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ADOLESCENTS AND THEIR MUSIC: AN ANALYSIS OF VARIABLES RELATED TO ADOLESCENTS' MUSIC LISTENING, INVOLVEMENT, AND PREFERENCES

by

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We, the undersigned, certify that we have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled, "Adolescents And Their Music: An Analysis of Variables Related to Adolescents' Music Listening, Involvement, and Preferences" submitted by Kelly Dean Schwartz in partial fulfillment of the requirements for the degree of Master of Science.

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ABSTRACT

The purpose of the present study was to examine the relationships among adolescent music preferences, motives for listening, involvement with music, personality, and various demographic variables. Grade and gender effects were also examined.

Ninety Grade 8 students (42 males and 48 females) and 75 Grade 11 students (36 males and 49 females) participated in the study. Two questionnaires, the Millon Adolescent Personality Inventory (MAPI, 1982) and the Music Information Questionnaire (MIQ), were administered during regularly scheduled class periods. The MAPI contained 150 true/false items that measured traits in three areas: Personality styles (e.g., Introversive, Inhibited, Cooperative, Sociable, Confident, Forceful, Respectful, and Sensitive), expressed concerns (e.g., Self-Concept, Personal Esteem, Body Comfort, Sexual Acceptance, Peer Security, Social Tolerance, Family Rapport, and Academic Confidence), and behavioral correlates (Impulse Control, Societal Conformity, Scholastic Achievement, and Attendance Consistency). The MIQ was designed to measure preferences for various music styles (e.g., Rap, Heavy Metal, Roots) and qualities (e.g., music which is "romantic and dreamy," "wild and violent"), motives for listening to music (e.g., "to help me relax," "to help pass the time," importance of "melody," "what the group or artists looks like"), music involvement (hours of music listening during weekdays and weekends, importance of music in one's life, attendance at musical events), and demographic variables (e.g., average school grade, parents' educational level). Instructions and experimental conditions were identical for both groups.

The results indicated that several consistent relationships exist between

adolescents' personality and motives for listening to music; e.g., subjects who were socially expressive listened to music in order to create an atmosphere or control mood, while those who were rebellious and nonconforming listened to fill silence or pass time and to irritate their parents. Preferences for certain styles of music were also significantly related to motives for listening, with subjects who listened to create an atmosphere or control mood preferring more mainstream styles of music (e.g., Dance, Pop, Teen Pop). Subjects who indicated that rhythm, harmony, melody, and singer's voice were important in determining their music listening preferred the traditional, pop, or "softer" music styles, while those who said instruments were more important preferred heavier or "harder" pop music styles. Music preference and music involvement were also significantly related; subjects who stated that music was extremely important in their lives preferred the heavier forms of rock music (e.g., Heavy Metal, Rock, "upsetting and protesting music," "music that is loud," and "music played at a fast tempo"). Finally, music preferences were strongly related with several personality variables. Subjects who were uncooperative, domineering, disrespectful, moody, uncomfortable with their family system, unable to succeed in academic efforts, impulsive, and nonconforming preferred listening to higher amounts of "hard" or heavy forms of popular music; those who did not have these characteristics preferred more traditional or mainstream styles of music.

The findings suggest that there are strong and consistent relationships among adolescents' personality, music preferences, motives for listening, and music involvement. In particular, teenagers who struggle with specific developmental issues were shown to gravitate towards either soft/mainstream or hard/heavy pop music and use their preferred music in varying amounts to meet specific needs.

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CHAPTER I

INTRODUCTION

Numerous studies have consistently found that adolescents prefer music that most adults refer to as "popular," "pop," or "rock" (e.g., Christenson & Roberts, 1989; Herberger, 1987; Lull, 1982; Tanner, 1981). This is a class of music that is produced for, marketed to, and largely consumed by North American youth. Approximately two-thirds of all records and tapes are purchased by the 10-24 year-old age group, and one-third of all radio stations aim their broadcast music at this pool of adolescent listeners (Santrock, 1990). As a result, it has been estimated that rock music reaches at least 66.5 million North American people under the age of 19 (Mark, 1988). Between the 7th and 12th grade, a typical adolescent spends approximately 10,500 hours listening to rock music, only 500 hours less than the total amount of time spent in class over 12 school years (Mark, 1988). This estimate of music listening may be somewhat conservative, as others have found that daily listening ranges from two to three hours per day in early adolescence (Christenson et al., 1989) to over 30 hours per week by late adolescence (Decima Research, 1991).

Given the considerable amount of time adolescents spend listening to music on the radio, playing records, tapes, or compact discs (CDs), or watching music videos on television, Christenson et al. (1989) has stated, "one simply cannot pretend to understand adolescents without considering the place of music in their lives" (p. 1). However, an examination of the research literature on adolescent development reveals that academic researchers have largely ignored the importance and impact of music on youth. For example, Greeson and Williams (1986) conducted a content analysis of adolescent textbooks and found that an average of only four pages per textbook was devoted to media

(i.e., TV, radio, music) influences in general, with half of the texts ignoring music completely. Although much of the research on media and adolescence has been devoted to the influence of television, media studies of music have generally focussed on the influence of music videos on television upon adolescent development, rather than music per se (e.g., Hansen, 1989; Hansen & Hansen, 1988; 1990; 1991; Greeson & Williams, 1986; Sun & Lull, 1986). Given the paucity of research in the area, the purpose of the present study is to examine the relationships among adolescents' preferences for different styles of music, their motives for listening to and preferring music, involvement with music, and personality characteristics.

Importance of Rock Music to the Adolescent

Toohey (1982) has described popular music as a "social conditioning force of remarkable proportion (when) seductive lyrics (are combined) with the mystical qualities of harmony." Chaffee (1985) has stated that the sound of music can provide identification, integration, and expression for the listener. These statements suggest that music may serve two general purposes for the adolescent listener: (a) Music may represent a type of social reality and serve to express an adolescent's perceptions, attitudes, and behavior, and (b) music may serve as a vehicle for an adolescent to use in experiencing and searching for identity, self image, and value construction.

Rock Music as a Source of Social Reality

The notion that rock music may reflect and present a social reality for adolescents has received empirical support. May and Hamilton (1980) found that female undergraduates' judgements of the physical attractiveness of photographed males could be influenced by the type of music heard while making the ratings. For example, they found that judgements of physical

attractiveness was greater while listening to positive-affect evoking rock music than while listening to the avant-garde music.

Adolescents' social attitudes have been shown to be susceptible to the influence of music, particularly rock music. Greeson and Williams (1986) presented either random or high impact (i.e., music videos selected especially for their reference to sex, violence, and anti-establishment overtones) samples of music videos to two groups of teenagers and then administered attitude surveys to both groups. The results showed that more adolescents agreed with the notion of premarital sex after watching the high impact sample of music videos than those who watched a random sample of music videos. The authors interpreted the findings by saying that the music and lyrics portrayed in the videos had a "deleterious impact" on the listeners. Similarily, Stumphauzer and Perez (1982) argued that rock music in general, and the groups/artists in particular, provide specific kinds of models for social learning that contribute to adolescent alcohol use.

Not only has rock music been found to influence the attitudes, perceptions, and behavior of its listeners, it is also used by its listeners as a tool or vehicle for expressing their social culture. Wicke (1985) stated that popular music functions as a cultural means of communication which has considerable sociopolitical relevance; thus, music is not valued merely for pleasure, fun, or entertainment. Further, Castanyer (1982) considered music to be an important vehicle for both emotional and political self-expression. Edwards and Singletary (1984) stated that an appreciable percentage of persons consider popular music to be an important part of their socialization. In their study, university students who listened to, understood, and were gratified by the lyrics of rock music felt that it was consistent with their conceptions of social reality.

Seltzer (1976) claimed that changes in preferences for lyrics of rock music reflected changes in the social reality and experiences of the maturing adolescent. In categorizing the preference changes for lyrics of popular music, she found that interest moves from external (e.g., relationships) concerns to internal concerns (e.g., feelings) as the adolescent grows older. This idea seems to support that of Cooper and Haverkos (1973), who suggested that lyrics are valid representations of the social concerns of youth. Thus, rock music may be appealing to teenagers because of the role it plays as an agent of social-emotional and behavioral change, while it may also serve as a reflection of society and the cultural concerns within it.

Rock Music as a Source of Identity Formation

A second function music may serve for adolescent listeners is as a vehicle for experiencing and searching for identity, self image, and values; thus, rock music may be an external reflection of an adolescent's "internal reality." Lull (1985) stated that rock music creates meaning and excitement for the listener, while Larson and Kubey (1983) said that it can reflect the emotional experiences of the adolescent. Santrock (1990) characterized adolescents as being in a state of continual "search for new data to help them generate support for their self-theory" (p. 368); this "new data" may, in part, come from rock music. Thus, as opposed to the function of rock music reflecting social reality and serving as a source of cultural change, adolescents may use popular music to facilitate their search for identity and a new self image (Avery, 1979).

Rock music and its lyrics may reflect the internal world of teenagers and serve as a vehicle for exploring that which is less social and more individual in nature. More specifically, Mainprize (1985) stated that music can be viewed as an expression of an adolescent's self and reflects the psychodynamics and psychosocial processes that constitute the subjective psychological makeup of

the teenager. For those adolescents who are dealing with responsibility issues, striving to form self-identities, and questioning authority and the establishment, rock music is likely to function as an escape and a haven of security until they successfully resolve these internal battles. White (1985) has stated that people are likely to prefer music that matches their values and perceptions of themselves; thus, the music they prefer may indicate their feelings of apartness, alienation, and peer conformity. He argued that pop music may be used as a tool for coping in a world in which building and maintaining an identity is difficult; and by listening to rock music, an adolescent subscribes to an identity shared by other listeners and with performers and writers who have similar views about who they are or might be.

One area of research which appears to support the identity function of music is in its application. The themes of identity in many popular songs may help develop meaningful communication with and among adolescents, with the values in the lyrics being commonly identified and challenged/supported by teenage listeners. For example, Mainprize (1985) found that pop music can provide a valuable communication vehicle and resource for the assessment and treatment of emotionally disturbed adolescents. Hughes (1985) found that it can increase adolescents' self disclosure of their views on a variety of topics, such as self-identity and self-acceptance. Reporting on the practice of using rock music to assist adolescents in searching for their identity, Mark (1988) stated that adolescents can discuss the experiences presented in the lyrics, thereby distancing themselves from the conflict they may feel but cannot address directly. Thus, in the communication process, the songs and messages appear to validate adolescents' identity by giving them recognition and a concept of themselves which may be lacking.

In contrast, rock music does not always present themes with which adolescents can identify. Leming (1987) asked 58 adolescents two questions: (a) Has a song ever influenced the way you think about an important topic?, and (b) Are there songs that you have disagreed with? He reported that 71% of the adolescents in his study declared having disagreed with a song's message, while only 49% stated that a song had influenced their thinking about a certain topic. Such disagreement with a song's message may also contribute to identity formation by serving as a base from which the adolescent can assert his or her uniqueness.

Although agreement with a song's message varies considerably among adolescents and depends on the type of message, some consistency does exist with regards to how adolescents use music to regulate emotions and develop a self-concept. For example, Lyle and Hoffman (1972) found that music listening was second only to "going off by myself" as the dominant means of coping with anger and hurt feelings. In addition, Gantz and his colleagues (Gantz, Gartenburg, Pearson, & Schiller, 1978) measured the "gratifications" derived by a group of adolescents while listening to pop music and found that they listened "to relieve tension or take my mind off things bothering me" and to "get me/keep me in the mood I want to be in." The researchers concluded that listening to rock music helps teenagers deal with problems, which correspondingly leads to greater calmness and better feelings towards one's self. Thus, for many adolescents, the act of listening to music, regardless of the shared themes, may help them seek, identify, judge, and communicate identity issues that may otherwise be difficult to access.

The importance of music as a guide in the search for identity and resolving conflicts likely contributes to the motivations of adolescents for attitudinal, behavioral, and social change. Perhaps Frith (1983) has best

summarized the dual nature of rock music for adolescents in stating, "rock has been simultaneously used as a source of solidarity and active dissatisfaction *and* as a form of self indulgence and individual escape" (p. 265). Thus, the two functions of music and the research outlined above serve to highlight both the *social* and *personal* roles that music plays in the lives of adolescent listeners.

Purposes

This discussion of the importance of music to adolescents has highlighted two aspects of the music experience for adolescents; their choice of music (especially Pop or Rock music) and some of the likely reasons for listening to music. The specific purposes of this study were to (a) determine the styles of music adolescents prefer and the factors which influence these preferences, (b) determine the social and personal motives for listening to music and the variables which influence these motives, (c) assess the contribution of the personality traits of adolescents (internal reality) on their music preferences and motives for listening, and (d) assess the relationships between age, gender, and involvement with music and music preferences and motives for listening.

The remainder of this introduction will discuss several topics in the following order: (1) Music preferences will be explored by examining music preference assessment, descriptions of various styles of pop/rock music, and theories of music preference; (2) external variables influencing music preference, such as music-related characteristics and social/cultural variables (e.g., social background and peer/parental influence); (3) internal motives influencing music preference, including personality; and (4) additional variables influencing music listening and preference, particularly the impact of age and gender.

CHAPTER II

REVIEW OF THE RELATED LITERATURE

Music Preferences

Assessment of Music Preferences

The assessment of music preferences of adolescents has used many different strategies. The methods of measurement vary from simply categorizing the favourite song of subjects (e.g., Tanner, 1981) to assessing their enjoyment of 60 different music styles (e.g., Litle & Zuckerman, 1986). One assessment technique has been to have subjects indicate their enjoyment of a selection (usually on a Likert scale) of music played aloud and then determine their preferences for music styles by examining their ratings regarding which they enjoyed the most (e.g., Glasgow & Cartier, 1985; Herberger, 1987; Leblanc, 1979; Nielzen & Cesarec, 1981). Some authors have measured music preference by asking subjects to list their three favourite music groups or songs (e.g., Boyle, Hosterman, & Ramsey, 1981; Tanner, 1981), and then categorizing the styles of music represented by the choices. Finnas (1987) has utilized a novel approach by asking subjects to rate their enjoyment of music on a list of short descriptions of musical styles (e.g., "sad and gloomy," "tough and hard"). The most commonly used technique is to provide subjects with a list of several different music styles or genres (e.g., Country, Classical), followed by an example or two of the groups or artists who represent each style, and then have subjects rate their liking of each style on a Likert scale (e.g., Christenson & Peterson, 1988; Decima Research, 1990; Dixon, 1979; Fox & Wince, 1975; Hansen & Hansen, 1991; Litle & Zuckerman, 1986; Lull, 1982; Roe, 1985; Yee, Britton, & Thompson, 1988).

There appears to be some consistency of findings of music preference regardless of the particular technique used. At the same time, several advantages and disadvantages are associated with each assessment method. For example, having subjects rate their enjoyment of music that is played aloud can take an excessive amount of time, while the task of finding and presenting musical excerpts that universally represent a particular style may also be problematic (if not impossible). Subjective biases can be evident in the categorization of subjects' reported favourite groups/artists and recordings to particular styles; this method, then, may fail to accurately illustrate subjects' music preferences. Finally, by having subjects rate their enjoyment of various styles of music on a Likert scale, at least three problems are apparent: (a) Subjects may not agree with the music style representing a music group provided, and may heighten or lower their rating of enjoyment of that particular style as a result; (b) the subjects may rate their enjoyment of the music group exemplars provided without considering the music style; and (c) it is difficult to determine a "favourite" style if a subject rates the enjoyment of several music styles equally high.

Given the fact that it is difficult to predict which of the above techniques is the most efficient and accurate measure of music preference, the present study utilized five separate measures of music preference. Each of the concerns noted above will be taken into account in interpreting the results.

Descriptions of the Music Preferences of Adolescents

There are many ways by which music styles have been grouped or categorized in research with adolescents and and young adults. Numerous studies have found that "pop" and/or "rock" music is the most preferred style of music for adolescents (Christensen & Peterson, 1988; Frith, 1983; Greer, Dorow, & Randall, 1974; Herberger, 1987; Litle et al., 1986; Lull, 1985; Radocy

& Boyle, 1979; Tanner, 1981; Taylor, 1985; Thompson, 1990). Recent research, however, has included more distinct divisions within the pop/rock music genre. For example, Decima Research (1991) included 18 "music format preferences" in assessing subjects' music preferences. Table 1 presents the actual rankings of these 18 styles. One of their most popular styles, Rap, has been described as "a chanted rhyme backed by the rhythms of a beat box - either human or mechanical" (Menconi, 1990, p. 68). Another very popular style similar to Rap is Hip Hop, which features "spoken verses with sung choruses" (Menconi, 1990, p. 68). Dance and House music also ranked highly with the teenagers in their sample. Dance music usually communicates themes of love and relationships to a beat written and produced for dancing. House music has been defined as "a sleek, rumbling rhythm, (with) brief snippets of existing records captured by keyboard samplers, piano fills, string sections, and unstoppable mid-tempo dance grooves" (Bateman, 1991, p. 56).

The distinct style of "pop" music may also be broken down into several groups. Power Pop is a style of music favoured by teens for its lighter, bouncier, and more melodic metal or party sound. Teen Pop, on the other hand, is often characterized as teenagers singing about teenagers to teenagers (usually in the 10-14 year-old range). Soundtrack music, taken from scores of feature films, also constitutes a category of music fitting the "pop" music category.

Several forms of "heavy" pop/rock music are also identifiable for adolescents. Heavy Metal is the best known, and is described by Hansen et al. (1991) as being loud, fast, and often discordant, music. Rock Funk also draws on these qualities, while delving somewhat into classical, rhythm and blues, and rap to complete their distinctive sound. New Wave is another style preferred by teens for its danceability; but this style is also characterized by a fast, driving beat that provides a repetitive rhythm rather than a melody.

Table 1

Rankings of Music Format Preferences

from Decima Research (1991) Study

Ranking	Music Format Preference
1	Rap
2	Dance
3	Power Pop
4	Pop
5	House
6	Hip Hop
7	Classic Rock
8	New Wave
9	Rock Funk
10	Blues
11	Teen Pop
12	Folk
13	Classical
14	Heavy Metal
15	Rock
16	Roots
17	Reggae
18	Country

Two other styles included in the pop/rock genre are those of Worldbeat and Roots. Worldbeat may be described as a corollary of black-originated reggae, and may include jazz or Latin bass-line oriented rhythms. Roots is a form of country-tinged rock which prides itself in being unconcerned about studio-perfect recordings. A summary of the descriptions of several music styles preferred by adolescents is included in Appendix A.

Similar to the problems noted previously in the assessment of music preference, the categorization of music into various styles is also fraught with difficulties. Several of the categories used by the very recent Decima Research (1991) study, and even those in the present study, may already be outdated. Several researchers seem to go to extremes in categorizing the music styles they present to their subjects; some too narrowly categorizing a certain style (i.e., Litle et al., 1986, with 60 music styles), while others fail to provide enough music examples for the subjects (e.g., Roe, 1985, with ten kinds of music).

The present study used the most recent categories from the Decima Research (1991) study in addition to those added by the researcher. Broader categories of music styles (by way of factor analysis) and 14 music style descriptions were also utilized to gain as accurate a picture as possible of the music preferences of adolescents.

Theories of Music Preference

Two theories have been proposed to account for the development of music preference, both of which suggest that music preference is influenced by social and person-centered variables. The first theory is that proposed by Leblanc (1980). He has suggested that many variables influence music preference decisions, and has proposed an 8-level hierachical model accounting for the considerable variation in musical taste among people. Basically, the model postulates three main areas of influence which determine a

listener's preference for music: (a) Stimulus or music characteristics, (b) cultural or social input, and (c) personal characteristics of the listener. For the listening adolescent, then, music preference could be said to be related to interest in the characteristics of the music itself, the cultural influences (e.g., peers, siblings, parents) which surround his or her interest in the music, and predisposing personal characteristics such as personality that mediate between the listener and the music.

The second theory is one proposed by Helmut Rösing (1984), who postulated several variables influencing music preference. He suggested that each music listener has, on the one hand, undergone a particular process of musical socialization which is heavily affected by factors such as social status, upbringing, education, environmental features, and the mass media. On the other hand, the listener also bears the imprint of physiological and biological features, including age, sex, and a multitude of personal constitutional features (e.g., type, character, disposition, ego weakness, ego strength), i.e., "a specific, individual personality structure" (p. 123). Rösing (1984) postulated a "triadic determinant model" of musical reception. Similar to Leblanc's (1980) model, Rösing stated that music listening is governed by several factors of broadly equal significance: Product, situation, and person. Rösing described the process by which a listener comes to experience the music and develops a preference for a certain style over another: (1) How the function of the music intended by the producer comes to influence the music's structure, (2) how the receiver learns to expect a particular structure appropriate to the function of the music and the given situational context, and (3) how the listener comes to prefer a kind of music which satisfies his or her expectations or role, which is congruent with past experiences and matches his or her personality and constitutional features.

Both Leblanc (1980) and Rösing (1984) have conceptualized the variables contributing to music preference as falling into three categories: (a) Music-related characteristics, (b) social or situational variables, and (c) person-centered or listener qualities. Research regarding the situational or social factors related to music preference is well represented in the literature, while a thorough examination of the person-centered variables, including personality traits, emphasized in both of these theories is comparatively underrepresented. These general categories will be used to organize the following literature review, and will result in demonstrating how they interrelate and contribute to understanding music preference.

External Variables Influencing Music Listening

Music-Related Variables Influencing Music Listening

Leblanc (1980) and Rösing (1984) both emphasized that there are factors associated with music listening which pertain to the characteristics of the music. The basic characteristics to which they refer are the elements of melody, rhythm or beat, harmony, instrumentation, voice quality, tempo, simplicity/complexity, and danceability. Lull (1982) emphasized that music is defined primarily by its sound rather than by its lyrics or subcultural associations.

Boyle and his colleagues (Boyle et al., 1981) studied the influence of a range of music characteristics on music listening; they also looked at sociocultural variables. Students (N=397) from grade levels 5, 7, 9, 11, and college were given a self-report form gathering information regarding (a) grade, sex, music experience, music ability, parental and sibling interest in music and music style preferences, and the importance of pop music in their lives, (b) the titles of their three favourite pop music selections, and (c) their ratings of the

extent to which 11 reasons had influenced their preference for each song (the reasons listed included the singer or vocal group, lyrics, mood, instruments used, melody, rhythm, harmony, peer influence, danceability, hearing the song on the radio, and sentiment). The only variables found to be significantly associated with listening to pop music were lyrics and its danceability, with peer influence having the lowest and nonsignificant correlation with music listening out of all 11 variables presented.

In the present study, the following characteristics of music were assessed with respect to their contribution to music listening: Melody, rhythm, harmony, instruments, singer's voice, what friends like, radio exposure, lyrics, and danceability. It was expected that the subjects' music listening will be significantly related to listening to the lyrics and danceability. Thus, this study, in part, attempted to replicate previous findings with today's genre of music and Canadian adolescents.

Social/Cultural Variables Influencing Music Listening

Leblanc (1980) and Rösing (1984) have both suggested models of music preference that include "cultural input variables" and "societal" factors influencing music preference. In a recent review of the literature on adolescent music preferences, Thompson (1990) concluded that the adolescent experience of pop music is a sociological phenomenon, stating that preferences for different styles of music is linked to race and ethnicity, socioeconomic status, age, and gender. What follows is a review of the literature relating music preference to social and cultural variables.

Social Background

In the scientific literature, the social variables influencing music preference have been investigated within the disciplines of sociology (e.g., Frith, 1983; Fox & Wince, 1975; Tanner, 1981)), communication studies (e.g.,

Roe, 1985; Lull, 1982; 1985; Cuthbert, 1985), and musicology (e.g., Boyle et al., 1981; Dixon, 1979; Finnas, 1987; Thompson, 1990; Taylor, 1985). The social background of adolescents has frequently been found to be associated with music preference. Fox and Wince (1975) examined this relationship using the rationale that preferences for music styles are diversified, that certain styles cluster together with one another, and that music taste cultures are associated with background characteristics. University students (N=767) were asked to indicate their liking of nine styles of music; five musical taste factors were found: Jazz/Blues, Popular Hits, Folk, Rock/Protest, and Country and Western. They then performed a Multiple Classification Analysis to assess the effects of background characteristics on these music preference factors. They found that (1) preference for Jazz/Blues was related to hometown size (urban), religious preference (atheists, agnostics, and Jews), and father's education and occupation (professionals); (2) preference for Popular Hits was related to religious preference (Catholic); (3) preference for Folk music was related to religious preference (Jews) and to father's education and occupation (professional); and (4) preference for Rock/Protest music was related to religious preference (atheists or agnostics), hometown size (larger cities), and family income (lower). The researchers concluded that music preferences were rooted in the social structure, with religious affiliation being the most consistent predictor of music preference.

Tanner (1981) asked 733 Canadian junior and senior high students to indicate their favourite performers and bands, and then related these preferences to social class background, ethnicity, and school experiences. Low socioeconomic status (SES) subjects were found to favour Top 40, while the middle SES respondents favoured more Progressive styles of rock music. School commitment was only weakly related to music preference: Those

subjects claiming to be more committed to their school work preferred Top 40 and those with less school commitment having a preference for Heavy Metal music. However, when these two factors were analyzed simultaneously, it was found that the combination of low SES and low school commitment produced a significant preference for the heavier forms of rock music, with low SES but high school committed subjects preferring Top 40 music. Finally, the author measured delinquency involvement and found that adolescents high on this factor appeared more likely to favour heavy rock than peers low on this factor. These results suggest relationships between delinquent activities, social class, and school commitment and a preference for music classified as "heavy rock." Tanner concluded that mainstream music (e.g., Pop, Dance), being somewhat "conformist" in character, would attract similar listeners, while heavy rock music and its listeners are often associated with action, physicality, and a collective solidarity against prevailing values.

One other study has examined the relationship between socioeconomic status (SES) and music preference. Cuthbert (1985) surveyed 300 Jamaican youths, testing the hypothesis that the higher the SES, the greater the preference for foreign music in contrast to local music. Respondents were asked to rank various types of music to which they listened. It was found that the lower SES subjects preferred Reggae (local music) over the other kinds of music, while the upper SES chose Rock music (foreign music) as the most preferred style. In explaining their choices, the lower SES respondents said that "Reggae tells what life is really like," while the upper SES subjects said that rock music "reflects the way they dress, act, and talk."

Finally, Dixon (1979) found that musical preference was influenced by amount of time spent listening, concert attendance, and musical background and competence. More specifically, he found the those persons preferring Soft

Rock and Spiritual music had a high incidence of concert attendance within the past year.

