ________
4. How many concerts have you attended in the last two years? ________
5. How many hours a day would you say you listen to records/tapes at home or at a friend's house? ________
6. How many single records do you own? ________
7. How many tapes do you have (8-track, Reel to Reel, cassette, Total)? ________
8. Do you read any "fan" or music related magazines? ____ Which ones? ________

Of the total time you spend listening to music, what percent of that time would you say you're listening alone or with friends? Circle the closest percent for each.

<table>
<thead>
<tr>
<th></th>
<th>0%</th>
<th>25%</th>
<th>50%</th>
<th>75%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Friends</td>
<td>0%</td>
<td>25%</td>
<td>50%</td>
<td>75%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Below are listed the Columbus area radio stations. Of the stations you actually listen to on a weekly basis, rate your preference with your favorite being 1, next favorite 2, etc.

<table>
<thead>
<tr>
<th>AM</th>
<th>FM</th>
</tr>
</thead>
<tbody>
<tr>
<td>WTVW (610)</td>
<td>WOSU (89.7)</td>
</tr>
<tr>
<td>WOSU (820)</td>
<td>WOFC (90.5)</td>
</tr>
<tr>
<td>WRFD (880)</td>
<td>WXGJ (92.3)</td>
</tr>
<tr>
<td>WPNI (920)</td>
<td>WXH (94.7)</td>
</tr>
<tr>
<td>WCOL (1230)</td>
<td>WHOK (95.5)</td>
</tr>
<tr>
<td>WLCH (1320)</td>
<td>WLIO (96.3)</td>
</tr>
<tr>
<td>WBNS (1460)</td>
<td>WHBN (97.1)</td>
</tr>
<tr>
<td>WDLR (1550)</td>
<td>WHCI (97.9)</td>
</tr>
<tr>
<td>WIKO (1580)</td>
<td>WFMZ (99.7)</td>
</tr>
<tr>
<td></td>
<td>WWAN (103.1)</td>
</tr>
<tr>
<td></td>
<td>WBXY (103.9)</td>
</tr>
<tr>
<td></td>
<td>WCVO (105.0)</td>
</tr>
<tr>
<td></td>
<td>WSXY (106.3)</td>
</tr>
</tbody>
</table>

Circle the answers that most accurately reflect how important music is to you.

1. How "in-to" your favorite music would you say you are?
   - Not much
   - a little
   - a lot
   - very "in-to" it

2. How important to you is listening to music every day?
   - Not important
   - not very important
   - important
   - very important

3. How important to your life in general (well-being, mood, relaxation, self-understanding, etc.) is your favorite music?
   - Not important
   - not very important
   - important
   - very important

Why is or is not music an important part of your life? ________________________________

What does listening to your favorite style of music do for you? _________________________

Any additional comments you may have about your interest or lack of interest in music.

________________________________________

________________________________________

(Use back if additional space is needed)

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