In the present study, subjects were asked to indicate their average percentage grade in school and to identify the highest educational level attained by either their mother or father. School commitment was also inferred from several measures assessing academic confidence, scholastic achievement, and attendance consistency. It was expected that music preference would be related to average grade, parents' education, and the three school commitment measures; more specifically, subjects who had higher average school grades, whose parent had higher education, and whose scores on the academic confidence, scholastic achievement, and attendance consistency scales did not indicate problems were expected to prefer different styles of music than those whose scores represented concerns in each of these areas. In addition, it was expected that several of the music involvement items, such as hours of music listening and importance of music in one's life would be related to music preference. Thus, while this study did not exhaustively quantify the impact of social factors (e.g., race, ethnic background) on music listening and involvement, it did attempt to determine whether several of the previous findings (i.e., Tanner, 1981) would hold a decade later, with the numerous changes that have occurred in music styles and in adolescents.

Peers and Parents

Frith (1983) stated that an individual's music preference can, in part, be understood by examining the reference or social group to which he/she belongs; this is due to music often serving as a group's "social symbol" (p. 269). Although this shared "social symbol" may not be the most common basis for group identity, when music does become the focus of attention in a group, it may become important for individual friendships. Frith argued that those

adolescents who stress individual music choices also stress the importance of shared musical taste for friendship, with music serving as a badge of individuality on which friendship choices can be based. Lull (1985) concurred with Frith by stating that adolescents "identify" strongly with their preferred music, and use these preferences as a basis for forming impressions of others and for constructing their social webs and daily activities.

Several studies document the relationship between music preference and peer involvement. Roe (1985) stated that music is the main expression for youth group values and identity. His study examined the media uses and gratifications of 509 children aged 11 to 15 years. He measured preferences for ten kinds of music (Country, Punk, Mainstream Pop, Reggae, New Wave, Rock, Folk, 60's Protest Songs, Classical, and Jazz). The results indicated a significant positive relationship between peer orientation and preferences for harder, less broadly accepted forms of music such as Punk and Rock. Conversely, there was a negative relationship between peer orientation and preference for Mainstream Popular music. Roe interpreted the results in this way: "The extent to which adolescents are motivated to listen to a particular type of music is an indicator of the degree to which that music is fulfilling their needs or wants" (p. 360). Frith (1983) would likely interpret the results as indicating that those students who highly value peer involvement also prefer music that is most identifiable as being subcultural in nature, while those students who place less value on peer involvement choose music that does not represent the adolescent subculture.

Finnas (1987) examined the question of whether young people misjudge each others' music tastes. He found that the individual's perception of the musical tastes of peers influenced their own tastes in music. For example, the Grade 7, 8, and 9 youngsters overestimated their peers' preference for

"tough/protesting/rock-oriented" music, while they underestimated their peers' preference for "classical/quiet" music, with this misperception influencing the music they prefer.

Taylor (1985) argued that social factors influence musical preference more than the characteristics of music. Using an ethnographic approach, Grade 6 children chose one cassette tape from each of three different styles of music: rock/pop, serious/opera, and typical school music. The child's parent(s) were then interviewed to determine their influence on music preference decisions of their children. Taylor found that a lower level of parental influence allowed children to become non-discriminate consumers of music, thus opening them to greater influence by the media and peers.

Complementing the findings of Taylor (1985), Gold (1987) compared the self-image of delinquents who preferred Punk Rock music with those who did not. Although he did not find any difference between the two groups on a measure of self-image, a significant difference was found between the groups in family closeness and quality of parental relationships. Those delinquents who preferred Punk Rock music reported feelings of being misunderstood by their parents more than those who did not like Punk Rock music.

In the present study, the relationships between music preference and peers and parental influence were examined. The variables of sociability, peer security, frequency of listening to music with others, and the importance of listening to music that friends enjoyed were all assessed. In addition, variables related to parental influence (i.e., family rapport, preference for music that irritates parents, and number of parents living at home) were also assessed, with both peer and parental variables being related to music preferences. It was expected that each of these variables would be related to the music style preferences indicated by the subjects; more specifically, subjects whose scores

indicated problems with sociability, peer security, and family rapport, who preferred music that their friends like, and who preferred music that irritated their parents were expected to prefer the heavier forms of pop/rock music, which is characterized as "tough/protesting/rock-oriented" or "hard" music, compared to subjects who scored significantly different on these same measures.

It should be noted that the present study does not purport to fully address the "social/cultural basis" of music affiliation of adolescents (e.g., style, opportunity, politics, economy, race). It is recognized, however, that the research discussed previously seems to indicate that some social factors (e.g., social background, peer involvement, parents) influence the music preferences of adolescents. Such results appear to support the contentions of both Leblanc (1980) and Rösing (1984) regarding "cultural or social input" and "societal" factors, respectively, influencing music preference. An important question still remains: What internal motivations and personality variables might make adolescents susceptible to those social factors influencing music preference? It is this question upon which this study focusses. The research pertaining to this question will now be briefly reviewed.

Internal Variables Influencing Music Listening

Leblanc (1980) and Rösing (1984) have suggested that the characteristics of the listener are important in influencing music preference decisions. This section will review the literature on two areas related to the music listener: motives or gratifications associated with listening to music and personality characteristics of adolescents.

Motives or Gratifications

The various motives for listening to music have recently received the attention of researchers within the fields of communication (e.g., Gantz,

Gartenburg, Pearson, & Schiller, 1978; Roe, 1985) and sociology (e.g., Rosenbaum & Prinsky, 1987). These researchers have attempted to answer questions regarding what satisfactions or "gratifications" young people obtain from being exposed to music and what adolescents think music does to and for them.

Roe (1985) examined the media uses and gratifications of 509 Swedish children aged 11-15 years. In addition to measuring their preferences for 10 kinds of music (e.g., Country, Punk, Mainstream Pop, Reggae, New Wave, Rock, Folk, 60s Protest Songs, Classical, and Jazz), he asked respondents how often each of 12 different motives was appropriate for them; e.g., "It helps me relax and stop thinking about things," "It helps me to get into the right mood," "It helps pass the time," "It is less boring when I am doing something else (e.g., homework, cleaning up)." The results showed that the most common motive for listening was as background to some other activity (e.g., homework), followed by "It's good to dance to" and "Music fits in well with my life." Listening to the words was the least common motive for listening to music.

Correlations were then computed between preferences for various music types and their motives for listening. Each of three types of music (Punk, Rock, and New Wave) was correlated with nine of the twelve motivational items; i.e., all three styles were positively correlated with the statement "Music fits in well in my life"; Mainstream Pop music correlated only with "It is good to dance to." The 12 motives were factor analyzed, producing three common factors: Atmostphere creation/mood control, silence filling/passing the time, and attention to lyrics. A preference for Punk music was correlated to the "attention to lyrics" factor, while Rock and New Wave music were correlated with the "atmosphere creation/mood control" factor. Thus, not only do specific motives relate to listening to different kinds of music, but generalized motives (factors)

also relate to preferences for specific styles of music. It was concluded that different styles of music fulfill different and important needs of adolescents.

Gantz and his colleagues (Gantz et al., 1978) used seven of the 12 motives designed by Roe (1985) with 468 junior high, senior high, and college students. They found that the two most frequent motives for listening to music were to "Help pass the time" and "Relieve boredom when doing other things"; also high were to "Relieve tension," "Take my mind off things that are bothering me," and to "Get in or keep in a mood I want to be in." To think about the meaning of the lyrics was the least frequently occurring gratification. High school and college students used the two motives, "To get me in or keep me in a mood" and "To take in the meaning of the lyrics," with a greater frequency than their junior high counterparts.

Rosenbaum and Prinsky (1987) also used several of Roe's (1985) motive items to determine why youths liked their favourite songs. They asked 266 adolescents (aged 12-18 years) to give the titles of their three favourite songs, and then had them indicate the motives for listening to each song. "It helps me to relax and stop thinking about things" was the most used motive, followed by "It gets me into the right mood." Listening to the lyrics was not a primary motive for preferring a specific song. Thus, mood control seemed to be the most important motive for listening to music for the adolescents (e.g., Thompson, 1990).

Eighteen items assessing motives for listening to or gratifications received from music were included in the present study. It was expected that the music preferences identified by the adolescent subjects will be correlated with several of the motivations listed, specifically, those related to atmosphere creation and mood control. It was also expected that several of the motive statements would be related to a number of the personality dimensions.

Personality

In each of the studies relating motives for listening to and preferences for music, a basic question is left unanswered: What are the underlying traits which influence young listeners to use such motives for listening to music (e.g., "It helps me to stop thinking about certain things," "The words express how I feel")? Messarias (1977) criticized the use of such self-reported gratification measures, stating that these measures require subjects to use self-awareness and analytical abilities that they simply may not possess. The interpretation of these motives may, in part, be illuminated by examining and comparing the identified motives for listening with specific personality characteristics which appear related to particular motives.

Empirical research examining the relationship between personality and music preference began approximately 40 years ago. Cattell and his associates (Cattell & Anderson, 1953; Cattell & Saunders, 1954) first asked this question: "Is there a tendancy for preferences for certain kinds of music to be systematically related to the kinds of personality structure?" (Cattell et al., 1954; p. 4). In measuring personality and behavior disorders and music preferences, Cattell and his researchers (Cattell et al., 1953) hypothesized that illogical aesthetic reactions differentiate psychotics and paranoids from normals and alcoholics. They tested 157 normal subjects and 98 clinical subjects using the Sixteen Personality Factor Questionnaire (16PF) and a music preference test. Their results indicated several relationships between music variables (derived from loadings based on several songs) and factors from the 16PF. The normal subjects who were dominant, self-sufficient, and tough-minded preferred music characterized as popular, jazz-like, rhythmic, fast, and joyful, while subjects who revealed paranoid tendancies and nervous tension preferred classical, sentimental, and introspective music. On the other hand, the psychotic group

was found to prefer music that is slow and simple, while the manic group preferred fast, exhilarating, and stimulating music. The present study attempted to assess such relationships using only a non-clinical population of adolescents.

Hahn (1954) investigated the relationship between music preference and personality by comparing the clinical personality assessments of 12 students with their musical preferences. Similar to Cattell's research, he found that personality was reflected in an individual's music choice. He concluded that a large degree of idiosyncratic behavior could be reflected in such expressed music preferences. These early studies represent some of the very few studies within the scientific literature which utilize complete personality inventories.

Keston and Pinto (1955) conducted a comprehensive study examining several possible factors influencing music preference. The subjects were required to rank their preferences for music selections, identify music composers, complete the Heston Personal Adjustment Inventory (measuring thinking introversion, social extroversion, and masculinity/femininity), identify preferences for swing or classical music, and reveal degree of musical training. There were two main results of this study: (1) Intellectual introversion, music recognition, and musical training were related to a preference for classical music; and (2) intelligence, social extroversion, sex, age, and masculinity/femininity were unrelated to music preference.

With the introduction of television and the sweeping speculation regarding its impact on the viewer, research pertaining to music preference and person variables waned during the 1960's and early 1970's. Some studies in the mid-1960's (e.g., Byrne & Sheffield, 1965; Burke & Grinder, 1966), however, did look at specific personality variables (such as repressors and sensitizers) and their relation to sexually arousing stimuli, including music. For example,

Burke et al. (1966) explored whether personality characteristics are associated with preferences for different lyric themes. They found that teenagers who had few friends, limited dates, and low involvement in extracurricular activities preferred listening to music which communicated themes of loneliness, adoration, love-life, and independence. In addition, grade-point average, study time, and academic aspirations were all negatively correlated with time spent listening to music.

In an attempt to measure the influence of personality on emotional experience while listening to music, Nielzen and Cesarec (1981) played seven pieces of music for 50 subjects between the ages of 19 and 51 years old. The subjects were then required to judge their preference for the pieces they heard, as well as complete the Cesarec-Marke Personality Scheme measuring 11 psychogenic needs. They found several significant relationships between personality and emotional experiences of music: (1) Subjects who rated the music as gay or happy also had a low need for defence of status, low anxiety, and a high need of dominance; (2) subjects who demonstrated a high affiliation need rated music as more tense; (3) subjects with high neurotic self assertion rated all the music as less attractive; (4) subjects with low need of companionship/friendship experienced the music as more relaxed; and (5) subjects with a high need for achievement and high need for autonomy experienced gaeity and gloom in the music in a less extreme way. The researchers found that many interactions existed among the variables tested; thus, no single personality trait seemed to influence the music's emotional meaning for listeners.

Glasgow and her colleagues (Glasgow, Cartier & Wilson, 1985) assessed the influence of conservatism and sensation-seeking on preferences for music varying along the dimensions of simplicity/complexity and

familiarity/unfamiliarity. Forty-two subjects between the ages of 18 and 69 years old listened to eight pieces of classical music and then were asked to indicate their enjoyment by rating it on a 7-point scale. The subjects then completed the Wilson-Patterson Attitude Inventory (Wilson, 1975) and the Sensation Seeking Scale - Form IV (Zuckerman, 1979). The researchers found that there was no difference between conservative and liberals in prefering simple or complex music. Findings approaching significance were found for conservative subjects who preferred simple and familiar music. The authors interpreted these findings as indicating that the degree of stimulation that is optimal for a given individual may depend partly on his/her personality, with conservatism being a relevant factor.

Litle and Zuckerman (1986) criticized Glasgow's et al. (1985) study for their use of only classical music and the improper use of the Sensation Seeking Scale. They devised a music preference scale made up of 60 musical preference categories (e.g., Rock, Classical, Electronic, Jazz, Soul/Rhythm and Blues, Popular, Country and Western, Folk/Ethnic, Religious, Broadway, TV, Soundtrack) and compared 82 university subjects' preferences with their subscale scores (Thrill and Adventure Seeking, Disinhibition, Experience Seeking, and Boredom Susceptibility) on the Sensation Seeking Scale - Form V (Zuckerman, Eysenck, and Eysenck, 1978). Several significant relationships were found: (1) Total Sensation Seeking Scale (SSS) score was significantly correlated with preferences for Hard Rock (r=.34), Soft Rock (r=.34), Classic Rock (r=.23), and Soundtrack music (r=-.23); (2) Thrill and Adventure Seeking was correlated with preferences for Folk (r=.35), Classical (r=.26), and Soft Rock (r=.23) music; (3) Experience Seeking was correlated with preferences for Folk (r=.34), Classical (r=.29), Hard Rock (r=.38), and Soft Rock (r=.24) music; (4) Disinhibition was correlated with preferences for Hard Rock (r=.32), Soft Rock

(r=.24), Religious (r=-.31), and Soundtrack (r=-.23) music; (5) Boredom Susceptibility was correlated with preferences for Soft Rock (r=.23); and (6) intensity of music involvement (e.g., importance in one's life, time spent listening) was correlated with Total SSS score (r=.28), Thrill and Adventure Seeking (r=.25), Experience Seeking (r=.38), but not with Disinhibition and Boredom Susceptibility. These results suggest that high sensation seekers (particularly those high on the Disinhibition subscale) like rock music, possibly because they enjoy focussing on the intensity of the sound. Thus, it appears that certain types of music provide a vehicle for satisfying sensation seekers' need for stimulation through arousing them and involving them in new experiences. Such an interpretation seems to complement the findings of McIlwraith and Josephson (1985), who found that subjects preferring "heavier music" had higher levels of hostile-guilty-failure fantasies. This high level of unpleasant fantasy rumination was interpreted to represent the need for external stimulation. Thus, these results also suggest that personality traits may underly preferences for specific styles of music.

Several different personality dimensions were investigated by Hansen and Hansen (1990) in relation to preferences for Heavy Metal and Punk Rock music. Ninety-six subjects, aged 18 to 25, were asked to complete a questionnaire measuring four personality dimensions on a 6-point Likert scale: Sexism, acceptance of antisocial behavior, rejection of authority, and enjoyment of cognitive endeavors. They were then asked to indicate their preferences for Pop Rock, Punk, or Heavy Metal music and the amount of time spent each week listening to each kind of music on records/tapes/CDs, radio, and television. Subjects who preferred Heavy Metal music were found to be more hypersexual, showed less respect for women, showed greater antisocial interpersonal behavior, and had a lower need for cognition than nonfans. Punk Rock fans

were found to be less accepting of authority than nonfans. With regards to several attitudes related to these personality dimensions, Heavy Metal fans revealed a higher consensus for the use of both cocaine and marijuana, less concensus for virginity among young people, a lower incidence of date rape, higher estimates of satanic beliefs in others, and a higher incidence of taking parents' cars without permission than nonfans. Those persons who enjoyed Punk Rock music showed a lower consensus for satanic beliefs, but higher consensus for vandalism, weapons use, jail, crime, shoplifing, and traffic violations than nonfans. Discrete liking for Punk Rock music (that is, not liking Heavy Metal) appeared to be the marker of particularly extreme estimates of antisocial behavior. The researchers interpreted such findings to mean that young people gravitate toward Heavy Metal because they possess attributes that attract them to particular aspects of the music. They also suggested that frequent exposure to such music may then increase the influence of other aspects of the music toward which the individual may heretofore not have been predisposed. These findings seem to support the contention by Radocy and Boyle (1979) that expressed musical preferences can be used to assess personality through examining deviations from mainstream population trends regarding music choices.

There are some problems in the research assessing personality and music preferences. First, many of the studies reviewed did not use standardized personality measures in assessing traits (e.g., Keston et al., 1955; Burke et al., 1966; Hansen et al., 1990). Both the reliability and validity of personality scales decline when only portions of the measure are used, and this fact must be considered when examining the findings of these studies. Second, several studies failed to use the population that is most often identified with the pop music phenomenon, adolescents (e.g., Nielzen et al., 1981; Glasgow et al.,

1985; Litle et al., 1986; Hansen et al., 1990); thus, any conclusions drawn from their findings may not be readily generalizable to adolescents. Finally, Zuckerman et al. (1986) was one of the few researchers to supply subjects with a sufficient number of music styles to use in identifying their preferences, especially styles applicable to adolescents. Questionnaires that provide a limited number of music styles from which to choose (e.g., Hansen et al., 1990) may force subjects to indicate a music style that does not accurately represent their true preference. The present study attempted to remedy these limitations by using a personality measure standardized with adolescents (Millon Adolescent Personality Inventory), two separate age groups of adolescents (ages 13-14 and 16-17), and a comprehensive list of music categories and styles to which adolescents are exposed as well as a variety of measures assessing their music preferences.

In the present study, several relationships between music preferences and adolescents' personality were expected: (1) Subjects who indicate concerns regarding introversion and peer security, but whose family rapport is adequate, should demonstrate preferences for more "mainstream" styles of music (i.e., Pop, House, Rap); and (2) the more problems indicated by the adolescent pertaining to impulse control, sexual acceptance, respect for others, societal conformity, scholastic achievement, and academic confidence, the greater the preference for "heavier" forms of rock music (i.e., Heavy Metal, Rock).

Additional Variables Influencing Music Listening and Preferences

Age and Music Preferences

Any attempt to examine adolescents' involvement with pop music would be incomplete without consideration of the impact of age on time spent

listening, music style preferences, and motives for listening to music. Although a few studies have found age to have a negligible impact on music preference (e.g., Glasgow et al., 1985; Keston et al., 1955), the majority of research has found overwhelming evidence for the effect of age on music appreciation and involvement (e.g., Christenson & Lindlof, 1983; Dixon, 1979). Christenson and DeBenèdittis (1986) surveyed 105 children over the span of Grades 1-5 regarding their use of music, and found several differences between younger and older children in their use of radio. For example, they found that (a) 42% of children in Grades 1-3 had a radio in their rooms, while 68% of 4th and 5th graders did; (b) 30% of children in Grades 1-4 listened to the radio the night before the assessment, while 55% of the 5th graders did so; and (c) 42% of children in Grades 4 and 5 reported listening to the radio "everyday or most days," while only 20% of 1st, 2nd, and 3rd graders reported doing so. Finally, 75% of 5th graders reported listening to the radio alone, while only 15% of the children in Grade 1 did. The results of this survey suggested that the importance of radio increases over the years, especially between the 4th and 5th grades.

In addition to an increase in the amount of time spent listening to the radio (Christenson et al., 1986) and to music in general (Larson, Kubey & Coletti, 1989), there appears to be a corresponding change in overt musical preferences with advancing grade levels. Radocy and Boyle (1979) have summed up the shift in preferences very succinctly: First, second, and third graders generally will listen to brief excerpts of a variety of musical styles without undue protest; however, in the fourth grade and up, students will cover their ears, cringe, and look around to see if their peers are doing the same when the music is other than the preferred rock music. Greer, Dorow, and Randall (1974) compared the music listening preferences (Rock, Non-rock, and

white noise) of subjects from ECS to Grade 6. The subjects were allowed to choose which music they preferred, and the listening times for each excerpt were compared at the end of the session. Their results, too, showed that there is an increase in Rock listening time with a rise in grade levels, particularly between the 3rd and 4th grades.

Music preferences within the general category of pop/rock also become differentiated as the listener advances in age. Thompson (1990) pointed out that between middle to late grade school, a gravitation towards mainstream pop music occurs, while the years between early adolescence and college age is a time in which the listeners' music tastes become more differentiated. As example of this trend, Tanner (1981) found that the interest in Progressive Rock music increased more in the senior high age group than in the junior high sample tested. Fox and Wince (1975) found that university students of varying ages differed on four out the five musical taste factors as a function of age: (1) Popular Hits and Rock/Protest music were preferred more by younger students; and (2) Folk and Country/Western music was preferred more by older students. Nielzen and Cesarec (1981) found that the older adult subjects in their study appreciated Classical music more than the younger adult subjects.

In the present study, it was expected that there would be significant differences between the junior high and senior high students in their preferences for musical groups/artists, music styles, and in the amount of time spent listening to music. Specifically, junior high subjects were expected to indicate a greater preference for mainstream pop music (e.g., Teen Pop, Rap) than the senior high students, who may be more eclectic in their tastes, and the older subjects were expected to report higher daily estimates of time spent listening to music than the younger subjects.

Age and Motives for Listening

The literature also suggests that age differences may exist in the motives for preferring one style of music over the others. Boyle and his colleagues (Boyle et al., 1981) found significant age differences on seven of the 11 variables influencing the music preferences of subjects in Grades 7 through college. When subjects were asked to estimate the importance of certain factors in influencing their preferences for their three favourite songs, the following results were found: For the younger subjects (Grades 7 and 9), rhythm, peer influence, danceability, and hearing the song on the radio were important factors influencing their preferences; for the older subjects (Grade 11 and college age), melody, mood, and instruments were the factors contributing the most to preferences for certain songs.

These findings seem to support those of Gantz et al. (1978), who found that high school and college age subjects reported a greater frequency of gratifications related to both mood and lyrics as opposed to younger subjects. Christenson and Lindlof (1983) reported that young adolescents determine their preferences as a function of the sound or the beat, and that the mood portrayed in the music only gains importance with increasing age. Indeed, Toohey (1982) compared adolescents' and college students' views of Rock music and found that adolescents perceive less influence of the lyrics on social values than did the university age subjects. Further evidence for this age-related trend was demonstrated by Leming (1987); he found that the older subjects (age 15) in his study were more likely to say that certain songs had previously influenced their thoughts than the younger subjects (age 11).

Several authors (e.g., Greenfield, Bruzzone, Koyamatsu, Satuloff, Nixon, Brodie & Kingsdale, 1987; Prinsky & Rosenbaum, 1983) have postulated the notion that the potential impact of lyrics on adolescents is limited by their

knowledge, experience, and literary abilities, thus influencing their music preferences in general. Schulten (1987) assessed the influence of several factors on music preference; age was the most stable predictor of music preference. In asking the subjects to describe the reasons for their preferences, the older subjects described their own music preference development as a chain, continuously integrating new musical experiences into their music preference. The author concluded that age may represent an abbreviation for the sum of all factors which have an effect on listeners.

In the present study, it was predicted that the reasons for listening to music and for preferring a particular musical group/artist or music styles would differ for junior high and senior high subjects. In particular, older subjects were expected to identify reasons for listening to music related to mood and lyrics more than the younger subjects. Younger subjects' reasons for preferring a musical group/artist and styles were expected to reflect the importance of rhythm, radio exposure, and peer influence, while the older subjects' reasons would pertain more to melody and instruments.

Gender and Music Preference

Several researchers have suggested that preferences for different styles of music are linked to gender (e.g., Fox et al., 1975; Thompson, 1990); other researchers find little evidence that gender plays a role (Hansen & Hansen, 1990; Keston et al., 1955; Schulten, 1987). Nevertheless, the majority of research in this area appears to indicate a strong and stable relationship between gender and responses to music, musical involvement, and music style preference.

Several studies have shown that music is generally a more emotional experience for women. Beardslee and Fogelson (1958) reported that sexual stimulation from the voice and music has a greater effect on women than on

men. Frith (1983) stated that women use music as a way of managing and expressing sexual and emotional tension implicit in a female's role. This notion may account for the finding (Nielzen et al., 1981) that a majority of females perceive more tension in the music they listen to than do males. This difference was assumed to be due to females having a greater culturally conditioned sensitivity for music than males. The results of two studies by Peretti and associates (Peretti, 1975; Peretti & Zweifel, 1983) suggested that the perceived tension in music contributes to female subjects experiencing greater decreases in anxiety level while listening to music compared to their male counterparts; thus, music may serve as an emotional release for females.

There is also evidence that females listen to music more than males. Four separate studies assessing the listening behavior of children (Christenson et al., 1983), early adolescents (Larson et al., 1989), adolescents (Roe, 1985), and university students (Christenson et al., 1988) have found that the female subjects listen to music more than male subjects. It has been estimated that by late adolescence (17-19 years of age), females listen to the radio over 20 hours more per week than males (Decima Research, 1991). Frith (1983) has suggested that females may listen to music more because they spend more time at home than males, although females' use of music in public situations appears to be the same as males'. Males have, however, been found to purchase more music recordings than females (Christenson et al., 1988), possibly due to greater financial resources.

There appears to be considerable consistency in males' and females' preferences for different styles of pop music. Females invariably are found to prefer Mainstream Pop/Top 40/Pop music, with males favouring Rock/Heavy Rock/Hard Rock music (e.g., Christenson et al., 1988; Herberger, 1987; Larson et al., 1989; Roe, 1985; Tanner, 1981). Frith (1983) proposed the terms "teeny-

bop" and "cock-rock" to differentiate female and male music, respectively. He states that such labels represent each of the gender's feelings about the sexual experience; i.e., for females, sex is serious and emotional, while for males, animalistic and superficial. Tanner (1981) expressed similar ideas when he stated that Mainstream music is "conformist in character," while Heavy Rock music represents action against prevailing values for the listener. In addition to gender differences between Mainstream and Rock music preferences, females have also been noted to prefer Folk (Christenson et al., 1988; Fox et al., 1975; Roe, 1985), Classical (Roe, 1985), Rhythm and Blues, Soul, Black Gospel, and Disco (Christenson et al., 1988), while males have been found to prefer Country and Western (Fox et al., 1975), Jazz (Roe, 1985), Heavy Metal, 70's Rock, Southern Rock, Psychedelic Rock, and Blues (Christenson et al., 1988).

Several predictions were made with regards to gender and use of music and music preference. It was expected that males would have purchased or received as gifts more musical recordings than females, while females reported listening to music was expected to be more than their male counterparts. Females were also expected to generally prefer those styles of music related to the mainstream pop music categories, while male subjects would prefer forms of music somehat "harder" in nature.

Gender and Motives for Listening

Male and female pop music listeners have also been shown to differ in the number of motives and the nature of their reasons for listening to specific styles of music. Gantz and his colleagues (Gantz et al., 1978) found that the gratifications received from listening to music were consistently more frequent for females than for males. In their sample, females said that music was used for getting in a particular mood, passing time or relieving boredom, feeling less lonely, thinking about the lyrics, and setting the mood with others more

frequently than did males. Females' use of music for matching and setting moods has also been found by Christenson et al. (1983) to be greater than males' music use. Female subjects in other studies have also indicated that they like to listen to the lyrics (Boyle et al., 1981; Roe, 1985) and use it for dancing (Roe, 1985; Rosenbaum et al., 1987) more than do males. Boyle et al. (1981) found that females place great importance on melody and sentiment, while males base their music preferences on instrumentation and peer influence. Christenson et al. (1988) stated that use of music for different reasons and the different preferences of music styles represents a gender-specific "mapping of music types." They stated that for males, music use and allegiance are central and personal; for females, music use and allegiance are goal-directed and social.

Given this research on gender and motives for listening, several gender differences were expected in the present study. Females' motives for listening to music was expected to focus on mood, lyrics, and danceability more than males' motives. Males' preferences for favourite groups or artists was expected to indicate a preference for instruments and peers to a greater extent than females, while females were expected to identify melody as the most important factor in determining their preferences.

Purpose and Design of Study

The relationship between personality and music preference, which was identified as an influencing factor in both Rösing's (1984) and Leblanc's (1980) models of music preference, is one area of study that has received little attention in the research literature. Given the importance of identity issues to the maturing adolescent, it is somewhat surprising that research focussing on the relationship between a teenager's developing personality structure and

preferences for popular music has been so neglected, especially since young people often look to music to affirm their self-concept and esteem and/or for answers. The purposes of this study were to (a) determine the styles of music adolescents prefer, (b) determine the social, personal, and music-related motives for listening to music and the variables which influence these motives, (c) assess the contribution of the personality of adolescents (internal reality) on their music preference and motives for listening, and (d) assess the interrelationships among age, gender, and involvement with music, music preferences, motives for listening, and personality. Thus, the overall purpose of this study was an attempt to understand the use and importance of music to adolescents, and how this varies according to numerous individual difference variables.

Two instruments, the Millon Adolescent Personality Inventory (1982; MAPI) and the Music Information Questionnaire (MIQ), were employed to provide the data necessary for addressing the purposes. The MIQ was designed by the researcher to provide information in four main areas: (1) Music preference (e.g., favourite group or artist, music style, recording, liking of various music styles and music described by various qualities), (2) demographics (e.g., number of parents and older brothers and sisters, average school grade, and parent's educational level), (3) motives for listening to music (e.g., "To stop thinking about certain things," singer's voice), and (4) music involvement (e.g., music experience and understanding, music importance, amount of time spent listening, souces of music used, and attendance at musical events). The MAPI (1982) assessed the subjects' development in three areas (personality styles, expressed concerns, and behavioral correlates) with 20 scales. The design of the MIQ and the selection of the MAPI matches the requirements necessary for answering the research questions in this study.

CHAPTER III

METHOD

Subjects

Male and female students from two grade levels, Grade 8 (12-14 years old) and Grade 11 (15-19 years old), were recruited from two schools within the Calgary Board of Education, Balmoral Junior High School and Crescent Heights High School, respectively. With the consent of both the school personnel and five classroom teachers, nine classes of students (four high school, five junior high school) were approached by the researcher (author). The purpose and procedures of the research study were explained. Parental Consent Forms (Appendix B) were either sent home with the students (high school) or attached to the students' report cards (junior high) to be signed and returned by students (within one week for senior high students, and two weeks for junior high students). The Parental Consent Form asked parents/guardians for permission to allow their adolescent to participate in a research study and informed them that the teenager would be required to fill out two questionnaires, a personality questionnaire and a music information questionnaire. The time span from the first distribution of Parental Consent Forms to students until the last session of data collection was just over three weeks (April 22 to May 14, 1991).

From a total of 249 Parental Consent Forms distributed to students (144 junior high, 105 senior high), 182 were signed by a parent or guardian and returned to the classroom teacher. At the senior high level, 91 consent forms were signed and returned (87 percent return rate), 90 of which granted permission to participate in the research study (42 males and 48 females). At the junior high level, 91 consent forms were signed and returned (63 percent

return rate), 85 of which granted permission to participate in the research study (36 males and 49 females). Thus, a total of 175 students participated in the research study (78 males and 97 females).

All subjects were full time students at their respective schools. The junior high subjects participated in the study during a class period in which they would normally attend a mandatory Grade 8 Science course (45 minute period). The senior high subjects participated in the research during a mandatory Career And Life Management (CALM) class (65 minute period) that was required for all students in order to receive a Grade 12 Diploma.

Research Instruments

For the purpose of measuring adolescents' personality and music preferences, involvement, and related gratifications, two separate measures were utilized in this research project. Each of the measures will be overviewed in the order that they were presented to the subjects.

Millon Adolescent Personality Inventory (MAPI).

Theodore Millon and his colleagues (Millon, Green, & Meagher, 1982) developed the MAPI to "elucidate and quantify" several personality traits salient during the adolescent years. It was designed to be used by clinical psychologists, school counselors, and other guidance personnel as an aid for identifying a wide range of psychological attributes characteristic of adolescents.

There are several features of the MAPI that distinguish it from other adolescent personality instruments. First, the questions are presented in a language that teenagers use, and deal with matters they can understand and find relevant to their concerns and experiences (Millon et al., 1982, p.1). Second, the MAPI was constructed with enough items to assess and illuminate

accurately a variety of personality traits, psychological concerns, and problematic behaviors, and yet be of sufficient brevity to encourage its use in both school and clinical settings. In addition, both reading level (sixth grade) and vocabulary were established to allow for easy comprehension by the vast majority of teenagers. As a result of these features, the instrument can be completed by most teens in less than 20 minutes with a minimum of resistance. Finally, "the presence of a comprehensive theoretical system undergirding (this) diagnostic instrument significantly increases both its research and clinical utility " (p.1). Thus, the several personality scales incorporated within the inventory are grounded on a comprehensive theory of adolescent personality (Millon, 1981) that may be absent from other scales of this nature.

The MAPI consists of 150 True-False statements from which 20 scales can be derived. The 20 scales contained in the MAPI can be divided into three scale profiles: personality styles, expressed concerns, and behavioral correlates. The higher the score on a particular scale, the greater the probability that the adolescent possesses the personality or clinical trait measured by the scale. Furthermore, the higher the score elevation, the greater the probable intensity or severity of the trait or issue tapped by the scale (Millon, 1982). The following scale descriptions are based on such high scores as described by Millon (1982).

Based on Millon's (1981) theoretical schema, the first eight scales in the computed profile configuration provide what he calls "personality styles." The eight personality styles and example questions are as follows:

1) Introversive, e.g., "I don't depend much on other people for friendship," "A quiet hobby is more fun for me than a party." High scorers tend to keep to themselves, appear rather quiet, colorless, and unemotional, and rarely get emotionally involved with other people.

2) Inhibited, e.g., "If I see a person I know from a distance, I usually try to avoid him," "I seem to have a problem getting along with other teenagers." High scorers tend to be quite shy, detached, isolated, socially ill-at-ease with others, and to avoid close personal contact. Fearing rejection, they do not trust the friendship of others.

3) Cooperative, e.g., "I am a quiet and cooperative person," "I like to follow instructions and do what others expect of me." High scorers tend to be soft-hearted, sentimental, and kindly in relationships with others; however, they are extremely reluctant to assert themselves, avoid taking initiative, and can become overly submissive and dependent.

4) Sociable, e.g., "I have more friends than I can keep up with," "I make friends easily." High scorers are talkative, socially charming, and emotionally expressive, but frequently become overly dramatic and exhibitionistic. They are always looking for new excitements and interesting experiences.

5) Confident, e.g., "I'm sure of my feelings about most things," "I'm pretty sure I know who I am and what I want in life." High scorers tend to be quite confident in their abilities and often act in a self-assurred manner. They are often seen by others as self-centered, arrogant, and egocentric, and tend to take others for granted.

6) Forceful, e.g., "In this world, you either push or get shoved," "I have a strong desire to win any game I play with others." High scorers are strong-willed and tough-minded, and tend to lead and dominate others. They frequently question the ability of others, can be blunt and unkind, and tend to be impatient with the problems or weaknesses of others.

7) Respectful, e.g., "I do my very best not to hurt people's feelings," "It is very important that children learn to obey their parents." High scorers are very serious-minded, efficient, and rule-conscious people who try to do the "right"

and "proper" things. They live their lives in a very orderly and planned fashion, and avoid unpredictable and unexpected situations.

8) Sensitive, e.g., "I get so touchy that I can't talk about certain things," "Other people my age seem more sure than I am of who they are and what they want." High scorers tend to be discontented and pessimistic, and their behavior is somewhat unpredictable. These people often feel guilt about their moodiness, but fail to change their behavior.

The next eight scales focus upon feelings and attitudes adolescents may experience about issues that tend to concern them. These "expressed concerns" scales address the phenomenological attitudes teenagers have regarding the following developmental problems:

9) Self-Concept, e.g., "I don't seem to know what I want out of life," "I often doubt whether people are really interested in what I am saying to them." High scorers do not have a clear idea of who they are, where they are going, or how they will get there. They are caught somewhere in between an unexamined childhood and an adult identity.

10) Personal Esteem, e.g., "I guess I'm a complainer who expects the worst to happen," "I sometimes feel I am in this world all alone." A high scorer on this scale sees a large discrepancy between what he is and what he should be. The comparison of self against ideals are far beyond what he previously considered, and this realization can result in dissatisfaction with self.

11) Body Comfort, e.g., "I'd like to trade bodies with someone else," "I don't like looking at myself in the mirror." A high scorer sees his wishes and dreams regarding appearance in sharp contrast to his emerging physical self, and finds discomfort with his bodily maturation and other changes. Critical self-awareness is fuelled by parental attitudes, personal fears, and peer reactions.

12) Sexual Acceptance, e.g., "I don't think I have as much interest in sex as others my age," "I'm pretty immature about sexual matters." High scorers find the task of reconciling learned beliefs with new and strong sexual stirrings that come from within very difficult and confusing. Such youth are dissatisfied with their sexual nature and development of heterosexual relationships.

13) Peer Security, e.g., "I have almost no close ties with others my age," "I very often think I am not wanted by others in a group." High scorers are often plagued with social deficits (e.g., ill-at-ease, timid, nervous) that detract from the growth enhancing rewards of peer approval and diminish self-esteem. As a result, the adolescent does not find acceptance and belonging in relation to his peers.

14) Social Tolerance, e.g., "It is easy for me to take advantage of other people," "I find it hard to feel sorry for people who are always worryied about things." High scorers are interpersonally insensitive (tough, negative, and emotionally insulated) and do not believe or act in a manner that respects the rights of others. There is very little degree of concern expressed by the youth in relation to the difficulties of others.

15) Family Rapport, e.g., "I would rather be almost anyplace but home," "My family is always yelling and fighting." High scorers on this scale tend to see a large discrepancy between their relationship with their family and their perceptions of what they should be. Intense inner struggles and parental reactions towards autonomy are contributing factors.

16) Academic Confidence, e.g., "I've just about given up as far as school is concerned," "I doubt if I'll make much of myself in life." High scorers admit the fear that they are not performing as well as most students do, while they also conclude that they are not performing as well as they should. Such youth do not believe that they have the ability to be successful in academic efforts.

The remaining four empirically derived scales move "from the level of expressed concerns to that of the behavioral or acted upon" (Millon et al., 1982, p.8). He calls these scales "behavioral correlates," reasoning that thoughts and feelings often prompt the individual to act in a manner consonant with his or her inner world of emotions and attitudes. Thus, the following behaviors may be seen as posing serious difficulty for the adolescent:

17) Impulse Control, e.g., "When I don't get my way, I usually lose my temper," "I often do things for no reason other than it might be fun." High scorers on this scale demonstrate their assertiveness in a highly excessive manner. The impulsive behaviors exhibited frequently escalate beyond the tolerance level of both the school and the family.

18) Societal Conformity, e.g., "I do my best to stop anyone from trying to boss me," "If I want to do something, I just do it without thinking of what might happen." High scorers demonstrate self-troubled behaviors among family, friends, and teachers. A central characteristic is impulsivity without caring for, ignoring of, or indifference to societal rules and regulations and the eventual consequences of their neglect.

19) Scholastic Achievement, e.g., "Someone else will probably have to support me when I'm an adult," "I really don't care what I'll do in life." High scorers on this scale usually have average intellectual abilities, are provided with an atmosphere condusive to learning, and fail repeatedly or consistently. Thus, the academic performance of the young person often does not match the academic potential.

20) Attendance Consistency, e.g., "I'd rather just lie around doing nothing than work or go to school," "Lots of kids seem to have it in for me." High scorers on this scale demonstrate repetitive skipping behaviors that stem from

deep causes, and may eventually lead to the permanent disengagement of the student from school.

Measures of reliability and validity for the MAPI were provided (Millon, 1982) by way of testing two separate clinical adolescent populations. The resulting test-retest stability data for these two groups over a five-month period were generally in the mid-70's range, while the one-year reliabilities were somewhat lower (e.g., personality styles scales in the range of .65). As gauged by the Kuder-Richardson Formula 20, internal validity for all the clinical scales was demonstrated to be .74 with a range from .67 to .84. From these results, both stability and consistency figures prove to be more than satisfactory.

Music Information Questionnaire (MIQ)

The MIQ (Appendix C) was constructed by the researcher for the purpose of measuring adolescent involvement with music, identifying motives for listening to music, and determining the favourite music style of each adolescent. The inventory of 84 questions consisted of a combination of previously used research questions (i.e., Boyle et al., 1981; Decima Research, 1991; Finnas, 1987; Roe, 1985) as well as original questions. Thus, the MIQ was designed to support and replicate the findings of previous research, as well as to extend into areas of music involvement not previously assessed, especially the relationships among adolescent music-listening motives, music preferences, and other listening behaviors. There were four sections in the MIQ: Music preference, demographic information, motives for listening, and music involvement They are presented below in the order they appear in the questionnaire.

Music Preference

A majority of the previous studies (e.g., Christenson et al., 1988; Hansen et al., 1991; Litle et al., 1986; Roe, 1885) use single measures of adolescents'

"favourite" styles of music. In the absence of knowing which measure is the most sensitive in assessing adolescents' favourite styles and/or may be most related to the personality styles, expressed concerns, and behavioral correlates of adolescents, the MIQ employed multiple measures of each subject's music preference. Question 1 was used as one measure of music style preference. Each subject was asked to write, in order, his or her three favourite musical groups/artists. Placing this question first in the questionnaire served two purposes: (1) The subjects were given the indication that their answers were not going to be forced-choice options only; and (2) the emphasis on the subjects identifying their favourite musical groups/artists in this first question was contrasted with their preference for a 'music style' in the second measure of music preference.

The second measure involved questions 2 to 24. Subjects were asked to rate their enjoyment of music described by 23 different categories using a Likert scale (from 1 - Not at All to 5 - A Great Deal, or X - Not Familiar). A majority of the music categories used in the MIQ were selected from the very recent Decima Research (1991) survey of Canadian youth. In addition to the 18 listed in that questionnaire (i.e., Country, Dance, Reggae, Rap, Rock Funk, Heavy Metal, Pop, Classical, New Wave, Folk, Teen Pop, Classic Rock, Rhythm and Blues, House, Power Pop, Roots, Hip Hop, and Rock), the MIQ included the music categories of Jazz, New Age, Soundtrack, Gospel/Christian, and Worldbeat. Next to each of the music style categories appeared the names of two groups or individual artists judged to be exemplars of the category. These examples were included in order to clarify the music category and to avoid, to the extent possible, respondents indicating they were not familiar with a genre because of lack of familiarity with a certain label for it. Christenson and Peterson (1988) have aptly called this practice of using labels to describe

different styles of music a "necessary evil," since the boundaries of different styles of music, and especially of pop/rock music, are in constant flux and open to considerable argument from year to year. As opposed to previous studies of music preference (Hansen & Hansen, 1990; Litle & Zuckerman, 1986), but in accordance with the method of Christenson et al. (1988), the MIQ included the option of Not Familiar in order to accurately differentiate such a response from that of Not at All.

For the purposes of the MIQ, the music categories and corresponding exemplar groups or artists were verified and/or updated using the expertise of two individuals responsible for formating the music at Calgary's top-rated teen radio station (AM 106)[1]. To provide another source of validity that the final category list was in fact representative of the music being consumed by the general public (and was, therefore, "popular"), a local nation-wide music store (A & A Records) was contacted to verify that those groups or artists representing the respective categories were top sellers in each music category.

The third measure of music preference (question 25) asked the subjects to list their three favourite kinds of music, using the 23 categories previously listed in questions 2 to 24. Since a person could identify more than one style that he or she liked A Great Deal, this approach to music preference differed from the previous Likert format in that a single favourite style of music could be established that may have been unidentifiable from the results of questions 2 to 24.

The fourth indicator of music preference was assessed by asking the subjects to list the three favourite LPs, tapes, or CDs they would take to a desert island (question 26). This measure was employed in the Decima Research (1991) study, and may serve as an indication of the adolescent's particular devotion to a style or category of music.

The fifth measure of music preference involved questions 27 to 40. Subjects were presented 14 descriptions of music and were asked to rate on a five-point Likert scale (1 - Not at All to 5 - A Great Deal) how much they enjoyed music described by these qualities (e.g., How much do you enjoy music which is . . ."tough and hard," "romantic and dreamy," "loud, played at a great volume"). In studying the reasons why young people misjudge their peers' musical taste, Finnas (1987) creatively used these short descriptions of music in the place of the traditional music categories to measure music preference. Of the original 38 descriptions he used, 13 were found to be highly loaded on two factors: (1) Six of the music characteristics were found to represent the category of "tough, wild, loud, protesting, and rock-oriented music"; (2) seven music characteristics contributed to the second factor, "quiet, contemplative, traditional, and serious music." Questions 27 to 40 represent these 13 music descriptions, with an additional descriptor added ("played with synthesizers") for a total of 14. The present study has designated Finnas' two factors to be called "hard" music and "soft" music, respectively.

Demographic Information

This section (questions 41 to 44) collected information on family characteristics (e.g., number of parents and older siblings at home), present academic standing (e.g., average percentage grade), and an approximation of socio-economic status (e.g., parents' educational level). This demographic information was collected in order to determine their relationship with music involvement, motives for listening to music, and music preferences of adolescents.

Motives for Listening

In order to assess adolescents' motives for listening to music, 18 questions (question 45 to 62) were presented in the MIQ. Twelve of the

questions were developed by Roe (1985) for identifying how often particular motives (using a Likert scale from 1 - Never to 5 - Very Often) play a role in influencing adolescents listening to music (e.g., "To help get me in a particular mood," "To help pass the time," "To listen to the words"). The scale has also been used by several other investigators (e.g., Gantz et al., 1978; Rosenbaum et al., 1987), and has been factor analyzed into three common factors: Atmosphere creation and mood control (#'s 46, 49, 50, and 54; e.g., "To dance," "To create a good atmosphere when I am with others"), silence filling and passing the time (#'s 47, 51, 53, and 56; e.g., "To feel less lonely," "To fill the silence when no one else is talking"), and attention to lyrics (#'s 45, 48, 52, and 55; e.g., "To help me relax," "To express how I feel"). Six additional questions (questions 57 to 62; e.g., "To get excited," "To be entertained") were developed by the researcher for the purpose of tapping the degree to which music listening satisfies an "emotional attunement" motive for the listener. Emotional attunement refers to the matching of a listener's emotions or feelings to the mood or message being communicated by the music.

Another method for assessing motives for listening to music is by focussing on several aspects directly related to music, and asking adolescents whether they believe these aspects are important in their music listening. Questions 63 to 71 of the MIQ asked the subjects to rate the importance of each of nine music-related variables in influencing their preference for a music group or artist on a Likert scale (from 1 - Not Important to 5 - Very Important). The question was presented as follows: "How important are the following items in determining your preference for a musical group or artist?" Five of the items had been used by Boyle et al. (1981), i.e., melody, rhythm, what your friends like, instruments, and what you've heard on the radio; four were added by the

researcher, i.e., singer's voice, harmony, what the group or artists looks like, and music that irritates your parents.

Music Involvement

The relationship between music preferences, formal experience with music (Boyle et al., 1981; Litle et al., 1986), and amount of time spent listening to music (Christenson et al., 1986; Christenson et al., 1988; Finnas, 1987; Gantz et al., 1978; Roe, 1985) has been the topic of numerous studies. Questions 72 to 83 on the MIQ asked subjects questions related to these factors. Questions 72 to 75 asked if the subjects presently play an instrument or sing, the total number of years of lessons and/or participation in an organized musical group, and their general level of understanding of music (identified on a scale from 1 - I don't understand anything about music to 5 - I understand almost all aspects of music).

Question 76 asked how important music has been in the adolescents' life in the past three years, and questions 77 to 79 attempted to quantify this importance by asking how much they listened to music during weekdays and weekends, whether they would listen more if able to, and how much they listened to music the previous day (a weekday). The subjects were asked to answer these last three questions in minutes (as opposed to hours), with the rationale being that any time under one hour could also be analyzed meaningfully. Consistent with Christenson et al. (1986), the latter question (question 79) referred to a specific time period (yesterday) for an estimate of time spent listening as opposed to the global estimates usually requested in other studies (e.g., Decima Research, 1991).

Finally, questions 80 to 83 asked the subjects to indicate their involvement with more specific behaviors related to music listening. First, subjects were asked to rank (from high to low) their use of four sources of music

(record player, cassette player, compact disc player, and radio), with 1 representing the source they used the most down to 4 being the source they used the least. The next two questions asked subjects to estimate how many records, tapes, and CDs they purchased or received as gifts in the last year (question 81), or taped in the past year (question 82). Question 83 asked the subjects to indicate how many concerts, dances, and school-related concerts they attended in the past year. Answers to these last four questions were assumed to indicate the subjects' degree of music involvement in addition to the information gathered regarding time spent listening to music.

Procedure

The two public secondary schools used in the study, Balmoral Junior High School and Crescent Heights High School, were selected for participation because of the flexibility of their classroom schedules which accommodated subject testing during regular class periods. With the approval of these schools, Parental Consent Forms (Appendix B) were distributed to each potential subject at least one week prior to the date of testing. These consent forms explained the purpose of the research project and the expectations of those students permitted to participate.

The distribution of the parental consent forms to prospective subjects differed slightly for the junior high (Grade 8) and senior high school (Grade 11) subjects. Ten days prior to the assessment date, each of the four Grade 11 classes used in the study were visited by the researcher. At this time, the researcher introduced himself, briefly outlined the purpose and procedure of the study, and distributed and explained the Parental Consent Form. For the purpose of maximizing the return of the consent forms, it was also announced that those returning a consent form signed by a parent/guardian (regardless of

whether or not they were permitted to participate in the study) would have their names entered in a draw for a free record, tape, or compact disc of their choice. The students were told to return the consent forms as soon as possible, up to and including the morning of the testing date. Each teacher was provided with an envelope for holding the returned consent forms.

The procedure for distributing consent forms to the Grade 8 students differed from that of the Grade 11 students. The junior high school used for data collection did not have a high consent form return rate in the past, particularly when the method of handing out consent forms to the students in class was utilized. As an alternative, it was decided by the school's principal that the optimal procedure for parents to receive, sign, and return the consent forms to the school would likely be by way of attaching the consent forms directly to the report cards to be sent home with each Grade 8 student. In this way, the junior high students were not burdened with any extra responsibility beyond what would normally be expected in taking their report cards home and returning them one week later. Thus, the Parental Consent Forms were sent home with the report cards 18 days prior to the date of data collection. The home room teachers were encouraged to frequently remind the students to return their report cards and the forms as soon as possible. In order to be comparable to the Grade 11 students, each teacher provided students with information regarding the purpose and procedure of the study; they also announced the draw that would take place for those students returning a consent form. Finally, each home room teacher was provided with an envelope to be used in holding the consent forms returned with the report cards.

Experimental conditions and procedures for the remainder of the study were identical for all subjects in both grade levels; i.e., all subjects were administered identical questionnaires in the same order preceded by the same

instructions and information. The data collection at both schools occurred during the period of May 1 to May 14, 1991. On the day of testing, the researcher entered the classroom at the beginning of the class period, and with the assistance of the teacher, collected any consent forms in addition to those already returned to the teacher. Once the class was settled, the names of those students who were eligible to participate in the study were read aloud. Those students who did not return a consent form or did not receive parental consent to participate were directed out of the class by the teacher and given alternative activities for the remainder of the period. The subjects who remained in the classroom were given a brief review of the study and its purposes. They were told that their participation in this study would contribute to understanding the relationship that may exist between a person's personality and his or her preference for certain kinds of music. In doing so, they would be asked to complete two questionnaires, a personality questionnaire and a music information questionnaire, within the remaining class period. The personality questionnaire, they were told, would ask them questions about themselves, while the music questionnaire would ask them about the music they liked and disliked, whom they listened to, and how much they listened to music.

Following this introduction, the MAPI, the MIQ, and pencils with erasures were distributed to each subject. The group was told to refrain from filling in any information until instructions were given. It was decided that the personality measure should precede the presentation of the music questionnaire for two reasons: First, and most importantly, because the personality measure was machine-scored, nonresponses due to time constraints could better be dealt with on the music questionnaire; and second, the notion was considered that should the adolescent subject attempt to deliberately match his or her answers to both questionnaires, such an action would be made more difficult by

presenting the personality measure first. In keeping with the promise of anonymity and confidentiality, it was emphasized that no names were to be entered on the front cover of the MAPI. The researcher directed the subjects' attention to the bottom right-hand corner of the MAPI in which two headings, age and sex, had been highlighted in green. Subjects were asked to write their ages in the appropriate boxes and fill in the circles representing the two digits for age, and then fill in the circles corresponding to their gender, either male or female. Following the completion of this identification section, an abbreviated version of the directions printed on the front of the MAPI, as well as additional instructions, were read aloud to the subjects. These were as follows:

1. Using the pencil provided, make a heavy, dark mark when filling in the circles.

2. If you make a mistake or change your mind, erase the mark fully and then fill in the correct circle.

3. The following pages (MAPI) contain a list of statements that young people use to describe themselves. They are printed here to help you in describing your feelings and attitudes. Try to be as honest and serious as you can in marking the statements.

4. Do not be concerned that a few of the statements will seem unusual to you; they are included to help teenagers with many types of problems. When you agree with a statement or decide that it describes you, fill in the T-circle to mark it true. If you disagree with the statement or decide that it does not describe you, fill in the F-circle to mark it false. Try to mark every statement even if you are not sure of your choice. If you have tried your best and still cannot decide, mark the F-circle for false (this is in accordance with the test manual).

5. There is no time limit to complete the MAPI, but it should take you about 20 minutes to complete. Once you have finished the MAPI, go on to complete the MIQ, which should take you about 15 minutes to complete.

6. Remember that all answers are confidential. Your teachers, counselors, or principal will not see your individual answers to any of the questions.

Following these instructions, questions were fielded from the subjects with regards to the procedure or the study in general. A final word of encouragement to answer the questions as honestly as possible was issued. They were also prompted to raise their hands and ask for assistance if there were any questions they could not understand. The subjects were then told to begin by opening the MAPI booklet to the first page of questions.

From this point on (until the end of the class period or until all subjects had completed both questionnaires), the subjects were left to work at their own pace in completing the questionnaires. All classes were informed of the time periodically throughout the testing session. For example, 10 minutes after the tests were begun, the subjects were told they should be near the half-way point of the MAPI; at the 20 minute point, they were told they should be nearing the end of the MAPI and starting the MIQ. Finally, all classes were notified when there were 10 minutes left in the class period.

When it was noted that a few of the subjects had completed both questionnaires, it was announced that the remaining subjects could raise their hands and the MAPI, MIQ, and pencils would be picked up. Once all of the materials had been collected, the researcher closed the session by stating that the winner of the free record, tape, or CD would be announced a week later, and that a general outline of the expected results would be available before the end of the school year (Appendix D). The subjects were thanked for their

participation, and if time permitted, questions or comments regarding the study were answered.

Administration time for both of the questionnaires for the Grade 11 subjects averaged 40 minutes; whereas for the Grade 8 subjects, it was 36 minutes. The shorter administration time for the younger students could be attributed to the fact that all the subjects handed in the questionnaires when the bell rang at the end of the period, whereas the completion time for the older subjects was calculated when the last person handed in the questionnaires.

[1]Special thanks to Karen Cooper and Jacquie Donaldson (AM 106).

CHAPTER IV

RESULTS

Development of the Data File

Millon Adolescent Personality Inventory (MAPI)

Answer sheets from the Millon Adolescent Personality Inventory (MAPI) were machine-scored by the testing service (National Computer Systems). A clinical report was produced for each subject; it provided for each subject (a) a profile of the raw and Base Rate scores for each of the 20 personality dimensions, and (b) an estimate of the test's reliability and validity for each subject. The Base Rate scores (determined by known personality trait prevalence data and calculated in terms of optimal valid-positive and false-positive ratios) for each of the 20 personality dimensions and designations of reliability and validity of each MAPI report were entered into the data file for subsequent analysis. These reliability/validity estimates and the number of reports for each (in parentheses) are as follows: Reliable and valid (n=117); questionable reliability (n=34); questionable validity (n=11); questionable reliability and validity (n=0); invalid report (n=9); unreliable report (n=2); and no report (n=2).

Music Information Questionnaire (MIQ)

The responses to the Music Information Questionnaire (MIQ) were converted to numerical values and entered into the data file. A majority of the questions were easily coded, since Likert scales were used (e.g., "How much do you enjoy music which is . . . " [Circle the number that best describes your answer]) or numerical answers were requested (e.g., "In the past year, approximately how many records, tapes, and CDs have you purchased or received as gifts?"). Four questions on the MIQ, however, required that the

written responses be translated into numerical values. Question 25, which asked subjects to list their three favourite kinds of music (using the categories listed), required the responses to be numerically coded by the researcher according to the numbers assigned to the music style categories (i.e., from MIQ #s 2 to 24). Question 1 (which asked the subjects to list their three favourite musical groups or artists) and Question 26 (which asked subjects to list three albums/tapes or CDs, by the title and name of group, they would take to a desert island) were ascribed the same numerical values (from 2 to 24) according to the style represented by the judgements of two experts from a local teen-oriented radio station (AM 106). Finally, the second part of Question 72 (which asked for the names of instruments played by the subjects) required the coding of responses according to several classes of musical instruments: 1 - strings, 2 - percussion, 3 - keyboard, 4 - brass, 5 - woodwind, and 6 - voice.

Interrater Reliability

There were 119 individual data points per subjects on the MIQ. Interrater reliability was determined for each of the major measures on the MIQ by sampling the individual data points within the major measures and comparing the codings of two independent coders. A total of 28 subjects were randomly selected for this comparison. The following is a summary of the reliability for those measures. For the 25 variables on the Music Styles Scale, interrater reliability was found to be 100 percent; for the 18 variables on the Music Qualities Scale, interrater reliability was found to be 100 percent ; for the five variables on the scale measuring favourite style of music, interrater reliability was found to be 98 percent; for the five variables on the scale measuring favourite music group or artist, interrater reliability was found to be 96 percent; and for the five variables on the scale measuring favourite musical recording, interrater reliabilty was found to be 96 percent. It was determined that the interrater reliability for the four variables on

the demographic measure was 97 percent. Motives for listening to music (19 variables) and the corresponding factor scores (four variables) each had reliability designations of 99 percent, while music-related factors influencing music listening (10 variables) were found to have 100 percent interrater reliability. Finally, it was found that interrater reliability for the 24 variables on the music involvement items was 91 percent.

Music Preference Measures

In order to determine the music preferences of adolescents, five indices were developed. The first involved examining the Music Styles Scale (MIQ questions 2-24) which asked subjects to rate their liking of each of 23 different kinds of music on a 5-point Likert scale. Thus, the degree of liking of each kind provided one index. Three indices (described below) were also developed by performing a Principal Components Factor Analysis on this 23-item scale in order to determine which of the music categories shared commonalities according to this sample. The program used in this factor analysis (StatView 512+) deleted subjects from the analysis if they failed to respond to any question or responded that they were Not Familiar (entered as a non-response) with the particular music style. In order to maximize the number of subjects included in the factor analysis, it was decided that only those kinds of music which received a response rate of 90% or greater would be used in the analysis; the music styles of Reggae, New Age, Rhythm and Blues, Gospel/Christian, Worldbeat, and Jazz were deleted from this analysis since many subjects were unfamiliar with these six categories. Thus, the factor analysis included 17 styles of music and utilized 126 subjects.

An oblique rotation revealed five factors with eigenvalues at or very near 1. These five factors accounted for 65% of the sampling variance. The five factors, factor group names, and their music style correlates are as follows:

Factor 1 (21% of variance): *Teen Pop* - Dance, Rap, Teen Pop, House, and Hip Hop ;

Factor 2 (20% of variance): *Heavy Pop* - Heavy Metal, Power Pop, and Rock;

Factor 3 (11% of variance): *Pop* - Pop and Soundtracks;

Factor 4 (7% of variance): *Traditional Pop* - Country, Classical, Folk, and Classic Rock; and

Factor 5 (6% of variance): *Alternative Pop* - Rock Funk, New Wave, and Roots.

These five factors were then used to categorize the music preference for the three questions which asked subjects to list their favourite music groups or artists (MIQ #1), their favourite kinds of music (MIQ #25), and their favourite albums/tapes or CDs (MIQ #26). Only the subjects' first choice listed for each of these questions was used in assigning a factor score for that measure. For example, if a subject listed that his or her favourite style of music was Soundtracks, the person was then attributed a value of 3 representing the third factor *Pop*; if the subject responded that his or her favourite group was "C + C Music Factory," this group was judged by the two expert raters to best represent the House music style and was given a value of 1 to represent the first factor, *Teen Pop*. This method was exercised until every "favourite" group, music style, and music recording reported by the subjects was assigned a factor value representing one of these five factors. Thus, these three questions and the assigned categories to the answers constituted three additional indices of music preference.

The final measure of music preference involved examining subjects' enjoyment of music described by various qualities (MIQ #s 27-40). Finnas (1987) factor analyzed the responses of 302 9th graders to these same music

descriptors and found that they fit into two factors: (1) Those who preferred "contemplative, serious, and traditional music," and (2) those who preferred "tough, protesting, and rock-oriented music." In the present study these two factors were renamed "hard" and "soft" music, respectively. Using the Finnas' factors, the Likert scores for the questionnaire items representing each factor were added together, with each sum then being divided by the number of questions constituting that factor. Thus, a mean for each factor was determined. The difference between these two mean scores was then used to indicate whether a subject had a preference for either "hard" or "soft" music. A difference score of less than .5 between the means resulted in the subject being categorized as having "no preference." To illustrate, if the means of a subject's "soft" and "hard" factor questions were 3.17 and 3.86, respectively, this subject would be categorized as having a preference for "hard" music. If, however, a subject's "hard" and "soft" means were 3.83 and 3.43, respectively, the subject would be categorized as having "no preference." Thus, each subject received a single preference categorization using the Finnas' factors:

Category 1 - representing a "soft" music style (representing Finnas' first factor);

Category 2 - representing a "hard" music style (representing Finnas' second factor); and

Category 3 - "no (or equal) preference" for both styles (if the difference between the means was <.5).

The result of these initial determinations was the entry into the data file of five separate measures of music preference for each subject: (1) Twenty-three individual scales representing preferences for specific styles or kinds of music (Music Styles Scale); (2) a score representing a subject's favourite group or artist; (3) a score representing a subject's favourite music style; (4) a score

representing a subject's favourite album/tape/CD; and (5) a score indicating his or her preference for "soft" or "hard" music (Music Qualities Scale).

Description of the Sample

Demographics

At the senior high level, 42 males and 48 females participated in the research study (n=90); at the junior high level, 36 males and 49 females participated (n=85). Thus, a total of 175 students participated in the research study (78 males and 97 females).

Seventy-nine percent of the subjects in the study reported that they reside in two-parent families, with 19% living in one-parent families. There were no significant differences between males and females or junior and senior high subjects on this measure. Fifty-six percent of the subjects reported having no older brothers or sisters presently living in their families, with 29% having one older brother or sister and 15% of the sample having two or more older siblings. No significant grade or gender differences were found.

The average academic grade in school was reported by subjects to be very near the 70% mark, with no significant grade or gender differences occurring. An examination of the highest educational level achieved by either of their parents (scale from 1- less than 12 years to 5 - graduate or professional school) revealed that 59% of the teens had parents who attended college/university or graduated with a degree. A significant interaction ($F(1,169) = .0157$, $p < .05$) between grade and gender was found with parent educational level, with senior high males reporting higher parental education than junior high males, and junior high females reporting higher parental education than senior high females; neither grade difference, however, was significant ($p > .05$).

Music Involvement

Several aspects of subjects' involvement with music were assessed. Sixty-four percent of the sample did not presently sing or play a musical/percussion instrument. Of the 36% that did play at least one instrument or sang, 15% played a keyboard instrument, 6% played a woodwind instrument, 4% played a string instrument, 4% played a brass instrument, and 3% played a percussive instrument, with 4% indicating that they sang. Over 53% of the sample had not taken any instrumental or voice lessons, while the mean number of years for those who had taken lessons was just under two years (M=1.9). Sixty-nine percent of the subjects had never played or sang in a band, orchestra, or other music group, while the mean number of years for those who had was under one year (M=.9). Subjects'self-reported level of understanding of music (on a Likert scale from 1 - I don't understand anything about music to 5 - I understand almost all aspects of music) was found to have a mean score of 3.6, indicating that the subjects believed they understood "many aspects of music."

The importance of music in their lives was measured on a Likert scale (from 1 - Not at all important to 5 - Very important). Over 78% of the subjects deemed music to be either important or very important in their lives (M=4.1). Such importance of music was also supported by their estimates of the number of hours spent listening to music each weekday (M=3.2) and each weekend day (M=3.3), with the weekly average being just under 22 hours per week (M=21.8). An estimate of the amount time they wished they could spend listening to music was also assessed, with subjects indicating that they would like to listen to music almost five hours (M=4.9) on weekdays and five hours (M=5.0) on weekend days, for a total of over 34 hours per week (M=34.2). This result suggests that subjects wished that they could listen to music 50% more than

they actually do. A measure of hours spent listening to music on the day before the data collection was also taken; the mean was 2.1 hours.

Subjects were asked to rank four music sources (with one being the source they used the most, down to four being the least used). The music source receiving the greatest use was cassette players (M=1.4), followed by the radio (M=2.1), CD players (M=2.9), and finally record players (M=3.5). The mean number of albums, cassettes, and CDs purchased by subjects in the past year was just over 20 (M=20.6), while the number of albums, cassettes, and CDs taped/duplicated was almost 17 (M=16.6). Finally, attendance at musical events in the past year was measured. The teenagers in this sample attended almost two concerts (M= 1.6), almost five dances (M= 4.5), and over one school concert (M= 1.5) in the past year; thus, the mean for attendance at musical events was 7.5 in the past year.

Table 2 presents the subjects' means scores, by gender and grade, for each of the music involvement items; the results of grade X gender ANOVAs are also reported. Females reported that music was significantly more important to them in the past three years ($F(1,168) = 5.445$, $p < .05$) than males. Hours of listening to music per weekday differed significantly between genders ($F(1,160) = 4.221$, $p < .05$), with females listening to music over an hour more per day than males. Attendance at all musical events ($F(1,162) = 5.883$, $p < .05$) was significantly greater for the females than males, with females attending significantly more concerts ($F(1,161) = 5.05$, $p < .05$) than males. The only significant grade difference found was that senior high subjects listened to almost one more hour of music on the day before data collection ($F(1,164) = 11.165$, $p < .01$) than did junior high subjects.

Millon Adolescent Personality Inventory (MAPI)

The MAPI assessed three areas: personality styles, expressed concerns,

Table 2

Mean Scores for Music Involvement: Gender and Grade Effects

MIQ Variable	Male	Female	Grade 8	Grade 11	Interaction
Understand Music	3.6	3.6	3.7	3.5	n/s
Music Importance	3.9*a	4.2*a	4.1	4.1	n/s
Weekday Listening	2.6*a	3.7*a	3.0	3.3	n/s
Weekend Listening	3.0	3.5	2.9	3.6	n/s
Daily Average	2.6	3.6	2.9	3.3	n/s
Preferred Weekday	4.2	5.5	4.7	5.0	n/s
Preferred Weekend	4.9	5.1	4.7	5.3	n/s
Preferred Daily	4.3	5.2	4.6	5.0	n/s
Hours Yesterday	1.9	2.3	1.6**b	2.5**b	n/s
Past Year Albums	17.0	23.6	17.4	23.4	n/s
Past Year Taped	15.7	17.4	12.1	20.5	n/s
Concerts	1.2*a	1.9*a	1.4	1.7	n/s
Dances	3.3	5.5	4.6	4.4	n/s
School Concerts	0.9	2.0	1.4	1.5	n/s
Total Events	5.3*a	9.3*a	7.4	7.6	n/s

* Gender or grade comparison significant, $p < .05$

** Gender or grade comparison significant, $p<.01$

Similar letters indicate the means being compared.

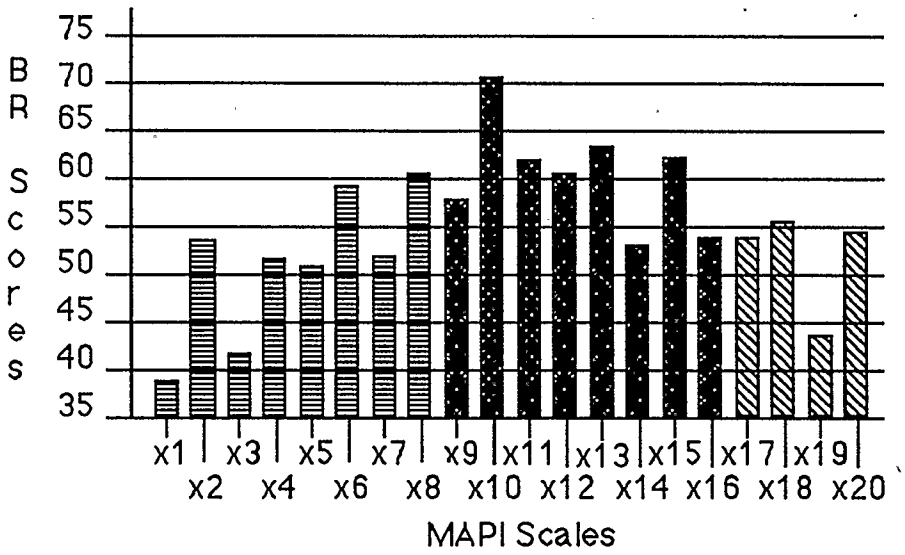
and behavioral correlates. Figure 1 presents the mean Base Rate scores achieved by 164 subjects on each of the 20 scales. As noted previously, nine of the original 175 profiles were deleted from the analysis because they were deemed invalid by the testing service, while two subjects did not have profiles completed for them because they failed to answer a minimum number of questions (i.e., 141) needed for a valid report.

Millon (1982) stated that "the greater the Base Rate (BR) score magnitude on the scale, the greater the probability that the youngster possesses the personality or clinical characteristics measured by the scale" (p.19). In general, the BR scores of 75 and 85 were established to indicate the "presence" and "prominence," respectively, of clinically designated personality styles, expressed concerns, and behavioral correlates. More specifically, Millon stated that personality style BR scores below 65, expressed concern BR scores below 75, and behavioral correlate BR scores below 60 fall in the "average" range. As can be seen in Figure 1, the range of scores for each scale and the percentage of subjects whose BR was greater than 75 reveals that some subjects did achieve BR scores that would suggest both the "presence" and "prominence" of certain traits; however, the BR mean scores for the sample did remain well within the range of normality. The personality styles scales, from highest to lowest, are as follows: Sensitive, Forceful, Inhibited, Respectful, Sociable, Confident, Cooperative, and Introversive. The expressed concerns scales, from highest to lowest, are as follows: Personal Esteem, Peer Security, Family Rapport, Body Comfort, Sexual Acceptance, Self-Concept, Academic Confidence, and Social Tolerance. Finally, the behavioral correlates scales, from highest to lowest, are as follows: Societal Conformity, Attendance Consistency, Impulse Control, and Scholastic Achievement.

The average MAPI BR scores achieved by this sample were seen to fall

Figure 1

Means and Ranges of Base Rate Scores on the 20 MAPI Scales



MAPI Scale	Mean	Range	% Above 75
Personality Styles:			
x_1 = Introversive	38.0	0-97	6.7
x_2 = Inhibited	53.8	1-113	25.6
x_3 = Cooperative	42.1	1-100	17.1
x_4 = Sociable	50.9	2-115	28.7
x_5 = Confident	50.0	3-106	20.1
x_6 = Forceful	59.0	5-109	31.1
x_7 = Respectful	51.5	4-109	23.8
x_8 = Sensitive	60.2	2-108	45.1
Expressed Concerns:			
x_9 = Self-Concept	57.2	1-109	27.4
x_{10} = Personal Esteem	70.5	13-109	53.1
x_{11} = Body Comfort	61.8	5-111	33.5
x_{12} = Sexual Accept	60.2	9-97	28.7
x_{13} = Peer Security	63.3	12-116	36.6
x_{14} = Social Tolerance	53.5	5-121	26.2
x_{15} = Family Rapport	62.0	0-125	40.2
x_{16} = Academic Confidence	54.0	0-108	20.1
Behavioral Correlates:			
x_{17} = Impulse Control	54.0	2-115	17.7
x_{18} = Societal Conformity	55.2	10-115	20.7
x_{19} = Scholastic Achievement	43.8	0-95	12.8
x_{20} = Attendance Consistency	54.5	3-110	18.9

well within the range of average scores reported by Millon (1982). That is, none of the average BR scores on the 20 scales that constituted the personality styles, expressed concerns, or behavioral correlates scales were found to be within five BR points of the criteria score needed for a clinical designation. The subjects in this sample may be classified as representing a "normal" or "average" population of teenagers. On the other hand, an examination of the range of scores reveals that for the 20 scales, there were varying percentages of subjects whose scores were clinically significant. Thus, the sample in this study provided a range of scores for determining the relationship between personality and music preference, with higher scores suggesting clinical significance associated with such preferences.

Table 3 presents the subjects' mean scores, by gender and grade, for each of the personality scales. Females significantly higher scores suggest that they have more problems with Personal Esteem ($F(1,160) = 4.05$, $p < .05$) and school Attendance Consistency ($F(1,160) = 4.379$, $p < .05$) than males, while junior high subjects reported greater concerns with Personal Esteem ($F(1,160) = 7.472$, $p < .01$) and school Attendance Consistency ($F(1,160) = 5.395$, $p < .05$) than their senior high counterparts. Five interactions were found between grade and gender on the MAPI scales. Examination of the differences within the interactions revealed the following: (a) Senior high males ($M=61.0$) were significantly more inhibited and withdrawn (Inhibited scale) ($F(1,160) = 7.393$, $p < .01$) than junior high males ($M=47.1$); (b) both junior high males ($M=55.8$) and senior high females ($M=56.0$) experienced significantly more problems in being overconfident and self-assured (Confident scale) ($F(1,160) = 9.678$, $p < .01$) than senior high males ($M=42.6$) and junior high females ($M=46.8$), respectively; (c) junior high females ($M=60.2$) had significantly more problems clarifying who they were and who they would become (Self-Concept scale)

Table 3

Mean Scores for MAPI Base Rate Scales:

Gender and Grade Differences

MIQ Variable	Male	Female	Grade 8	Grade 11	Interaction
Introversive	38.9	37.4	34.9	40.7	n/s
Inhibited	55.2	52.7	52.6	54.8	61.0**
Cooperative	46.2	38.8	40.4	43.5	n/s
Sociable	49.3	52.2	51.0	50.9	n/s
Confident	48.1	51.4	50.3	49.6	56.0**
Forceful	57.5	60.1	58.9	59.1	n/s
Respectful	49.5	53.2	49.1	53.7	n/s
Sensitive	58.8	61.4	62.6	58.2	n/s
Self-Concept	60.4	54.8	58.9	55.9	63.1**
Personal Esteem	66.7*a	73.5*a	76.4**b	65.5**b	82.5**
Body Comfort	60.7	62.7	62.5	61.2	n/s
Sexual Acceptance	58.1	61.8	63.4	57.3	n/s
Peer Security	62.2	64.2	62.8	63.7	66.9*
Social Tolerance	54.0	53.2	53.9	53.2	n/s
Family Rapport	57.2	65.8	64.6	59.8	n/s
Academic Confidence	53.2	54.7	53.0	54.9	57.4*
Impulse Control	54.8	53.3	56.0	52.2	n/s
Societal Conformity	53.6	56.5	55.2	55.3	n/s
Scholastic Achievement	46.4	41.8	43.5	44.1	50.5*
Attendance Consistency	50.8*a	57.4*a	59.0*b	50.6*b	n/s

* Gender or grade comparison significant, $p < .05$

** Gender or grade comparison significant, $p<.01$

Similar letters indicate the means being compared.

($F(1,160) = 6.78$, $p < .01$) than senior high females (M=49.3); and (d) junior high females (M=82.6) had significantly greater dissatisfaction with their views of themselves (Personal Esteem scale) ($F(1,160) = 6.823$, $p < .01$) than senior high females (M=64.5). All of the means, with the exception of problems regarding Personal Esteem for the junior high and junior high female subjects in comparison with senior high and senior high females, respectively, fall within the normal range; thus, clinical significance is related to grade and gender in these two instances only.

Now that the sample has been described, the results will be presented in the following order: (1) Motives for listening to music, (2) grade and gender differences for these motives, (3) music-related factors influencing music listening, (4) grade and gender differences for these factors, (5) correlations between motives/music-related variables and demographics and music involvement, (6) correlations between the motives/music-related variables and the MAPI scores, (7) music preferences, (8) grade and gender differences for music preferences, (9) correlations between music preferences and demographic and music involvement variables, (10) correlations between music preferences and motives for listening and music-related factors influencing music listening, (11) correlations between music preferences and personality, and (12) correlations between music preferences and music involvement.

Variables Influencing Music Listening

Motives for Listening to Music

An 18-item scale was used to tap four social-emotional motives for listening to music: Atmosphere creation and mood control, silence filling and time passing, attention to lyrics, and emotional attunement. Subjects

responded to these questions using a Likert scale (from 1 - Never to 5 - Very Often).

Figure 2 presents the mean scores of subjects on this scale. An examination of the means revealed that the most popular motives were relief of boredom and entertainment. Other popular motives (in decending order) were "to help pass the time," "to make the time go by faster when there is nothing else to do," "to feel better," "to help get me in a particular mood," "to stop thinking about certain things," "to dance," "to create a good atmosphere when I am with others," "to keep my in the mood I am in," and "to help me relax". The least used motive was "to feel less lonely."

The scores for the 18 items were then grouped into four categories (three of which were suggested by Roe, 1985), summed, and a mean calculated. The means for each category are as follows (from highest to lowest): (1) Atmosphere creation and mood control (M=3.8); (2) emotional attunement (M=3.6); (3) silence filling and time passing (M=3.5); and (4) listening to the lyrics (M=3.4). As can be seen, motives related to mood and feelings appear to be dominant.

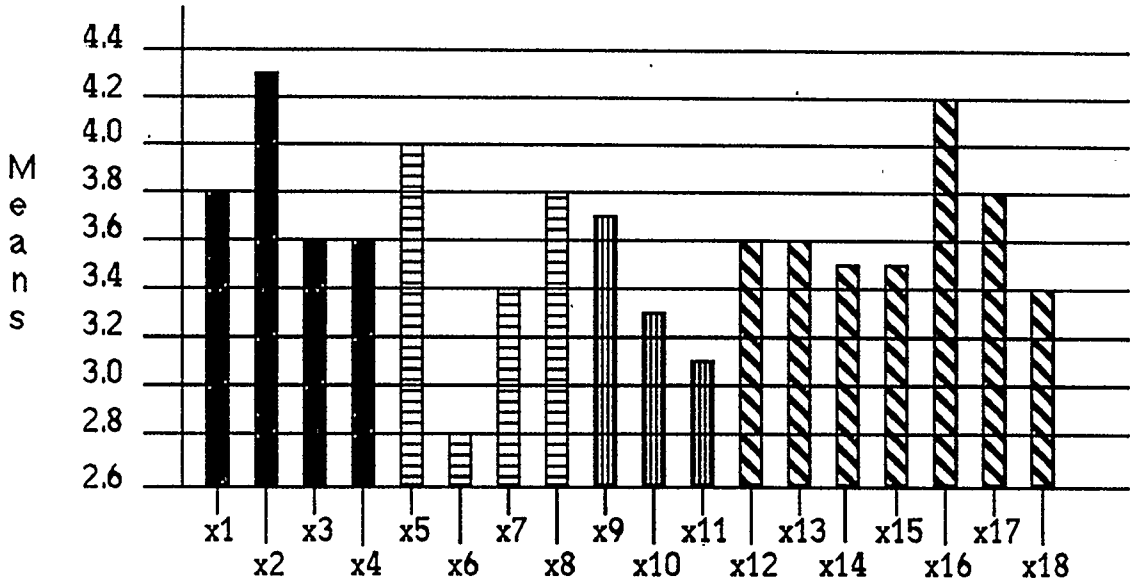
Grade and Gender Differences

The effects of grade and gender on the use of social-emotional motives for music listening were examined. The analysis of variance of social-emotional motives revealed that females were motivated to listen to music for a greater number of reasons compared the male subjects in the sample.

Table 4 presents the mean frequency of use by grade and gender for the motives, as well as for the four categories of these motives. The gender differences are discussed first. Females reported that they listened to music for motives related to atmosphere creation and mood control ($F(1,167) = 15.017$, $p < .01$) significantly more than the males. It was also found that listening to

Figure 2

Mean Scores for Motives for Listening to Music



Atmosphere Creation/Mood Control	**Mean**
x_1 = To help get me in a particular mood.	3.8
x_2 = To be less bored when I am doing something else.	4.3
x_3 = To dance.	3.6
x_4 = To create a good atmosphere when I am with others.	3.6
Silence Filling/Time Passing	
x_5 = To help pass the time.	4.0
x_6 = To feel less lonely.	2.8
x_7 = To fill the silence when no one else is talking.	3.4
x_8 = To make the time go faster when there is nothing else to do.	3.8
Attention to Lyrics	
x_9 = To stop thinking about certain things.	3.7
x_{10} = To listen to the words.	3.3
x_{11} = To express how I feel.	3.1
Emotional Attunement	
x_{12} = To help me relax.	3.6
x_{13} = To keep me in the mood I am in.	3.6
x_{14} = To get rid of frustration or anger.	3.5
x_{15} = To get excited.	3.5
x_{16} = To be entertained.	4.2
x_{17} = To feel better.	3.8
x_{18} = To be alone with my thoughts and feelings.	3.4

Table 4

Mean Frequency of Use of Social-Emotional Motives for Listening to Music: Gender and Grade

MIQ Variable	Male	Female	Grade 8	Grade 11	Interaction
Help Relax	3.2**a	3.8**a	3.4**b	3.7**b	n/s
Particular Mood	3.6	3.9	3.7	3.9	n/s
Pass Time	3.9	4.0	4.2*b	3.8*b	n/s
Stop Thinking	3.5	3.9	3.9	3.6	n/s
Less Bored	4.0**a	4.4**a	4.4	4.1	n/s
To Dance	3.2**a	4.0**a	4.0**b	3.3**b	n/s
Less Lonely	2.5*a	3.0*a	2.8	2.7	n/s
Listen to Words	3.0**a	3.6**a	3.4	3.2	n/s
Fill Silence	3.2	3.5	3.4	3.4	n/s
Atmosphere/Others	3.5	3.7	3.6	3.6	n/s
Express Feelings	2.8*a	3.3*a	3.1	3.1	n/s
Make Time Go By	3.8	3.9	3.9	3.7	n/s
Keep Mood	3.4	3.7	3.6	3.6	n/s
Rid Frustration	3.2**a	3.8**a	3.8*b	3.2*b	n/s
Get Excited	3.2*a	3.7*a	3.7*b	3.3*b	n/s
Be Entertained	4.0	4.3	4.2	4.1	n/s
Feel Better	3.7	3.9	3.9	3.8	n/s
To Be Alone	3.2*a	3.6*a	3.5	3.3	n/s
Atmosphere/Mood Sum	14.3**a	15.9**a	15.5	14.9	n/s
Silence Filling/Time Passing Sum	13.4*a	14.3*a	14.3	13.6	n/s
Attention to Lyrics Sum	9.2**a	10.8**a	10.3	9.9	n/s
Emotional Attunement Sum	23.9**a	26.7**a	26.0	25.0	n/s

* Gender or grade comparison significant, $p < .05$

** Gender or grade comparison significant, $p<.01$

Similar letters indicate the means being compared.

lyrics ($F(1,167) = 16.485$, $p < .01$) and silence filling and time passing ($F(1,167) = 4.257$, $p < .05$) were significantly more important for the females in music listening compared to the males. Finally, females also used the music they listen to for emotional attunement ($F(1,167) = 11.785$, $p < .01$) significantly more than males.

An examination of each of the particular motives within these four categories also revealed gender differences. Females indicated that they listened to music "to be less bored when I am doing something else" ($F(1,167) = 7.289$, $p < .01$) and "to dance" ($F(1,167) = 13.532$, $p < .01$) more than males in the sample. The females also responded that they listened to music "to feel less lonely" ($F(1,167) = 5.582$, $p < .05$) more than males. Females indicated that they listened to music "to listen to the words" ($F(1,167) = 13.193$, $p < .01$) and "to express how I feel" ($F(1,166) = 6.449$, $p < .05$) more than males. Finally, the female subjects indicated that they listened to music "to help me relax" ($F(1,167) = 15.785$, $p < .01$), "to get rid of frustration or anger" ($F(1,167) = 7.585$, $p < .01$), "to get excited" ($F(1,166) = 5.882$, $p < .05$), and "to be alone" ($F(1,166) = 4.302$, $p < .05$) more than males.

No significant differences were found between the junior high and senior high subjects using the four motive categories, but there were differences according to particular motives. An examination of significant grade differences revealed that junior high students listened to music "to pass the time" ($F(1,167) = 5.92$, $p < .05$), "to dance" ($F(1,167) = 13.794$, $p < .01$), "to get rid of frustration or anger" ($F(1,167) = 5.684$, $p < .05$), and "to get excited" ($F(1,166) = 4.007$, $p < .05$) significantly more than the senior high subjects. The older students indicated that they listened to music "to help me relax" ($F(1,167) = 8.092$, $p < .01$) more than the younger students.

Music-Related Factors Influencing Music Listening

A nine-item scale was used that focussed on the importance of specific aspects of music (e.g., "melody") and socially oriented factors (e.g., "what your friends like") on music listening. Subjects responded on a Likert scale (from 1 - Not Important to 5 - Very Important) regarding the importance of each item in determining their listening to musical groups or artists.

Figure 3 presents the mean responses for these factors. An examination of Figure 3 reveals that the "singer's voice," "rhythm," and "instruments" were the most important music-related factors for listening to music, while "melody" and "harmony" were only moderately important. Factors (presented in descending order of importance) related to "what (they) hear on the radio," "what (their) friends like," "what the group or artist looks like," and "music that irritates (their) parents" were only somewhat important in determining their music listening.

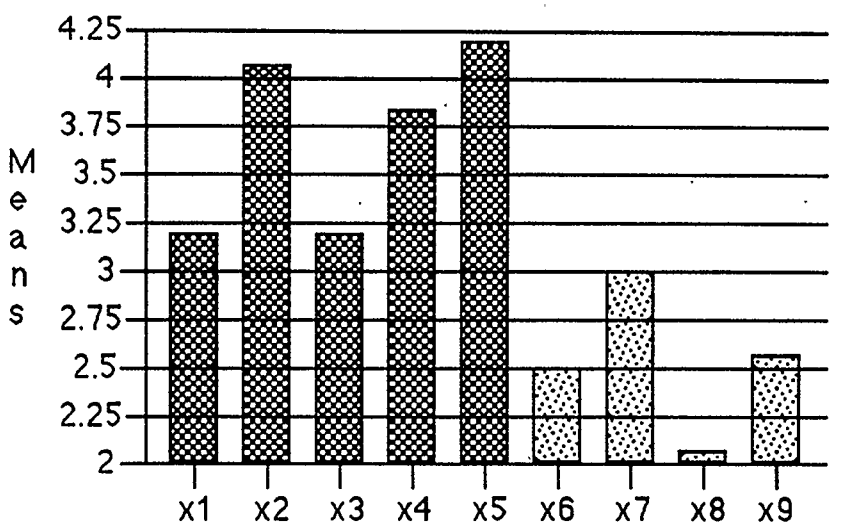
Grade and Gender Differences

Grade and gender differences were found for several of the music-related factors influencing music listening. Table 5 presents the mean scores, by gender and grade, for each of the music-related factors. The analysis of variance revealed that "melody" ($F(1,166) = 5.182$, $p < .05$) was significantly more important to females than males in determining their listening to musical groups or artists. Males indicated that "what your friends like" ($F(1,167) = 5.608$, $p < .05$) was significantly more important in determining music listening than for females.

Several grade differences were also found. Senior high subjects indicated that "melody" ($F(1,166) = 10.444$, $p < .01$), "harmony" ($F(1,166) = 14.4$, $p < .01$), and "instruments" ($F(1,166) = 4.214$, $p < .05$) were significantly more important in determining their listening to a musical group or artist than for the junior high subjects. On the other hand, "what the group or artist looks like"

Figure 3

Mean Scores for Music-Related Factors Influencing Music Listening



Music Factors	**Mean**
x_1 = Melody	3.2
x_2 = Rhythm	4.1
x_3 = Harmony	3.2
x_4 = Instruments	3.8
x_5 = Singer's voice	4.2

Socially-Oriented Factors	**Mean**
x_6 = What the group or artist looks like	2.5
x_7 = What you've heard on the radio	3.0
x_8 = Music that irritates your parents	2.1
x_9 = What your friends like	2.6

Table 5

Mean Scores of Music-Related Factors:

Gender and Grade

Music Factors	**Male**	**Female**	**Grade 8**	**Grade 11**	**Interaction**
Melody	3.1***a**	3.4***a**	3.0****b**	3.5****b**	n/s
Rhythm	4.1	4.2	4.2	4.1	n/s
Harmony	3.1	3.3	2.9****b**	3.5****b**	n/s
Instruments	3.9	3.7	3.6***b**	4.0***b**	n/s
Melody	3.1***a**	3.4***a**	3.0****b**	3.5****b**	n/s
Singer's Voice	4.1	4.4	4.2	4.3	4.6*

Social Factors	**Male**	**Female**	**Grade 8**	**Grade 11**	**Interaction**
Group Appearance	2.3	2.7	2.7***b**	2.3***b**	n/s
Hear On Radio	2.9	3.0	3.2	2.8	n/s
Irritates Parents	1.9	2.2	2.4****b**	1.8****b**	n/s
Friends Like It	2.9***a**	2.5***a**	2.9****b**	2.4****b**	n/s

* Gender or grade comparison significant, $p < .05$

** Gender or grade comparison significant, $p<.01$

Similar letters indicate the means being compared.

($F(1,167) = 4.126$, $p < .05$), "music that irritates your parents" ($F(1,166) = 7.859$, $p < .01$), and "what your friends like" ($F(1,167) = 7.876$, $p < .01$) were factors that influenced listening to a group or artist significantly more for the younger subjects than the older subjects. An interaction between grade and gender was found for "singer's voice"; follow-up analyses revealed that high school females ($M=4.6$) indicated that the "singer's voice" ($F(1,167) = 5.528$, $p < .05$) was significantly more important in determining their listening to a group or artist than for junior high females ($M=4.2$), with no other differences being significant.

Correlations Between Music Listening Variables and Demographics/Music Involvement Variables

Pearson Correlation Coefficients were computed between the four categories of motives for listening (atmosphere creation/mood control, silence filling/time passing, attention to lyrics, and emotional attunement) and demographic and music involvement variables. There were no significant correlations ($p>.05$) between motives for listening and any of the demographic variables (number of parents, number of older brothers and/or sisters, average percentage grade, and parents' educational level).

Motives for listening to music, however, were related to several music involvement variables. Listening to music for the purpose of creating an atmosphere or setting a mood was significantly and positively correlated with understanding of music ($r = .2096$, $p < .01$), importance of music in one's life ($r = .2727$, $p < .01$), weekday ($r = .1783$, $p < .05$) and weekly average ($r = .1783$, $p < .05$) music listening, and hours of listening to music on the day prior to data collection ($r = .3045$, $p < .01$). Attention to the lyrics of music was significantly and positively correlated with importance of music in one's life ($r = .2611$, $p < .01$) and hours of listening to music on the day prior to data collection ($r = .2176$, $p < .01$). Finally, listening to music for the purpose of emotional attunement was

significantly and positively correlated with the importance of music in one's life (r = .2773, $p < .01$) and hours of listening to music on the day prior to data collection (r = .2853, $p < .01$). No significant correlations were found between the silence filling/time passing motive and any music involvement variables.

Pearson Correlation Coefficients were computed between music-related factors influencing music listening and demographic and music involvement variables. The importance of what the group or artist looks like was significantly and positively correlated with the number of older brothers/sisters in one's family (r = .2150, $p < .05$), while it was negatively correlated with hours of listening to music during a weekday (r = -.2147, $p < .05$). Importance of preferring music that irritates one's parents was significantly and negatively correlated with both hours of listening during the weekday (r = -.2280. $p < .05$) and weekly average music listening (r = -.2211, $p < .05$).

Correlations Between Music Listening Variables and MAPI Base Rate Scores

Pearson Correlation Coefficients were computed between the four categories of motives for music listening and the 20 MAPI scale scores. Listening to create an atmosphere/control mood was significantly and negatively correlated with the Introversive (r = -.1648, $p < .05$), Inhibited (r = -.2725, $p < .01$), Cooperative (r = -.1823, $p < .05$), Self-Concept (r = -.1997, $p < .05$), and Peer Security (r = -.2134, $p < .01$) scale scores, while it was positively correlated with the Sociable (r = . 2718, $p < .01$) and Confident (r = .2071, $p < .01$) scale scores; that is, adolescents who are not overly quiet, withdrawn, and submissive, who are sure of who they are and are satisfied with themselves, but who tend to be too loud, dramatic, and somewhat condescending use music to create atmosphere and/or control mood.

Listening to music for the purpose of filling silence and passing the time was significantly and negatively correlated with the Respectful (r = -.1641, $p <$

.05) scale score. This same motive was significantly and positively correlated with the Sensitive (r = .1760, $p < .05$), Impulse Control (r = .1689, $p < .05$), Societal Conformity (r = .1711, $p < .05$), and Attendance Consistency (r = .1639, $p < .05$) scale scores. In other words, teenagers who not overly conscientious, but who are moody, impulsive, nonconforming, and attend school irregularly use music for fill the silence and/or pass the time.

Attention to the lyrics of music was significantly and positively correlated with the Sensitive (r = .1729, $p < .05$) and Attendance Consistency (r = .1767, $p < .05$) scale scores; that is, the more irritable adolescents are and the lower their school attendance, the more they use music to listen to the lyrics. Listening to music for the purpose of emotional attunement was positively correlated to the Sensitive (r = .2005, $p < .05$), Attendance Consistency (r = .2404, $p < .01$) and Academic Confidence (r = .1648, $p < .05$) scale scores. The emotional attunement motive was also found to be significantly and negatively correlated to the Introversive (r = -.1711, $p < .05$) and Cooperative (r = -.1911, $p < .05$) scale scores. Thus, adolescent listeners who would not be characterized as quiet or submissively dependent, but who are moody and unpredictable, who are irregular in their school attendance, and who believe they are unable to succeed at school use music for emotional attunement.

Pearson Correlation Coefficients were computed between music-related factors influencing music listening to particular musical groups or artists and Base Rate (BR) scores on the MAPI. The importance of melody in determining music listening was significantly and negatively correlated with the Self-Concept (r = -.2270. $p < .05$) score; thus, the more certain of who they are and what they will become, the greater importance they give to melody.

Listening to musical groups or artists that "you've heard on the radio" was significantly and positively correlated with the Cooperative (r = .2320, $p < .05$)

and Respectful (r = .2185, $p < .05$) scale scores, but was negatively correlated with the Social Tolerance (r = -.2210, $p < .05$) scale score. In other words, the more dependently passive and rule-conscious, but more tolerant of others the adolescents were, the more they listened to music heard on the radio. The importance of preferring music groups/artists that "irritate your parents" was positively and significantly correlated with the Forceful (r = .2544, $p < .05$), Sensitive (r = .2757, $p < .01$), Social Tolerance (r = .2696, $p < .05$), Family Rapport (r = .2452, $p < .05$), Impulse Control (r = .2988, $p < .01$), Societal Conformity (r = .2900, $p < .05$), Scholastic Achievement (r = .2433, $p < .05$), and Attendance Consistency (r = .2114, $p < .05$) scale scores, but was negatively correlated with the Respectful (r = -.2654, $p < .05$) scale score. That is, teenagers who were not overly responsible, but who were tough-minded, moody, unconcerned about others, uncomfortable with their family, impulsive, nonconforming, underachieving in school, and did not attend school regularly listened to music that irritated their parents.

Finally, listening to musical groups/artists that "your friends like" was significantly and negatively correlated with the Introversive (r = -.2295, $p < .01$) scale score. Thus, adolescents who would not be characterized as being quiet, dull, or colorless listened to music that their friends enjoyed.

Music Preferences

There were five measures of music preference: The Music Styles Scale, three indices measuring favourite musical groups or artists, favourite style of music, favourite albums, tapes, and/or CDs, and the Music Qualities Scale.

Music Styles Scale

Subjects' preference for each of 23 different styles or kinds of music were

rated on a Likert scale (from 1 - Not at All to 5 - A Great Deal). Figures 4 and 5 present the means for each of the 23 music styles, as well as the percentage of Not Familiar responses for each style. The following is a summary of the subjects' preference means, from highest to lowest, for these music styles: Rap, Dance, House, Pop, Hip Hop, Soundtracks, New Wave, Rock Funk, Power Pop, Reggae, Rock, Classic Rock, Teen Pop, Classical, Roots, Worldbeat, New Age, Jazz, Rhythm and Blues, Folk, Heavy Metal, Country, and Gospel/Christian.

Subjects were asked to name their three favourite music groups or artists. As previously mentioned (pages 60-61), 17 of the 23 styles constituting the Music Styles Scale were factor analyzed, yielding five factors: *Teen Pop*, *Heavy Pop*, *Pop*, *Traditional Pop*, and *Alternative Pop*. Figure 4 also presents how the music styles are grouped into the five factors and the mean preference ratings for each of the styles.

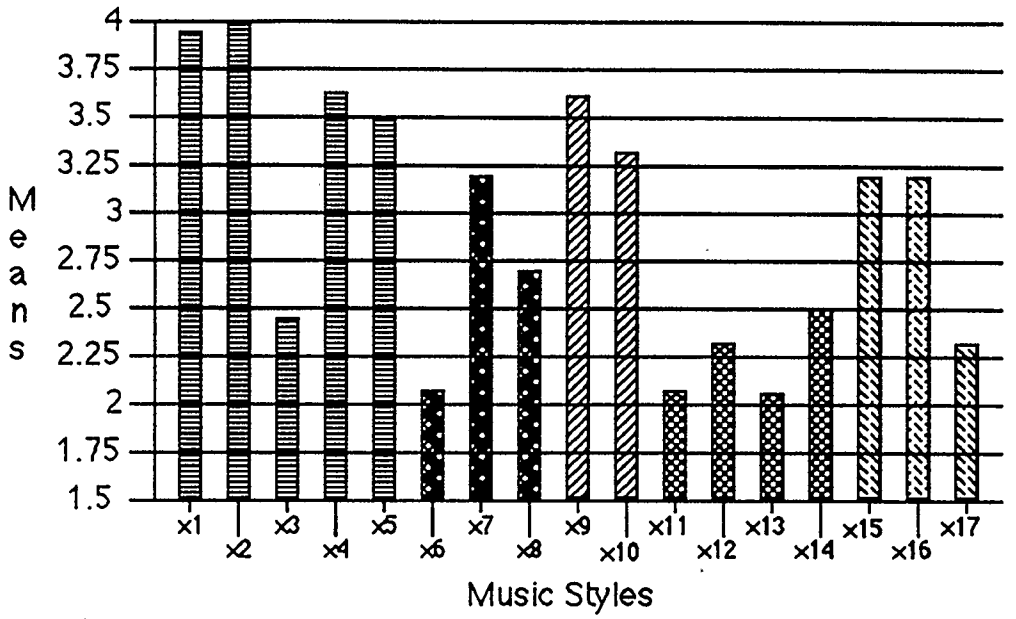
Favourite Music Group or Artist

Subjects were asked to name their three favourite music groups or artists. An analysis of their choices revealed that over 17% of the teenagers in the present study chose C + C Music Factory as one of their top three favourite musical groups or artists. Some of the other popular groups chosen by these students and the percentage of subjects that preferred them are as follows (in descending order): Depeche Mode (13%), Black Box (10%), MC Hammer (10%), Another Bad Creation (8%), Paula Abdul (8%), New Kids on the Block (7%), Mariah Carey (7%), Janet Jackson (6%), and Bel Biv Devoe (6%).

Each "favourite" musical group or artist listed by the subjects was subsequently categorized by the author into one of the five factors representing a specific style or genre of music. Using these judgements, an estimate of music preference (based on the favourite music group or artist) for each subject was established. Table 6 presents the percentage of subjects

Figure 4

Mean Preferences for Music Styles Scale: Factor Groups



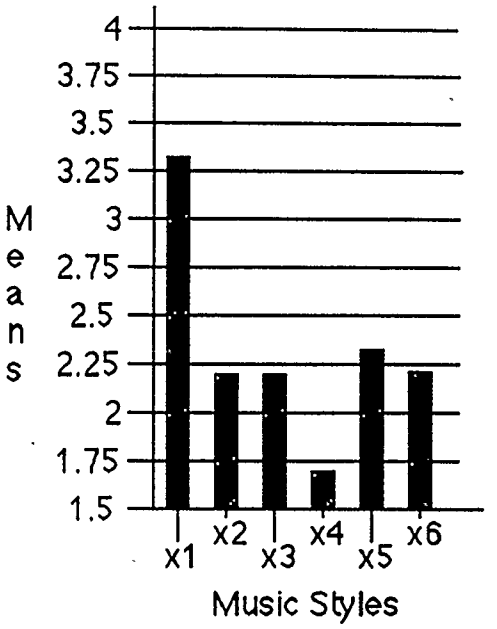
Teen Pop	**Mean**	**N/F%**	**Traditional Pop**	**Mean**	**N/F%**
x_1 = Dance	3.9	0	x_{11} = Country	2.1	1.1
x_2 = Rap	4.0	0	x_{12} = Classical	2.3	1.7
x_3 = Teen Pop	2.4	0	x_{13} = Folk	2.1	8.0
x_4 = House	3.6	7.4	x_{14} = Classic Rock	2.5	2.3
x_5 = Hip Hop	3.5	4.6			
Heavy Pop			**Alternative Pop**		
x_6 = Heavy Metal	2.1	0.6	x_{15} = Rock Funk	3.2	8.6
x_7 = Power Pop	3.2	1.7	x_{16} = New Wave	3.2	8.0
x_8 = Rock	2.7	2.3	x_{17} = Roots	2.3	9.7
Pop					
x_9 = Pop	3.6	0			
x_{10} = Soundtrack	3.3	0			

Mean Scale: 1 - Not at all; 2 - Very Little; 3 - Somewhat; 4 - Quite a Bit; 5 - A Great Deal

N/F% Percentage of subjects not familiar with this music style.

Figure 5

Mean Preferences for Music Styles Scale: No Factor Groups



No Factor Grouping	Mean	N/F %
x_1 = Reggae	3.3	23.4
x_2 = New Age	2.2	52.6
x_3 = Rhythm/Blues	2.2	19.4
x_4 = Gospel/Christian	1.7	28.0
x_5 = Worldbeat	2.3	22.9
x_6 = Jazz	2.2	13.1

Mean Scale: 1 - Not at all; 2 - Very Little; 3 - Somewhat; 4 - Quite a Bit; 5 - A Great Deal

N/F% Percentage of subjects not familiar with this music style.

Table 6

Percentage of Subjects Preferring Different Music Styles Based Upon Favourite Music Group or Artist

Factor 1 *Teen Pop*	**Percentage**
Dance	17.7
Rap	15.2
Teen Pop	13.4
House	7.3
Hip Hop	1.2
Total	**54.8**
Factor 2 *Heavy Pop*	
Heavy Metal	6.7
Power Pop	3.1
Rock	3.1
Total	**12.9**
Factor 3 *Pop*	
Pop	17.1
Soundtracks	0
Total	**17.1**
Factor 4 *Traditional Pop*	
Classic Rock	5.5
Country	2.4
Classical	0
Folk	0
Total	**7.9**
Factor 5 *Alternative Pop*	
New Wave	2.4
Rock Funk	0.6
Roots	0
Total	**3.0**
No Factor	
Gospel/Christian	2.4
Jazz	1.8
Reggae	0
New Age	0
Rhythm and Blues	0
Worldbeat	0
Total	**4.2**

preferring each particular music style as determined by the independent judges, and is divided into the five factor groups. Almost 18% of the sample listed favourite music groups or artists within the Dance style of music (under Factor 1). This was followed closely by those who preferred Pop (17%; under Factor 3), Rap (15%; under Factor 1), and Teen Pop (14%; under Factor 1) musical groups. Examining the five factors or kinds of pop music, over half of the subjects (54.8%) preferred music that falls into Factor 1, *Teen Pop*, while the remaining factors had comparatively smaller proportions of the subjects' preferences (in descending order): *Pop*, *Heavy Pop*, *Traditional Pop*, *Alternative Pop*. Of the 23 music styles, 16 of the 23 styles had under 5% of the reported preferences. There were no favourite musical groups indicated by the subjects representing the styles of Reggae, New Age, Classical, Folk, Soundtracks, Rhythm and Blues, Worldbeat, or Roots. It should be noted that the high preferences for *Teen Pop* and *Pop*, as measured by favourite musical group or artist, were also the most preferred styles when measured by the Music Styles Scale.

Favourite Music Style

Subjects were asked to indicate their favourite style of music using the list of 23 music styles. Table 7 represents the percentage of subjects indicating a particular style as their favourite, and are grouped according to their respective factors. Looking at the 23 styles, Dance and Rap music accounted for over 40% of the subjects' favourite styles of music. Both of these styles fall under Factor 1, *Teen Pop*, which represents 56.9% of the subjects, while the remaining four factors have comparatively lower percentages of the sample. In descending order, the preferences were *Heavy Pop*, *Alternative Pop*, *Pop*, and *Traditional Pop*. Again, the designation of *Teen Pop* as the favourite music style is consistent with that found when measured by the Music Styles Scale.

Table 7

Percentage of Subjects Indicating Favourite Music

Using "Music Styles Scale" Categories

Factor 1 *Teen Pop*	**Percentage**
Rap	23.7
Dance	17.2
House	7.7
Hip Hop	4.7
Teen Pop	3.6
Total	**56.9**
Factor 2 *Heavy Pop*	
Heavy Metal	6.5
Power Pop	4.1
Rock	1.8
Total	**12.4**
Factor 3 *Pop*	
Pop	7.7
Soundtracks	1.2
Total	**8.9**
Factor 4 *Traditional Pop*	
Classic Rock	4.1
Country	2.4
Classical	0.6
Folk	0
Total	**7.1**
Factor 5 *Alternative Pop*	
New Wave	7.7
Rock Funk	3.0
Roots	0.6
Total	**11.3**
No Factor	
Gospel/Christian	1.8
Reggae	1.2
Jazz	0.6
New Age	0
Rhythm and Blues	0
Worldbeat	0
Total	**3.6**

The Worldbeat, Folk, Rhythm and Blues, and New Age music styles did not receive any first choice rankings.

Favourite Album, Cassette, or Compact Disc

The title of the favourite album, tape, or CD listed by each subject was similarly categorized according to a specific style or genre of music by the two external raters. Table 8 presents the percentage of subjects indicating a favourite music style as represented by their favourite musical recording, and are grouped according to their respective factors. As can be seen under Factor 1, Dance, Rap, and Teen Pop are music styles that account for over 44 percent of the favourite musical recordings. The three styles plus an additional two styles within Factor 1, *Teen Pop*, account for over 50 percent of the total preferences, while the remaining four factors are represented by comparatively smaller proportions of the sample, in descending order: *Pop*, *Heavy Pop*, *Traditional Pop*, and *Alternative Pop*. This order is identical to that found when favourite musical group or artist was requested from the subjects. Reggae, Rock Funk, New Age, Folk, Worldbeat, and Roots were not mentioned by any subjects as their favourite albums, tapes, or CDs. Sixteen of the 23 styles had less than 5% of the reported preferences.

Music Qualities Scale

The fifth measure of music preference involved asking subjects to indicate on a Likert scale (from 1 - Not at All to 5 - A Great Deal) their enjoyment of music described by 14 qualities (as suggested by Finnas, 1987). Figure 6 presents the mean scores for each of the 14 items constituting this scale. High mean scores were achieved for music described as "loud, played at a great volume" and "played at a fast tempo," moderate mean scores for "romantic and dreamy," "mild and quiet," "peaceful and relaxing," "tough and hard," "soft and tender," "serious and thoughtful," "played with many guitars," "good-natured and kind,"

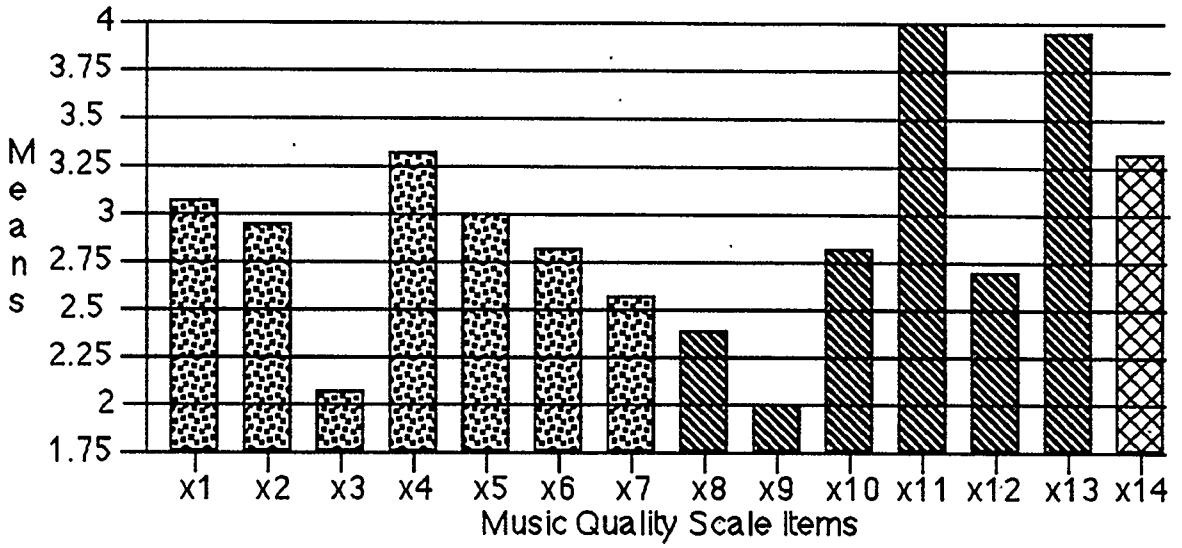
Table 8

Percentage of Subjects Indicating Favourite Music Style by Favourite Album, Cassette, or Compact Disc

Factor 1 *Teen Pop*	**Percentage**
Rap	13.4
Dance	17.8
House	5.7
Hip Hop	0.6
Teen Pop	13.4
Total	**50.9**
Factor 2 *Heavy Pop*	
Heavy Metal	7.0
Power Pop	5.1
Rock	2.6
Total	**14.7**
Factor 3 *Pop*	
Pop	19.1
Soundtracks	0.6
Total	**19.7**
Factor 4 *Traditional Pop*	
Classic Rock	4.5
Country	1.9
Classical	0.6
Folk	0
Total	**7.0**
Factor 5 *Alternative Pop*	
New Wave	1.3
Rock Funk	0
Roots	0
Total	**1.3**
No Factor	
Gospel/Christian	3.2
Reggae	0
Jazz	1.9
New Age	0
Rhythm and Blues	1.3
Worldbeat	0
Total	**6.4**

Figure 6

Subjects' Mean Scores on the Music Qualities Scale



"Soft" Music Factor	**Mean**
x_1 = "romantic and dreamy"	3.1
x_2 = "mild and quiet"	2.9
x_3 = "sad and gloomy"	2.1
x_4 = "peaceful and relaxing"	3.3
x_5 = "soft and tender"	3.0
x_6 = "serious and thoughtful"	2.8
x_7 = "good-natured and kind"	2.6
"Hard" Music Factor	**Mean**
x_8 = "wild and violent"	2.4
x_9 = "upsetting and protesting"	2.0
x_{10} = "tough and hard"	2.8
x_{11} = "loud, played at a great volume"	4.0
x_{12} = "played with many guitars"	2.7
x_{13} = "played at a fast tempo"	3.9
Not Included In Analysis	**Mean**
x_{14} = "played with synthesizers"	3.3

and "played with synthesizers," and relatively low means scores for music characterized as "wild and violent," "upsetting and protesting," and "sad and gloomy."

Using factor analysis, Finnas (1987) found that 13 of these scale items fell into two factors, designated in the present study as "hard" music and "soft" music. The mean score achieved for the six items comprising the "hard" factor was just under three ($\underline{M}$ = 2.9), while the mean score achieved for the seven items making up the "soft" factor was only slightly lower ($\underline{M}$ = 2.8).

Selection of Music Preference Measures for Subsequent Analysis

An examination of the three "favourite" measures (i.e., favourite group or artist, favourite music style, favourite recording) and a comparison with the Music Styles Scale revealed considerable similarity in the ranking of *Teen Pop* as the favourite music style. Thus, there would likely be a high degree of redundancy in findings if all the measures were employed in subsequent analysis (e.g., grade and gender differences, relating to MAPI scales). Additionally, there were several potential problems associated with the use of these three "favourite" measures in subsequent analysis. First, a subject's "favourite" group or musical recording may not necessarily indicate that he or she prefers the general style of music represented by the group or particular recording; thus, subjects' favourite groups or recordings may not be representative of their favourite styles of music. Second, an examination of Tables 6, 7, and 8 reveals that the numbers of subjects falling under the *Heavy Pop*, *Pop*, *Traditional Pop*, and *Alternative Pop* factors are quite small in comparison to those in the *Teen Pop* factor. This inequality in numbers of subjects under the five factors would likely result in inconsistent and uninterpretable findings when the three measures are related to other measures (e.g., demographic variables, motives for listening, music

involvement variables, and personality variables). Finally, since the three "favourite" measures are categorical data, they are not as amenable as continuous data (Music Styles Scale, Music Qualities Scale) for further analysis examining relationships with the variables just mentioned.

For these reasons, the three "favourite" music preference measures were deleted from any further analysis. Nevertheless, it should be noted that these three measures do coincide to a surprising degree with the two other music preference scales. Therefore, the two measures of music preference which will be examined for the remainder of the paper and related to other variables (e.g., MAPI, motives for listening, music involvement) will be the Music Styles Scale and the Music Qualities Scale.

Grade and Gender Differences

Grade and gender differences (and their interactions) were examined for the two measures of music preference. Data from the Music Styles Scale, in which subjects reported their liking of the 23 music styles, were examined. Table 9 presents the subjects' mean scores, by gender and grade, for each of the music styles. An analysis of variance revealed that males in the sample preferred Rap music ($E(1,169) = 7.989$, $p < .01$) significantly more than females; females were found to prefer Teen Pop ($E(1,171) = 6.658$, $p < .05$) and Roots ($E(1,154) = 5.086$, $p < .05$) significantly more than males. Examining grade differences, it was found that junior high school subjects preferred Rap ($E(1,171) = 20.748$, $p < .01$), Teen Pop ($E(1,171) = 6.332$, $p < .05$), and House ($E(1,158) = 4.925$, $p < .05$) significantly more than the high school subjects. On the other hand, the high school subjects demonstrated a greater preference for Country ($E(1,169) = 23.554$, $p < .01$), Classical ($E(1,168) = 8.777$, $p < .01$), Folk ($E(1,157) = 6.755$, $p < .05$), Classic Rock ($E(1,167) = 20.007$, $p < .01$), Rhythm and Blues ($E(1,137) = 10.245$, $p < .01$), and Roots ($E(1,154) = 8.434$, $p < .01$)

Table 9

Mean Scores for Music Styles Scale: Gender and Grade

MIQ Variable	Male	Female	Grade 8	Grade 11	Interaction
Country	2.0	2.1	1.6**b	2.4**b	n/s
Dance	3.9	3.9	4.1	3.8	n/s
Reggae	2.7	2.8	2.7	2.8	n/s
Rap	4.2**a	3.7**a	4.4**b	3.5**b	n/s
Rock Funk	3.0	3.3	3.3	3.1	n/s
New Age	2.1	2.4	2.5	2.0	n/s
Heavy Metal	2.0	2.2	2.0	2.2	n/s
Pop	3.4	3.7	3.6	3.6	n/s
Classical	2.3	2.3	2.0**b	2.6**b	n/s
New Wave	3.1	3.3	3.2	3.3	n/s
Folk	1.9	2.2	1.8*b	2.3*b	n/s
Soundtracks	3.2	3.4	3.3	3.3	n/s
Teen Pop	2.1*a	2.7*a	2.7*b	2.1*b	n/s
Classic Rock	2.7	2.3	2.0**b	2.9**b	n/s
Rhythm/Blues	2.3	2.1	1.9**b	2.5**b	2.9*
Gospel/Xian	1.7	1.8	1.6	1.8	n/s
Worldbeat	2.2	2.3	2.2	2.3	n/s
House	3.7	3.6	3.9*b	3.4*b	n/s
Power Pop	3.2	3.2	3.0	3.3	n/s
Roots	2.0*a	2.4*a	2.0**b	2.5**b	n/s
Hip Hop	3.4	3.6	3.7	3.4	n/s
Jazz	2.3	2.0	2.0	2.3	n/s
Rock	2.7	2.7	2.6	2.8	n/s

*p < .05 **p < .01 Similar letters indicate the means being compared.

than junior high subjects. One gender X grade interaction was found: Senior high male subjects (M=2.849) preferred Rhythm and Blues ($F(1,137) = 6.07$, $p < .05$) music significantly more than junior high male subjects (M=1.714), with the other differences within the interaction not reaching significance.

Gender and grade differences on the Music Qualities Scale were examined. Table 10 presents the subjects' mean scores, by gender and grade, for each quality. The analysis of variance revealed that males preferred music described as "tough and hard" ($F(1,160) = 4.848$, $p < .05$) more than female subjects. Females in the sample were found to prefer "romantic and dreamy" ($F(1,171) = 26.217$, $p < .01$), "mild and quiet" ($F(1,169) = 4.618$, $p < .05$), "sad and gloomy" ($F(1,171) = 8.224$, $p < .01$), "peaceful and relaxing" ($F(1,17)1 = 19.6$, $p < .01$), "soft and tender" ($F(1,170) = 35.187$, $p < .01$), "serious and thoughtful" ($F(1,171) = 9.419$, $p < .01$), and "good-natured and kind" ($F(1,170) = 17.956$, $p < .01$) music more than males. Females demonstrated an overall preference for "soft" music ($F(1,171) = 37.296$, $p < .01$) more than males. Examining grade differences, senior high school subjects showed a significantly greater preference for "soft" factor music ($F(1,171) = 8.42$, $p < .01$) than junior high subjects; greater preferences for music described as "romantic and dreamy" ($F(1,171) = 5.921$, $p < .05$), "mild and quiet" ($F(1,169) = 11.696$, $p < .01$), "sad and gloomy" ($F(1,171) = 4.335$, $p < .05$), "played with many guitars" ($F(1,171) = 10.139$, $p < .01$), and "good-natured and kind" ($F(1,170) = 11.535$, $p < .01$) were also shown. There were no significant grade by gender interactions for any quality on this scale.

Music Preferences, Demographic, and Music Involvement Variables

The relationships between the two measures of music preference (Music Styles Scale and Music Qualities Scale) and demographic and music involvement variables were examined. The Pearson Correlation Coefficients

Table 10

Mean Scores for Music Qualities Scale:

Gender and Grade

MIQ Variable	Male	Female	Grade 8	Grade 11	Interaction
Romantic/Dreamy	2.6**a	3.4**a	2.9*b	3.2*b	n/s
Wild/Violent	2.5	2.3	2.2	2.5	n/s
Mild/Quiet	2.8*a	3.0*a	2.7**b	3.2**b	n/s
Upsetting/Protesting	2.0	2.1	1.9	2.1	n/s
Sad/Gloomy	1.8**a	2.3**a	1.9*b	2.2*b	n/s
Peaceful/Relaxing	2.9**a	3.6**a	3.3	3.3	n/s
Tough/Hard	3.0*a	2.6**a	2.8	2.8	n/s
Soft/Tender	2.5**a	3.5**a	3.0	3.1	n/s
Loud	4.0	3.9	4.0	3.9	n/s
Serious/Thoughtful	2.6**a	3.1**a	2.7	3.0	n/s
Many Guitars	2.7	2.6	2.4**b	2.9**b	n/s
Good-natured/Kind	2.2**a	2.9**a	2.3**b	2.8**b	n/s
Fast Tempo	4.0	3.8	3.8	3.9	n/s
Synthesizers	3.3	3.3	3.3	3.4	n/s
"Hard" Factor Sum	3.0	2.9	2.9	3.0	n/s
"Soft" Factor Sum	2.5**a	3.1**a	2.7**b	2.9**b	n/s

*p < .05 **p < .01

Similar letters indicate the means being compared.

computed between the 23 styles of music (Music Styles Scale) and demographic variables revealed a significant and negative correlation between number of parents (r = -.1758, $p < .05$) and a preference for Hip Hop music. Significant and positive correlations were found between the number of older brothers and sisters and preferences for Pop (r = .1647, $p < .05$), Classical (r = .1635, $p < .05$), and Soundtracks (r = .1859, $p < .05$) music. Average percentage grade was significantly and negatively correlated with preferences for Reggae (r = -.1836, $p < .05$) and Heavy Metal (r = -.1883, $p < .05$), while average percentage grade was positively related with preferences for Classical (r = .1778, $p < .05$), Worldbeat (r = .1955, $p < .05$), and Jazz (r = .2310, $p < .01$). Finally, significant and positive correlations between parents' educational level and preferences for Classic Rock (r = .1556, $p < .05$), Rhythm and Blues (r = .1708, $p < .05$), and Worldbeat (r = .2166, $p < .05$) were also found.

The Music Styles Scale was also correlated with several of the music involvement items. Importance of music in one's life was significantly and positively correlated with a preference for Heavy Metal (r = .1680, $p < .05$), Soundtracks (r = .2020, $p < .01$), Power Pop (r = .2277, $p < .01$), Roots (r = .2344, $p < .01$), and Rock (r = .2169, $p < .01$) music. Several relationships between hours of music listening and music styles preference were found: (1) Hours of listening to music during the weekdays was negatively and significantly correlated with preference for Classical (r = .2070, $p < .01$) music; (2) hours of listening during the weekend was positively correlated with preference for Reggae (r = .2081, $p < .05$) music; and (3) weekly average music listening was negatively correlated with a preference for Classical (r = .2229, $p < .01$) music. Finally, hours of music listening on the day before testing was positively correlated with preferences for Reggae (r = .2368, $p < .01$), Heavy

Metal (r = .1915, $p < .05$), Folk (r = .1820, $p < .05$), Classic Rock (r = .2597, $p < .01$), Roots (r = .1716, $p < .05$), and Rock (r = .1835, $p < .05$) music.

Using the Music Qualities Scale, an analysis was done which related each item within the Music Qualities Scale with demographic and music involvement variables. Enjoyment of music described as "loud, played at a great volume" was significantly and negatively correlated with average percentage grade (r = -.1744, $p < .05$), while enjoyment of "good-natured and kind" music was positively correlated with average percentage grade (r = .1570, $p < .05$). Enjoyment of music "played with many guitars" was significantly and positively correlated with understanding of music (r = .1903, $p < .05$). Significant and positive relationships were also found between importance of music in one's life and enjoyment of "upsetting and protesting" music (r = .1535, $p < .05$), music that is "loud, played at a great volume" (r = .1608, $p < .05$), and music "played at a fast tempo" (r = .1622, $p < .05$). Finally, significant and positive correlations were found between several music descriptors and hours spent listening to music: (a) hours of weekday music listening was correlated with enjoyment of "romantic and dreamy" (r = .1772, $p < .05$) and "soft and tender" (r = .1588, $p < .05$) music; (b) weekend music listening was related to enjoyment of "upsetting and protesting" music (r = .2040, $p < .01$); (c) hours of weekly music listening was correlated with enjoyment of "soft and tender" music (r = .1542, $p < .05$); and (d) hours of listening on the day prior to data collection was correlated with enjoyment of "wild and violent" (r = .2454, $p < .01$), "soft and tender" (r = .1667, $p < .05$), "loud, played at a great volume" (r = .1650, $p < .05$), and music "played with many guitars" (r = .2606, $p < .01$).

Using the same scale, subjects were categorized as preferring the "soft," "hard," or having "no preference" for either kind of music. Multivariate ANOVAs were computed contrasting these three categories with demographic and music

involvement variables. The Wilk's Test of Significance revealed that there were no significant differences among the three groups in any of the demographic ($F(1,8) = .415$, $p > .05$) or music involvement ($F(1,22) = .347$, $p > .05$) variables.

Music Preferences, Motives for Listening, and Music-Related Factors Influencing Music Listening

The two measures of music preference (Music Styles Scale and Music Qualities Scale) were related to motives for listening and to music-related factors influencing music listening. Pearson Correlation Coefficients were computed between each of the 23 styles of music in the Music Styles Scale and the four categories of motives for listening to music. Significant and positive correlations were found between subjects who listen to music to create an atmosphere and set a mood and those subjects preferring Dance ($r = .1816$, $p < .05$), Reggae ($r = .1864$, $p < .05$), Rock Funk ($r = .1913$, $p < .05$), Pop ($r = .1608$, $p < .05$), Soundtracks ($r = .2875$, $p < .01$), Teen Pop ($r = .1935$, $p < .05$), House ($r = .2557$, $p < .01$), Roots ($r = .1874$, $p < .05$), and Hip Hop ($r = .2635$, $p < .01$) music. Listening to music for the purpose of filling silence and/or passing time was significantly and positively correlated with Teen Pop ($r = .1850$, $p < .05$), Power Pop ($r = .1712$, $p < .05$), and Roots ($r = .1829$, $p < .05$) music. Attention to the lyrics was positively related to preferences for Soundtracks ($r = .2313$, $p < .01$) and Power Pop ($r = .2045$, $p < .01$). Finally, listening to music for the purpose of emotional attunement was significantly and positively correlated with Rock Funk ($r = .2010$, $p < .05$), Heavy Metal ($r = .1743$, $p < .05$), Classical ($r = .1564$, $p < .05$), Soundtracks ($r = .1720$, $p < .05$), and Roots ($r = .1601$, $p < .05$) music.

Pearson Correlation Coefficients were computed to determine the relationships between preferences for the 23 styles of music and music-related factors influencing music listening. Significant and positive correlations were

found between subjects indicating the importance of melody in determining their listening to a musical group or artist and preferences for Dance (r = .1575, $p < .05$), Pop (r = .2247, $p < .01$), Classical (r = .2310, $p < .01$), Soundtracks (r = .1948, $p < .05$), Teen Pop (r = .2490, $p < .01$), Rhythm and Blues (r = .1721, $p < .05$), Gospel/Christian (r = .1791, $p < .05$), and Jazz (r = .2014, $p < .05$). Significant and positive correlations were found between the importance of rhythm in determining music listening and preferences for Dance (r = .1737, $p < .05$), Pop (r = .2452, $p < .01$), Soundtracks (r = .2686, $p < .01$), and Teen Pop (r = .1744, $p < .05$) music. Harmony was positively correlated with Country (r = .1581, $p <.05$), New Age (r = .2390, $p < .05$), Classical (r = .3158, $p < .01$), Teen Pop (r = .1627, $p < .05$), Classic Rock (r = .1526, $p < .05$), Gospel/Christian (r = .2598, $p < .01$), Worldbeat (r = .1895, $p < .05$), Power Pop (r = .1811, $p < .05$), Roots (r = .2278, $p < .01$), and Jazz (r = .2153, $p < .01$) music preferences. The importance of instruments in determining music listening was significantly and positively correlated with Heavy Metal (r = .2084, $p < .01$), Classic Rock (r = .1624, $p < .05$), Power Pop (r = .1581, $p < .05$), and Roots (r = .2211, $p < .01$) music preference, but was negatively correlated with Rap (r = -.1540, $p < .05$) music preference. The singer's voice was significantly and positively correlated with a preference for Dance (r = .1796, $p < .05$), Pop (r = .1948, $p < .05$), and Soundtracks (r = .1626, $p < .05$) music.

Music preference (Music Styles Scale) was also shown to be related to the influence of other music-related variables; those which were external or social characteristics of music. The musical group's appearance was significantly and positively correlated with Dance (r = .2215, $p < .01$), Rap (r = .1813, $p < .05$), and Teen Pop (r = .2185, $p < .01$) music preference, but was negatively correlated with a preference for Rhythm and Blues (r = -.1772, $p < .05$). The importance of hearing the music on the radio in determining music

listening was significantly and positively correlated with preferences for Dance (r = .3553, $p < .01$), Rap (r = .3565, $p < .01$), Pop (r = .1975, $p < .05$), Soundtracks (r = .2706, $p < .01$), Teen Pop (r = .1998, $p < .01$), and House (r = .2580, $p < .01$) music, but was negatively correlated with Heavy Metal (r = -.2914, $p < .01$), Classic Rock (r = -.1736, $p < .05$), Rhythm and Blues (r = -.3171, $p < .01$), and Rock (r = -.1800, $p < .05$) music. The importance of listening to music that irritates your parents was negatively correlated with a preference for Rhythm and Blues music (r = -.2102, $p < .05$). Finally, the importance of listening to music that your friends like was significantly and positively correlated with preferences for Dance (r = .3039, $p < .01$), Rap (r = .3719, $p < .01$), and Soundtracks (r = .1722, $p < .05$) music , but was negatively correlated with preferences for Country (r = -.1939, $p < .05$), Heavy Metal (r = -.2427, $p < .01$), and Rhythm and Blues (r = -.2580, $p < .01$).

Using the Music Qualities Scale, multivariate ANOVAs were performed to determine the existence of differences among the groups of subjects preferring "hard," "soft," and "no preference" music and the four motives for listening. There were no significant differences among the groups for any of the four categories of motives for listening to music (i.e., atmosphere setting/mood creation, silence filling/time passing, attention to lyrics, and emotional attunement) as revealed by the Wilk's Test of Significance ($F(1,8)$ = .702, $p > .05$).

Significant differences were found to exist among the three groups and the music-related variables influencing music listening ($F(1,18)$ = .001; $p < .01$). Table 11 presents the means for the "hard," "soft," and "no preference" groups on each of the music-related variables. Scheffe' tests revealed the following significant differences among the groups: (a) Subjects who preferred "soft" music indicated greater importance of melody in determining music listening

Table 11

Mean Scores of Music-Related Factors:

"Hard," "Soft," and "No Preference" Groups

Music Factors	**"Soft" Group**	**"Hard" Group**	**"No Preference"**
Melody	3.6**	2.9*	3.2
Rhythm	4.1	4.1	4.2
Harmony	3.4**	2.9*	3.3
Instruments	3.5*	4.2**	3.7
Singer's Voice	4.2	4.1	4.4

Social Factors	**"Soft" Group**	**"Hard" Group**	**"No Preference"**
Group Appearance	2.4	2.4	2.7
Heard On Radio	3.2**	2.6*	3.2**
Irritates Parents	1.8	2.3	2.1
What Friends Like	2.5	2.6	2.9

**Mean significantly greater ($p < .05$) than *mean.

than subjects preferring "hard" music ($F(1,169) = .0058$, $p < .05$); (b) subjects preferring "soft" music indicated greater importance of harmony in determining their music listening than subjects preferring "hard" music ($F(1,169) = .0369$, $p < .05$); (c) subjects who preferred "hard" music indicated greater importance of instruments in determining their music listening than those preferring "soft" music ($F(1,169) = .0017$, $p < .05$); and (d) subjects who preferred "soft" music or had "no preference" indicated greater importance of hearing the music on the radio in determining their music listening than those who preferred "hard" music ($F(1,170) = .0082$, $p < .05$).

Personality and Music Preferences

The relationships between personality characteristics (as assessed by the MAPI) and music preferences were examined. Pearson Correlation Coefficients were computed to determine the relationships between preferences for 23 styles of music in the Music Styles Scale and the 20 MAPI Base Rate (BR) scores. With regards to personality styles (the first eight scales of the MAPI), the following significiant correlations were found: (a) Teenagers who had a tendancy to be quiet and untalkative (Introversive style) preferred Rhythm and Blues ($r=.3158$, $p < .01$), Gospel/Christian ($r=.2832$, $p < .01$),Worldbeat ($r=.2413$, $p < .01$), and Jazz ($r=.2267$, $p < .01$), while those subjects who were more emotional and colorful preferred Soundtracks ($r=-.1686$, $p < .05$) music; (b) the less inhibited or shy (Inhibited style) subjects were, the more they preferred Country ($r=-.1898$, $p < .05$) music; (c) the less socially passive and submissive (Cooperative style) subjects were, the more they preferred Heavy Metal ($r=-.1938$, $p < .05$), Classic Rock ($r=-.2156$, $p < .05$), and Roots ($r=-.1774$, $p < .05$) music; (d) subjects who were not overly outgoing or socially charming (Sociable style) preferred Rhythm and Blues ($r=-.1886$, $p < .05$) and Gospel/Christian ($r=-.2608$, $p < .01$) music; (e) subjects who could be

characterized as being somewhat condescending and self-assured (Confident style) preferred Country (r=.2512, $p < .01$), New Age (r=.2387, $p < .05$), and Roots (r=.2172, $p < .05$) music; (f) subjects who were more domineering and strong-willed (Forceful style) preferred Heavy Metal (r=.2107, $p < .01$) and Classic Rock (r=.2011, $p < .05$) music, while those who were less assertive and tough-minded preferred Teen Pop (r=-.1925, $p < .05$) and Gospel/Christian (r=-.1830, $p < .05$) music; (g) subjects who tended to be overly perfectionistic and rigid (Respectful style) preferred Country (r=.1587, $p < .05$) Pop (r=.1923, $p < .05$), Teen Pop (r=.2102, $p < .01$), and Gospel/Christian (r=.2008, $p < .05$), while those who were less serious-minded and rule-conscious preferred Heavy Metal (r=-.2635, $p < .01$); and (h) subjects who were more moody and unpredictable (Sensitive style) preferred Heavy Metal (r=.2492, $p < .05$), while subjects who were less dissatisfied with themselves preferred Country (r=-.2618, $p < .01$), Gospel/Christian (r=-.1859, $p < .05$), Worldbeat (r=-.2541, $p < .01$), and Rock (r=-.1744, $p < .05$) music.

The expressed concerns (next eight scales on MAPI) were also related to each of the 23 music styles. Pearson Correlation Coefficients revealed the following: (a) The clearer the subjects felt about who they were and what they will become (Self-Concept), the more they preferred Country (r=-.2634, $p < .01$), New Age (r=-.3028, $p < .01$), Roots (r=-.1682, $p < .05$), and Rock (r=-.1596, $p < .05$) music; (b) the more satisfied subjects were when they compared views of themselves against their ideal selves (Personal Esteem), the more they preferred Country (r=-.2777, $p < .01$) and Classic Rock (r=-.1701, $p < .05$) music; (c) subjects who felt comfortable with their physical maturation (Body Comfort) preferred Country (r=-.1906, $p < .05$) Classic Rock (r=-.1604, $p < .05$), Roots (r=-.1900, $p < .05$), and Rock (r=-.1829, $p < .05$) music; (d) subjects who were dissatisfied with their sexual nature and development of heterosexual

relationships (Sexual Acceptance) preferred Teen Pop (r=.1696, $p < .05$) and Gospel/Christian (r=.1945, $p < .05$), while those who were more satisfied with this area of development preferred Country (r=-.1728, $p < .05$), Classic Rock (r=-.2542, $p < .01$), Power Pop (r=-.1610, $p < .05$), Roots (r=-.2332, $p < .05$) and Rock (r=-.1898, $p < .05$) music; (e) subjects who struggled with acceptance and belonging in relation to peers (Peer Security) preferred Gospel/Christian (r=.2404, $p < .01$) and Worldbeat (r=.2151, $p < .05$) music; (f) subjects who demonstrated a certain degree of concern in relation to the difficulties of others (Social Tolerance) preferred Soundtracks (r=-.2565, $p < .01$) and Teen Pop (r=-.1847, $p < .05$) music; (g) subjects who were uncomfortable with their family system (Family Rapport) preferred Heavy Metal (r=.2532, $p < .01$), while those who were more comfortable with their families preferred Country (r=-.1928, $p < .05$) and Gospel/Christian (r=-.2166, $p < .05$) music; and (h) subjects who struggled with their beliefs about their inability to be successful in academic efforts (Academic Confidence) preferred Rock Funk (r=.1728, $p < .05$) and Heavy Metal (r=.2699, $p < .01$), while those who were more confident academically preferred Country (r=-.1634, $p < .05$), New Age (r=-.2564, $p < .05$), and Teen Pop (r=-.1755, $p < .05$).

Pearson Correlation Coefficients were computed between the behavioral correlates (last four scales on MAPI) and the 23 music styles of the Music Styles Scale. The results of this analysis are as follows: (a) Subjects who tended to act on their impulses (Impulse Control) preferred Heavy Metal (r=.2488, $p < .01$), while those who had exercised restraint preferred Country (r=-.1787, $p < .05$), Pop (r=-.2369, $p < .01$), Teen Pop (r=-.2174, $p < .01$), Gospel/Christian (r=-.2089, $p < .05$), and Worldbeat (r=-.2167, $p < .05$) music; (b) subjects who had problems conforming to societal rules and regulations (Societal Conformity) preferred Heavy Metal (r=.3410, $p < .01$) and Classic Rock (r=.1649, $p < .05$),

while those subjects who were more conforming preferred Teen Pop (r=-.2202, $p < .01$) and Gospel Christian (r=-.2109, $p < .05$); (c) subjects whose academic performance did not match their academic potential (Scholastic Achievement) preferred Heavy Metal (r=.2911, $p < .01$), while those whose academic potential more closely approximated their scholastic achievement preferred Country (r=-.2020, $p < .01$), New Age (r=-.2336, $p < .05$), and Teen Pop (r=-.1879, $p < .05$); and (d) subjects who had problems attending school regularly (Attendance Consistency) preferred Rock Funk (r=.2014, $p < .05$), while those who attended school with more regularity preferred Country (r=-.2550, $p < .01$) and Classic Rock (r=-.1851, $p < .05$).

Turning now to the Music Qualities Scale, multivariate ANOVAs were employed to determine the differences among subjects in the "hard," "soft," and "no preference" groups and the 20 personality scales of the MAPI. Table 12 presents the means for the "hard," "soft," and "no preference" groups for each of the personality scales as well as the significant differences. Figures 7, 8 and 9 graphically present these means on the personality styles, expressed concerns, and behavioral correlates scales for each of the three music preference groups. With regards to personality style (the first eight scales of the MAPI), the MANOVA procedure revealed a Wilk's Test of Significance ($F(1,16) = .001$, $p < .05$) that indicated significant differences among the groups on the personality styles of Cooperative, Forceful, Respectful, and Sensitive. Follow-up Scheffe' tests showed the following significant differences among groups: (a) Subjects who were significantly more passive and submissive (Cooperative style) preferred "soft" music ($F(1,163) = .0092$, $p < .05$) compared to those who preferred "hard" music; (b) subjects who were significantly more assertive and tough-minded (Forceful style) preferred "hard" music ($F(1,163) = .0001$, $p < .05$) compared to subjects who preferred "soft" music; (c) subjects who were

Table 12

MAPI BR Scores for "Soft," "Hard," and "No Preference" Groups

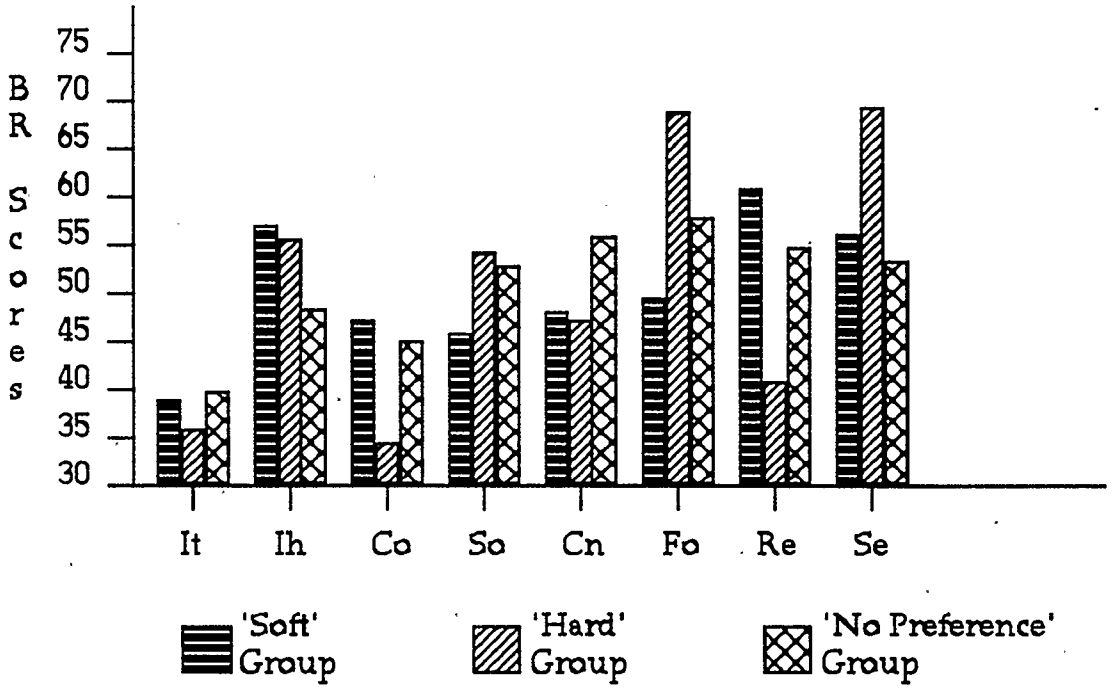
Personality Styles	**"Soft" Group**	**"Hard" Group**	**"No Preference"**
Introversive	38.9	35.9	39.6
Inhibited	56.7	55.8	23.6
Cooperative	47.3**	34.9*	45.0
Sociable	45.8	54.1	52.7
Confident	47.8	47.4	55.6
Forceful	49.4*	69.1**	57.4
Respectful	60.4**	40.7*	54.9**
Sensitive	56.0*	69.6**	53.5*
Expressed Concerns			
Self-Concept	56.8	62.3**	51.6*
Personal Esteem	73.1	72.1	65.8
Body Comfort	67.3	60.6	57.1
Sexual Acceptance	67.6**	55.9*	57.1*
Peer Security	69.8**	58.3*	62.1
Social Tolerance	44.3*	61.5**	54.1
Family Rapport	58.1*	70.6**	57.0*
Academic Confidence	48.9*	60.6**	51.7
Personality Styles			
Impulse Control	45.7*	63.9**	51.1*
Societal Conformity	47.3*	64.5**	52.8*
Scholastic Achievement	38.9*	51.3**	40.2*
Attendance Consistency	56.2	55.5	51.3

**Mean significantly greater ($p < .05$) than *mean

Figure 7

Personality Styles BR Scores for

Subjects on the Music Qualities Scale



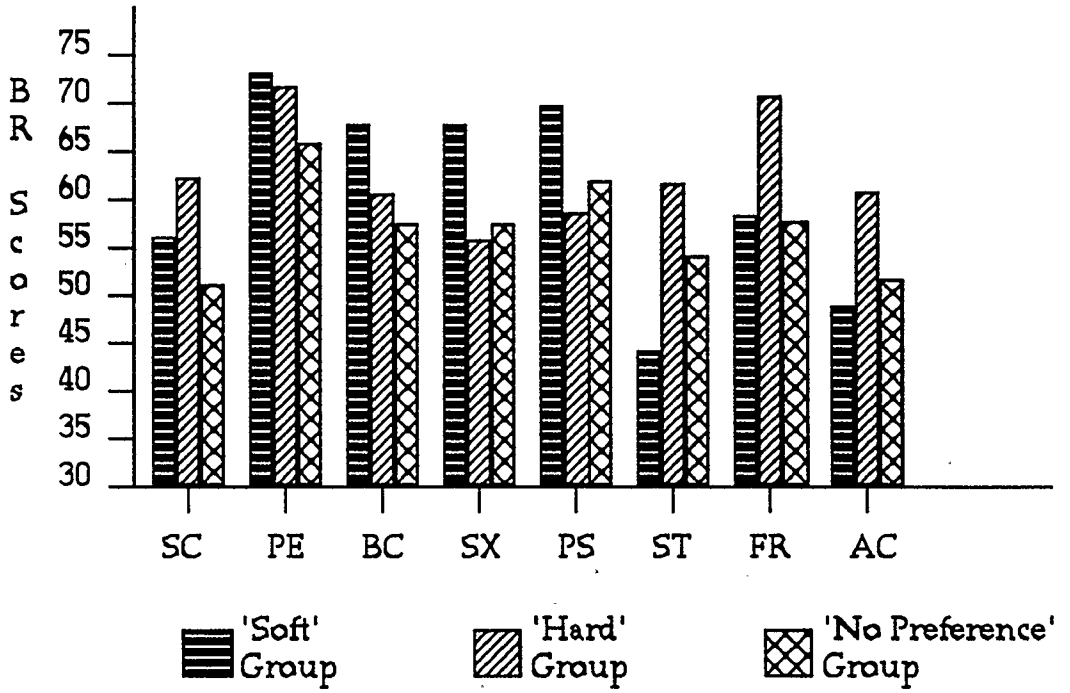
Personality Styles

It - Introverted
Ih - Inhibited
Co - Cooperative
So - Sociable
Cn - Confident
Fo - Forceful
Re - Respectful
Se - Sensitive

Figure 8

Expressed Concerns BR Scores for

Subjects on the Music Qualities Scale

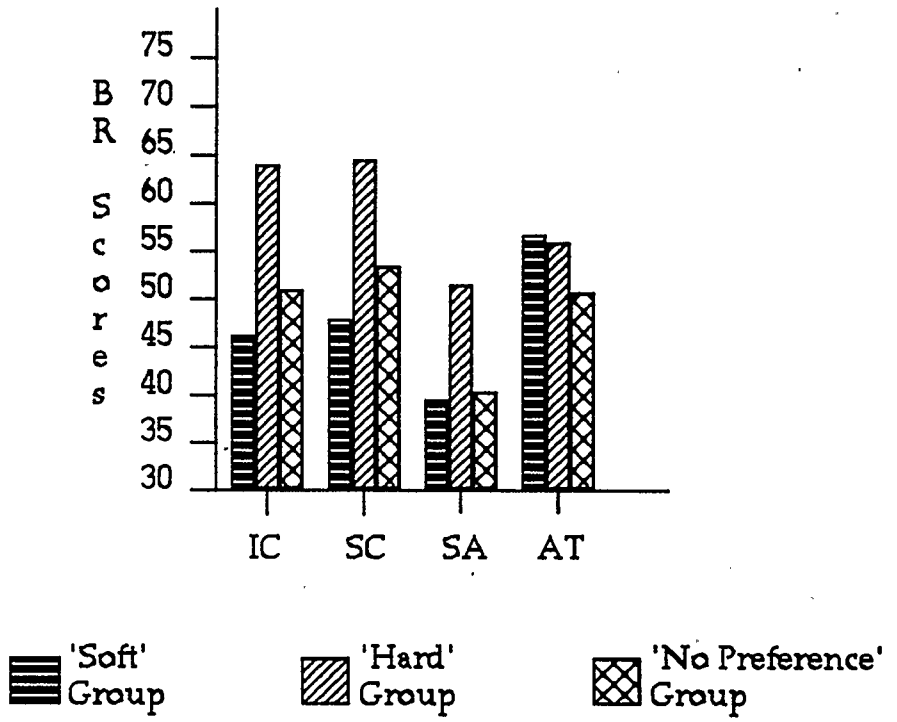


Expressed Concerns
SC - Self-Concept
PE - Personal Esteem
BC - Body Comfort
SX - Sexual Acceptance
PS - Peer Security
ST - Social Tolerance
FR - Family Rapport
AC - Academic Confidence

Figure 9

Behavioral Correlates BR Scores for

Subjects on the Music Qualities Scale



Behavioral Correlates
IC - Impulse Control
SC- Societal Conformity
SA - Scholastic Achievement
AT - Attendance Consistency

significantly more responsible and emotionally overcontrolled (Respectful style) indicated a greater preference for "soft" music ($E(1,163) = .0000$, $p < .05$) or had "no preference" ($E(1, 163 = .0000$, $p < .05$) for either style compared to subjects who preferred "hard" music; and (d) subjects who were significantly more moody and behaved unpredictably (Sensitive style) preferred "hard" music ($E(1,163) = .0019$, $p < .05$) compared to those who preferred "soft" music or had "no preference."

The Wilk's Test of Significance ($E(1,16) = .001$, $p < .05$) also indicated differences among the groups regarding their expressed concerns (scales nine to 16 on MAPI) on six of the scales. Scheffe' tests revealed the following significant differences among the groups: (a) Subjects who indicated concerns over who they were and what they would become (Self-Concept) showed a preference for "hard" music ($F(1,163) = .0314$, $p < .05$) compared to those subjects who had "no preference" in their music; (b) subjects who were dissatisfied with their sexual nature and the development of heterosexual relationships (Sexual Acceptance) preferred "soft" music ($E(1,163) = .002$, $p < .05$) compared to those who preferred "hard" music or had "no preference"; (c) subjects who had problems being accepted by and fitting in with their peers (Peer Security) preferred "soft" music ($E(1,163) = .0202$, $p < .05$) compared to those who preferred "hard" music; (d) subjects who lacked concern for others in difficult circumstances (Social Tolerance) preferred "hard" music ($E(1,163) = .0021$, $p < .05$) compared to subjects who preferred "soft" music; (e) subjects who were uncomfortable with their family systems (Family Rapport) preferred "hard" music ($E(1,163) = .0142$, $p < .05$) compared to subjects who preferred either "soft" music or had "no preference"; and (f) subjects who believed they were unable to be successful in academic efforts (Academic Confidence)

indicated a preference for "hard" music ($F(1,163) = .0171$, $p < .05$) compared to subjects who preferred "soft" music.

The MANOVA procedure also revealed significant differences among the music preference groups on three of the MAPI behavioral correlates scales (scales 17 to 20) ($F(1,8) = .000$, $p < .05$). The following significant differences were found: (a) Subjects who indicated problems in acting of their impulses (Impulse Control) preferred "hard" music ($F(1,163) = .0000$, $p < .05$) compared to subjects who preferred either "soft" music or had "no preference"; (b) subjects who did not regularly conform to societial rules and regulation (Societal Conformity) indicated a preference for "hard" music ($F(1,163) = .000$, $p < .05$) compared to subjects who preferred "soft" music or had "no preference"; and (c) subjects who academic performance did not meet their academic potential (Scholastic Achievement) preferred "hard" music ($F(1,163) = .0020$, $p < .05$) compared to those who preferred "soft" music or had "no preference."

Personality and Music Involvement

Pearson Correlation Coefficients were computed to determine the relationships between the MAPI BR scale scores and music involvement variables. Several of the MAPI variables were significantly correlated with music involvement. Hours of listening to music during the weekday was significantly and positively correlated with the Forceful ($r = .2262$, $p < .01$), Sensitive ($r = .1897$, $p < .05$), Family Rapport ($r = .2360$, $p < .01$), Academic Confidence ($r = .1589$, $p < .05$), Impulse Control ($r = .1664$, $p < .05$), Societal Conformity ($r = .2271$, $p < .01$), and Scholastic Achievement ($r = .1739$, $p < .05$) scale scores; that is, subjects who were domineering, moody, and dissatisfied with their family system, who did not believe they could be successful in school, who often acted on their impulses and disregarded societal rules, and whose academic performance did not match their academic potential listened to high

amounts of music during weekdays. Weekend music listening was significantly and positively correlated with the Forceful (r = .1818, $p < .05$) scale score, but was negatively related with the Cooperative (r = -.1769, $p < .05$) scale score; that is, subjects who were overly assertive and not passive or submissive listened to large amounts of music on the weekends. Average hours of listening to music during the week was significantly and negatively correlated with the Cooperative (r = -.2108, $p < .01$) and Peer Security (r = -.1613, $p < .05$) scale scores, but was positively correlated with the Forceful (r = .2230, $p < .01$), Family Rapport (r = .2030, $p < .01$), and Societal Conformity (r = . 2085, $p < .01$) scale scores; thus, subjects who were tough-minded, were uncomfortable with their family system, who did not conform to societal rules, and were not passively dependent or shunned by their peers listened to a considerable amount of music throughout the week. Finally, hours spent listening to music on the day prior to data collection was significantly and positively correlated with the Sociable (r = .1609, $p < .05$) and Forceful (r = .1625, $p < .05$) scale scores, while it was negatively correlated with the Cooperative (r = -.2259, $p < .01$), Self-Concept (r = -.1581, $p < .05$), Sexual Acceptance (r = -.1899, $p < .05$), and Peer Security (r = -.1815, $p < .05$) scale scores; that is subjects who were loud, emotional, and domineering, but who did not struggle with issues related to social passivity, deciding who they were and what they will become, and peer acceptance listened to a greater-than-average amount of music on the day before testing.

CHAPTER V
DISCUSSION

The present study examined the relationships among music preferences, motives for listening to and preferring music, demographic characteristics, music involvement, and personality traits of adolescents; the impact of grade and gender on each of the factors was also measured. This discussion is divided into three sections. First, the research questions and related findings for the external variables (music-related variables, social background, and peers/parents) and internal variables (motives/gratifications and personality traits) influencing music preference, as well as grade and gender differences pertaining to both, will be reviewed. The results will be compared to findings from previous research and some possible explanations for the findings will be presented. Second, some theoretical and methodological considerations related to the design of the study will be discussed. Finally, the implications of this investigation and suggestions for future research will be presented.

Review of Internal and External Variables Tested

Demographic Variables

Seventy-eight males and 97 females (N=175) from two grade levels, Grades 8 and 11, participated in study. All subjects were in full-time attendance at their respective public schools during the period of testing. This sample of adolescents seemed to typify the "average" Canadian family with regards to family structure, middle-class educational background, and scholastic ability. More specifically, the majority of adolescents in this sample had two parents living at home (at least one of which had attended or completed college), one older brother/sister, and was achieving at least average marks in school. Not

surprisingly, almost 20% of this sample lived in a single-parent family (Santrock, 1990, estimated that 25% of children will live in such a household at some point in their childhood).

Millon Adolescent Personality Inventory (MAPI)

Millon (1982) did not provide the normative data or means by which one can compare the present sample on each of the 20 scales with his standardization norms. Nevertheless, the overall Base Rate mean scores achieved by the total sample were consistently below the scores established by Millon (i.e., BR ≥ 75) to represent the "presence" of a serious clinical problem; thus, this sample appears to represent a typical adolescent population.

Although one cannot compare the specific means for gender and grade in the present study with the general norms of the MAPI, several insights can be gained by examining the significant grade and gender differences within each of the personality styles, expressed concerns, and behavioral correlates scales. By the degree of score elevation indicated, both female and junior high subjects reported that they were more dissatisfied with their view of themselves when compared with an ideal self (Personal Esteem scale) and failed to attend school with a similar degree of regularity (Attendance Consistency) as compared to the males and senior high subjects, respectively, in the sample. It is interesting to note that the mean Personal Esteem score ($\underline{M}$ = 76.4) achieved by the junior high subjects was over the criterion score necessary for the designation of the "presence" of clinical problem in this area. Thus, at an age where critical self appraisal and peer acceptance are at their height, both junior high and female subjects revealed significant issues in how they view themselves and in their school attendance behavior compared to the other grade and gender.

Several interactions between grade and gender were also found that both support and add to the findings above. Junior high females indicated

greater concern with both the clarity of who they were and what they would become (Self-Concept) as well as the contrast between themselves and their ideal selves (Personal Esteem) than senior high females. The salience of fashion and physical appearance in this population of teenagers is possibly greater than at any other period in a person's life; thus, it is not surprising that the blossoming adolescent females struggle with these two issues of concern to a greater degree than all other population groups in the sample.

The two final interactions provided information regarding the personality styles of senior high males. It was found that senior high males had significantly more problems with being nervous and awkward in social situations and often felt more lonely and isolated (Inhibited scale) than their junior high counterparts. In contrast, it was found that junior high males and senior high females were more dominant in their friendships (Confident scale) than either senior high males or junior high females. This might be interpreted to mean that as adolescent males grow and mature, a majority of them may feel left out socially and very fragile in their relationships with others. It may be that males who are not athletic, good-looking, and sociable feel uncomfortable in their interaction with others.

Music Involvement

With regards to formal music experience, well over half of the adolescents in this sample reported that they presently did not sing or play a musical instrument, had never taken any form of music lessons, and had never sang or played in a band, orchestra, or other musical group. Although one would expect that such musical inexperience would translate into a commensurate lack of music understanding, the subjects' collective mean response indicated that they believed they understood "many aspects of music." Given the nature of the MIQ and the purpose of the study that was explained to

the subjects prior to their participation, it is possible that many of the subjects overestimated their music understanding in order to appear "qualified" to participate in the study. On the other hand, it is important to note that many aspects of music can be appreciated simply through listening to many hours of music.

Almost four out of every five adolescent subjects indicated that music was either "important" or "very important" in their lives. The importance ascribed to music, however, did not translate into above average amounts of listening, as the 3.2 hours of music listening per day and 22 hours per week were consistent with Christenson et al.'s (1989) estimate of 3.5 hours per day and Decima Research's (1991) finding of 20.12 hours per week. The present listening amount was somewhat less than that found by Leming (1987); in his sample, the time spent with all media (i.e., radio, record, and tapes) was estimated to be 28 hours per week or 4 hours per day. His latter estimate may reflect what this study's subjects "wished" they could spend listening to music (e.g., 34 hours per week); thus, a discrepancy exists between the actual listening amounts reported by the subjects and the amount that they wished they could spend listening to music. The gap between these two indices may be narrowed by the fact that their reported listening likely reflects their bias in reporting intentional listening and, hence, they may have significantly underestimated the actual amount of exposure such as having music as the background for other activities (Christenson et al., 1989).

The cassette player was ranked by the subjects as being the source of music they used the most. This is consistent with the notion that having control over the kind of music they listen to is very important to adolescents, with the popularity of the "walkman" in the past decade testifying that this source of music is very attractive to this mobile group. The radio, which was ranked

second by the group, possibly reflected the popularity of Top 40 music to a good majority of the subjects. The ranking of CD and record players as third and fourth in use, respectively, may have indicated at least two considerations: (1) CD's and CD players may still be somewhat out of the financial reach of many teenagers; and (2) the record player as a source of music has been surpassed both in quality of sound and ease of use in comparison to the other music sources available.

The teenagers in this study reported that they bought musical recordings at the rate of almost two per month. It was somewhat surprising that duplicating (taping) of music was not higher than the average of 17 per year reported, given that this activity would be much cheaper than buying new recordings. As mentioned previously, these self-reports of buying and taping behavior may be underestimates. Their attendance at music concerts was slightly under the two-per-year average reported in the Decima Research (1991) study, while attendance at dances was almost triple this amount. Again, given that the average concert price is in the twenty-five dollars and higher range, the economic feasibility of attending more dances than concerts was hardly unexpected.

Several hypotheses were made with regards to music involvement, particularly concerning grade and gender differences. Pertaining to grade, it was expected that the senior high subjects would report higher daily estimates of time spent listening to music than the younger subjects. Although only one of the measures proved to be significant, the older subjects did consistently report higher daily and weekly averages of music listening, and did listen significantly more on the day before testing than the junior high subjects. The present study did not find the magnitude of age differences found by Christenson et al. (1986); this is not surprising since their results were based upon children in Grades 1-5.

With regards to gender differences, the research question stated that males would have purchased more musical recordings than females, but that females would report listening to music more than males. The male subjects purchased or received as gifts somewhat more musical recordings in the past year than females, but this difference was not statistically significant. If a larger sample size had been obtained, perhaps this gender effect may have been demonstrated. Supporting the findings of past research (e.g., Christenson et al., 1983; 1988; Larson et al., 1989; Roe, 1985), female adolescents reported significantly greater weekday listening than males. They also reported greater weekend listening, daily average listening, and hours of listening the day before testing, although these differences were not significant. This generally greater listening time by females is supported by several other significant findings pertaining to this group: Females reported significantly greater importance of music in their lives than males; they also reported significantly higher attendance at music concerts than males, as well as higher attendance at all music events (e.g., concerts, dances, school-related events) than males. Thus, for reasons that will be explored later in this section, females deem music to be very important in their lives, and this fact is supported by their behaviors in both the amount of listening and attendance at musical events.

Motives for Listening to Music

The adolescents in the present study revealed that their motives for listening to music were not limited to one or two, but spanned across a range of reasons. The three most frequent motives for listening to music were to relieve boredom, for entertainment, and to help pass the time. This finding corresponds very closely with that of Gantz et al. (1978) and suggests that adolescents in this study do listen to music, in part, because of its "background" function. The high use of motives to "feel better" and "get me in a particular mood" suggests that

music also plays the role of setting mood and attuning emotions, with the role of the lyrics in achieving these ends downplayed by the subjects. This was further supported by the subjects' mean scores for the four categories of motives; atmosphere creation/mood control and emotional attunement were the dominant motives relative to listening to the lyrics and passing the time.

Several grade and gender differences were found with regards to motives for listening to music. The research question stated that the senior high subjects would identify motives related to mood (Christenson et al., 1983; Gantz et al., 1978) and lyrics (Gantz et al., 1978; Leming, 1987; Toohey, 1982) more than the younger subjects. The only significant finding in this direction was that the older subjects listened to music to "help relax" more than the younger subjects. The younger subjects, on the other hand, indicated that several motives were significantly more important in determining their music listening (e.g., for passing time, to dance, to rid frustration, to get excited) than they were for the older subjects . Such findings suggest that the younger adolescents listen to music as a background for social activities and for emotional attunement. Thus, although the junior high subjects do not use the motives of mood and lyrics more than their senior high counterparts, the different grade groups do use music for different reasons.

Gender differences in motives for listening were more pronounced than the grade differences. Consistent with previous studies, females overwhelmingly reported a greater frequency of use of motives for music listening (e.g., Boyle et al., 1981; Christenson et al., 1983; Gantz et al., 1978; Roe, 1985; Rosenbaum et al., 1987). Female subjects indicated that they listened to music for atmosphere setting/mood control, time passing/silence filling, attention to the lyrics, and emotional attunement significantly more than did the male subjects. Supporting these findings, Christenson et al. (1988)

found that females were more likely to express that they "use music in the service of secondary gratifications (e.g., to improve mood, feel less alone) and as a general background activity" (p. 299). The fact that females in this study reported more frequent use of motives for listening to music than males may also stem from what Nielzen et al. (1981) calls "a greater culturally conditioned sensitivity for music." Thus, females may use music for managing their emotions, mood, and time because they are more susceptible to its influence even when used in a background capacity.

Music-Related Factors Influencing Music Listening

The present study found that the singer's voice and rhythm were "important" for many of the subjects, while the music's melody, harmony, and instrumentation were all at least "somewhat important" in determining listening to a musical group or artist. This is consistent with Lull's (1982) delineation of factors responsible for influencing music listening; he stated that it is the sound, rather than the lyrics or subcultural associations, that determine music preference.

The sociocultural variables of the music group's appearance, peer approval, parental irritation, and radio airplay appeared to be relatively unimportant in determining their listening to musical groups or artists. This finding seems inconsistent with the variables emphasized by both Leblanc (1980) and Rösing (1984) who suggested the importance of social/cultural/situational variables influencing music preference. The unimportance of these sociocultural variables in the present sample is surprising for three reasons. First, those who finance, produce, and market music for teens assume that the more attractive the "music package" looks to the listener, the more that product will be consumed. Second, Frith (1980) argued that rock music can be used as a "source of solidarity" for teens to organize

themselves around and that this is an unspoken rule within most cliques or friendship groups. Third, a good portion of the groups identified by the adolescents as being their favourites were also the most frequently played on the Top 40 or All Hits radio stations, suggesting a cultural influence. Yet, in the face of these seemingly important factors of music listening decisions, the present sample of adolescents presented a picture of music listeners who focussed almost solely on the characteristics of the music itself and not on the social factors traditionally associated with pop music listening.

Past research suggested that grade and gender differences might be expected with regards to music-related factors for music listening. Specifically, junior high subjects were previously found to indicate that rhythm, radio exposure, and peer influence were important in determining music listening, while the senior high subjects had previously identified melody and instruments as being important in influencing listening. It was found that (a) melody, instruments (both found by Boyle et al., 1981), and harmony were more important for the older than the younger subjects, and (b) peer approved music (as per Boyle et al., 1981), music that irritates parents, and group appearance were significantly more important for the younger group than the older subjects. It appears that for younger adolescents, the sociocultural aspects of music were significantly more important in determining their music listening compared to older adolescents. The former group appears to be more concerned with physical appearance, peer acceptance, and challenging parental authority for the first time; thus, they may use social cues to decide to which type of music to listen. On the other hand, senior high subjects seemed to lay claim to certain music groups for no other reason than for the music itself, i.e., how it sounds melodically, harmonically, and instrumentally. The senior high subjects may be experiencing the culmination of what Schulten (1987) called a "chain" of music

preference development, in which music does not dominate their lives to the point where it determines friendships, their parental relationships, or fashion decisions, but is appreciated to a large extent for the aesthetic pleasure it provides.

Music Preferences

The rankings of the 23 music styles on the Music Styles Scale revealed that the majority of adolescents preferred music within the *Teen Pop* music factor. Of the top five music styles identified by the subjects, four of them (Rap, Dance, House, and Hip Hop) were within this music factor. This finding supports those of other studies (e.g., Christenson et al., 1988; Lull, 1982; Tanner, 1981) which also found that "mainstream" or "Top 40" was the most preferred styles of pop music. The top six preferences of subjects in the Decima Research (1991) study were also found to include these four music styles.

When asked to list their favourite musical groups or artists, a very similar trend appeared. Seven of the 10 most frequently reported groups or artists were judged to be exemplars of the *Teen Pop* music factor, making up almost 55% of the preferences indicated by the subjects. The percentage of subjects preferring *Teen Pop* was even greater when they were asked to indicate their favourite style of music and their favourite musical recordings. Taken together, these three indices of music preference strongly suggest that the *Teen Pop* music factor adequately represents the favourite styles of music for this population. This finding is somewhat surprising given the paucity of teen-oriented radio stations in the city of Calgary. Nevertheless, the findings may suggest that these adolescents manage to keep abreast of their favourite music by way of the numerous music-video stations (e.g., MuchMusic), television programs (e.g., Video Hits, Good Rockin' Tonite, NRG), and peer contact.

The Music Qualities Scale revealed that the subjects indicated moderate and almost equal preference for music described by both "soft" and "hard" qualities. The highest consensus among the subjects was for music that was played loudly and at a fast tempo; no other qualities received mean Likert scale responses nearly as high as these two items.

There were several differences between the junior high and senior high subjects in their music preferences, with many of the results in accordance with the findings of previous research. First, junior high subjects reported preferences for Rap, Teen Pop, and House music significantly more than the senior high subjects; all three of these styles are representative of the *Teen Pop* music factor. This finding supports Thompson's (1990) suggestion that there is a gravitation towards mainstream pop music in late grade school and early adolescence. He also suggested that as the listener approaches college age, his or her music tastes become more differentiated. This was predicted and found in the present study. The senior high subjects indicated a greater preference for Country, Classical, Classic Rock, Rhythm and Blues, and Roots music than the junior high subjects. Other researchers (e.g., Fox et al., 1975; Nielzen et al., 1981) have also confirmed these findings regarding the more eclectic tastes of older adolescents. In a similar vane, on the Music Qualities Scale, senior high subjects were found to show a significantly greater preference for "soft" music compared to the junior high subjects. That is, compared to the relatively narrow preference for the continous rhythm, repetitive back-beat, and fast-paced tempo of pop music by young adolescents (such as Rap, Dance, and Hip Hop), it is not surprising that the older subjects showed a greater diversity in their liking of music that is described by adjectives such as romantic, mild, gloomy, and kind; music which represents nearly the polar opposites of the descriptors one would use to characterize Teen Pop music.

Male and female subjects differed in their liking of various music styles and qualities, although the differences appeared to be specific to the scale measuring the music preferences. Using the Music Styles Scale, males were found to prefer Rap music more than females, while the female subjects indicated a significantly greater preference for Teen Pop and Roots music. Although these gender differences were expected and were consistent with several other studies (e.g., Christenson et al., 1988; Herberger, 1987; Larsen et al., 1989; Roe, 1985; Tanner, 1981), the homogeneity of the present sample regarding music style preferences (i.e., predominantly *Teen Pop*) may have prevented the appearance of more gender differences. Such was not the case, however, when males and females responses were compared on the Music Qualities Scale. It was readily apparent that the female subjects showed a much greater preference for "soft" music than the male subjects. That is, while males preferred music described as "tough and hard," females preferred "romantic and dreamy," "mild and quiet," "sad and gloomy," "peaceful and relaxing," "soft and tender," serious and thoughtful," and "good-natured and kind" music. These findings seem to support the notions of Frith (1981); he stated that women use their preferred music to manage and express the sexual and emotional tension implicit in their roles as females. It is also socially acceptable for females to express their feelings in this manner and to admit to such expression. In addition, it appears that the "soft" music preferred by females may result in what Nielzen et al. (1981) called a "culturally conditioned sensitivity" towards music. On the other hand, males' preference for "hard" music, which is described by such adjectives as tough, wild, and protesting, may suggest that the superficial and external aura of control and power communicated by such music are the most important elements to them. Thus, the music preferred by both males and females may serve to meet the

socialized needs of each gender according to the emotions and feelings associated with being male and female.

Interpretation of Correlations Among the Variables Measured

Correlations Between Motives for Listening and Demographics/Music Involvement

Three of the four listening motive factors (i.e., atmosphere creation/mood control, attention to lyrics, and emotional attunement) were found to be positively and significantly related to the importance of music in adolescents' lives. This suggests that the more important music is in adolescents' lives, the more they are motivated to listen music for the purposes of setting atmosphere, controlling mood, listening to the lyrics, and organizing emotions; and, the more important music is, the more reasons listeners have for listening to music. This complements the belief of Mainprize (1985) that pop music reflects the "processes that constitute the subjective psychological makeup of the teenager," since it might be postulated that as adolescents try to understand mood swings, fluctuating emotions, and their relations to the opposite sex (a topic of which the lyrics of a majority of popular music communicate), the more importance they place on pop music as being a vital component of their daily lives.

The fact that the atmosphere creation/mood control factor was found to be positively correlated with weekday music listening, weekly average music listening, and the hours of listening to music on the day prior to data collection suggests that adolescents may have a strong need to listen to music regularly and for extended hours of the day for the purpose of either setting an atmosphere (e.g., with others, for dancing) or controlling mood (e.g., to be less bored). Hours of listening to music on the day prior to data collection was also

positively correlated with attention to lyrics and emotional attunement. This finding might suggest that because these subjects listened to greater-than-average amounts of music on the day before testing, the reasons why they listen to music were more salient and identifiable than for those who reported listening to less music on the day before testing.

Two music-related factors, music that irritates parents and musical group appearance, were negatively correlated with hours of listening to music during the week. It seems plausible that those teens who know that their music irritates their parents decide to listen to lesser amounts out of respect for their parents' feelings. The second finding suggests that adolescents who believe that the music group's appearance is important, the musicality of their music is less important, thus resulting in less listening. It may be the case that if the watching of MuchMusic on television had been assessed, those who believed that appearance was important would have been found to watch more than those who indicated the musicality of music was more salient. Although not measured directly in this study, the influence of music videos on adolescents' affiliation with music cannot be underestimated in this relationship and others to be interpreted. Further, the fact the music group appearance was positively related to the number of older brothers or sisters in one's family, however, might suggest that birth order is associated with the more social aspects of music listening.

Music Listening and MAPI Base Rate Scores

Several strong associations were found between motives for listening to music and the 20 MAPI scales. For example, subjects who indicated a tendency to become loud, exhibitionistic, and overly dramatic (Sociable scale) and who exude overconfidence and arrogance (Confident scale) identified their motives for listening to music were related to atmosphere creation/mood control.

Thus, these very social adolescents may use music for setting the atmosphere and mood for their social gatherings. In contrast, those teenagers who were moody (Sensitive scale), lacked control of their impulses (Impulse Control scale), displayed nonconforming behavior (Societal Conformity scale), and had a tendency to skip school (Attendance Consistency scale) identified their motives for music listening as filling in silence and time passing. For these teenagers, certain kinds of music (e.g., antisocial themes) may reinforce as well as serve as background for some of their misbehavioral exploits; music may also serve as a distraction from their more asocial behavior. Similarly, those adolescents who were self-dissatisfied (Sensitive scale), truant (Attendance Consistency scale), and academically poor (Academic Confidence scale) reported listening to music for emotional attunement and for the lyrics, suggesting the need to feel a sense of validation when it is not forthcoming from others. Taken together, these findings suggest that troubled teens may listen to music as a form of distraction from certain feelings about themselves and academic situations, as well as to offer solace and self-support when feeling outcast.

The sociocultural variables of music listening were also correlated with several scales on the MAPI. Subjects characterized as being submissively dependent (Cooperative scale) and socially rigid (Respectful scale) listened to music that they had "heard on the radio." The mainstream style of music played on the radio has been described by Tanner (1981) as "conformist in character," and adolescents who are struggling with these states may tend to seek music which is consistent with their character. Similarly, teenagers who may be described as cold and domineering (Forceful scale), moody and unpredictable (Sensitive scale), intolerant towards others (Social Tolerance scale), uncomfortable with the family unit (Family Rapport scale), impulsive (Impulse

Control scale), nonconforming to rules and regulations (Societal Conformity scale), academically underachieving (Scholastic Achievement scale), and irregular school attenders (Attendance Consistency scale) listened to music that "irritated" their parents. Apparently, these adolescents choose to deal with their social conflicts by listening to music which not only vent and continue their frustrations (i.e., with their parents), but also which characterize how they feel. In both cases, the music reflects the types of difficulties they experience.

Music Preferences and Demographic/Music Involvement Variables

Preferences for certain styles and qualities of music have previously been found to be related to both demographic and music involvement variables. Any relationships found among the variables might suggest that music preferences are influenced to a certain extent by the social environment surrounding adolescent music listeners. Using the Music Styles Scale, the positive correlations between number of older brothers and/or sisters and preferences for Pop, Classical, and Soundtracks music suggest that older siblings may expose adolescents to a wider range of music beyond that of *Teen Pop* which is so popular with them. It was also found that subjects with lower school grades preferred Reggae and Heavy Metal music, while those with higher school grades preferred Classical, Worldbeat and Jazz music. Similarly, on the Music Qualities Scale, subjects who had lower grades preferred music that was played loudly, while those with higher grades preferred music that was good-natured and kind. These findings parallel those of Tanner (1981), who found that subjects who were less committed to school preferred Heavy Metal, with those who were committed to school preferring Top 40 music, most of which can be characterized as being "good-natured and kind." In general, these findings may suggest that teenagers with higher school grades and more exposure to a variety of music through siblings are more eclectic in their music

tastes (i.e., prefer music from Teen Pop to Jazz), whereas subjects with lower school grades and fewer siblings have narrower musical tastes.

Significant correlations were found between socioeconomic status (as measured by parents' educational level) and preferences for certain styles of music, as measured by the Music Styles Scale. Subjects from higher SES levels preferred Classic Rock, Rhythm and Blues, and Worldbeat music. This finding is similar to that of Fox et al. (1975), who found that adolescents whose fathers' education and occupation were high preferred Jazz/Blues and Folk music more than those whose parents were low SES. Thus, higher SES, together with higher school grades and more older siblings, may be seen as being related to preferences for more progressive styles of pop music.

The degree of involvement with music was also found to be related to music style and quality preferences. For example, the more important music was for adolescents, the more they preferred Heavy Metal, Soundtracks, Power Pop, Roots, and Rock music. Since three of these music styles (Heavy Metal, Power Pop, and Rock) constitute the *Heavy Pop* factor grouping, it might be the case that those who have a very high need for music may focus more narrowly on more intense or harder forms of pop music, perhaps reflecting the intensity of the commitment to music. Similar results were found using the Music Qualities Scale; subjects who indicated that music was important in their lives preferred "upsetting and protesting" music and music that was played "loudly" and "at a fast tempo." These findings support Tanner's (1981) belief that heavy rock music can represent action against prevailing values for adolescent listeners. It was also found that adolescents who listen to large amounts of music on the weekend prefer "upsetting and protesting" music, while those who listen to large amounts during the week prefer "romantic and dreamy" and "soft and tender" music. The picture of the weekend warrior may apply to adolescents who stress

the importance of listening to loud, fast, and protesting music for extended lengths of time on the weekends.

In sum, the pattern of findings suggests that adolescents who lack the presence of older siblings, have lower school grades, are lower SES level, give music central importance in their life, and listen to large amounts of music on the weekend have narrower music tastes (e.g., Heavy Metal, "upsetting and protesting") than those at the other end of these variables. Such findings seem to indicate that the social or situational factors surrounding adolescents do influence adolescents' music preferences.

Personality and Music Involvement

Hours of listening to music was related with all 20 of the MAPI scale scores. It was found that the more the subjects listened to music during the weekdays (Monday to Friday), the more the elevations of their scores indicated problems with being domineering and tough-minded (Forceful scale), being moody and self-dissatisfied (Sensitive scale), having poor family relations (Family Rapport scale), lacking in academic confidence (Academic Confidence scale), often behaving impulsively (Impulse Control scale), being socially nonconforming (Societal Conformity scale), and rarely achieving academic potential (Scholastic Achievement scale). The higher the subjects' average hours of listening to music throughout the week (including weekends), the less socially passive and submissive (Cooperative scale) and accepted by the peer group (Peer Security scale) the listeners were, while at the same time they were overly domineering and tough-minded (Forceful scale), uncomfortable with the family system (Family Rapport scale), and not conforming to societal rules and regulations (Societal Conformity scale).

The body of findings relating personality (personality styles, expressed concerns, and behavioral correlates) and music involvement indicated that, not

only did teenagers with problems prefer the heavier forms of pop music (e.g., Heavy Metal or "hard" music), they also listened to greater amounts of this music throughout the week than those who preferred other styles of music. Hansen et al. (1990) suggested that young people choose to listen to these heavier forms of pop music because they possess attributes that attract them to particular aspects of the music. More specifically, there may be a match between the personality, concerns, and behaviors of the adolescent listeners and the message being communicated. Hansen speculated that when exposure to this form of music is frequent, the result may also be an increase in the influence of other aspects of the music (e.g., modelling of nonconforming behavior and lifestyle, anti-establishment values) toward which listeners may not have been previously predisposed. Thus, troubled teenagers who listen to large amounts of music which has traditionally been opposed to societal norms and values may be trying to sort out their feelings and attitudes in the face of conflicting messages from both their music and the society in which they participate.

Music Preferences and Motives for Listening/Music-Related Factors Influencing Music Listening

Many of the 23 styles of music from the Music Styles Scale were related to the four categories of motives for listening to music. The music-related variables of melody, rhythm, and the singer's voice were deemed by adolescents to be very important contributors for their preferences for Dance, Pop, Soundtracks, and Teen Pop music; whereas harmony and instruments were both strongly favoured in listening to such music styles as Classic Rock, Power Pop, Classical, Jazz, and Roots music. Not surprisingly, instruments were identified by fans of Heavy Metal to be very important, while those who preferred Rap music significantly downplayed the importance of instruments.

Using the Music Qualities Scale, adolescents who preferred "soft" music placed more emphasis on the melody than those subjects who preferred "hard" music. Conversely, teenagers who preferred "hard" music allocated greater importance to the influence of instruments on their music preference decisions than those who preferred "soft" music. This suggests a pattern: Adolescents who prefer the more mainstream styles of popular music identify melody, rhythm, and the singer's voice as being important for their music preferences, while those with more progressive (and sometimes harder) tastes indicate that harmony and instruments have a strong influence on their listening preferences.

Regarding sociocultural variables and music listening, a similar trend may also be present in the results. It was found that the group's appearance, hearing the music on the radio, and "what your friends like" were identified as being very important for preferring music styles that included Dance, Rap, Soundtracks, and Teen Pop music, as well as music described as "soft." On the other hand, hearing the music on the radio was not particularly important for fans of Heavy Metal, Classic Rock, Rhythm and Blues, and Rock music, nor was the variable of "what your friends like" salient for adolescents who preferred Country, Heavy Metal, and Rhythm and Blues music. Thus, preferences for progressive and/or non-mainstream teen music do not appear to be dependent on factors associated with either the mass media or peer approval. This finding appears to be contradictory to what one would expect, given that music subcultures often organize themselves around music that is traditionally non-mainstream. Given the results using this particular population, however, it might be stated that only those adolescents who prefer the more mainstream styles are subject to the influence of peers and other teen culture (e.g., media). Also, these results suggest that several of the music-related variables have a stable

and predictable influence on the music preference decisions of adolescents no matter what the form of the music preference measure utilized.

Personality and Music Preferences

Personality Styles and Music Preferences

All eight of the personality styles showed strong correlations with preferences for certain music styles and qualities, several of which support the findings of previous research. It was previously found that a higher introversive style would be related to preferences for mainstream styles of music. Contradictory to this finding, however, subjects who might be described by this scale as dull, quiet and colorless, unable to make friends, and often indifferent and apathetic (Introversive scale) preferred distinctly non-mainstream music such as Rhythm and Blues, Gospel/Christian, Worldbeat, and Jazz music, while those who were less introverted preferred Soundtracks music. This finding lends support to an early study by Keston et al. (1955), who found that listeners who were characterized as being intellectually introverted identified a preference for classical music over the more modern swing music style. It is important to note that this was the only source of research upon which this finding was based.

Previous studies suggested that subjects who were sociable to the point of being loud, demanding, and overly dramatic (Sociable scale) would prefer more mainstream styles of music. The results showed that adolescents who were not overly outgoing or socially charming preferred Rhythm and Blues and Gospel/Christian music. These findings are similar to those of Burke et al. (1966), who found that subjects who were not particularly sociable (i.e., limited friends, extracurricular activites) preferred listening to music which communicated such themes as loneliness and love. Both R and B and

Christian music present such themes, and thus, possibly meet the needs of these listeners.

Using the Forceful scale, subjects who could be described as cold, domineering, and insensitive indicated preferences for Heavy Metal, Classic Rock, and "hard" (Music Qualities Scale) music, while adolescents on the other end of the spectrum preferred Teen Pop and Gospel/Christian music. This fits with the findings of Hansen et al. (1990), who found that subjects preferring Heavy Metal music showed insensitivity (towards females) and a "might makes right" attitude. Such findings may be interpreted as suggesting that an overly forceful, self-reliant personality style leads listeners to music that further reinforces such attitudes and demeanor.

Adolescents who scored high on the Respectful scale were characterized as perfectionistic and conforming in their relations with others; they were found to prefer Country, Pop, Teen Pop, and Gospel/Christian music in the present study. On the other hand, those who were less rigid and less respectful preferred Heavy Metal and "hard" music. Thus, similar to the findings of Hansen et al. (1990), adolescent listeners who subscribed to hard or heavy rock music may have done so to validate their disrespectful feelings towards others; whereas those who preferred more mainstream styles of music might be serving their needs to conform in a respectful, though somewhat dependent, manner. This validation of feelings can also be used to characterize adolescents who scored significantly higher on the Sensitive scale, since adolescents who were described as moody and unpredictable indicated a preference for Heavy Metal and "hard" music.

These findings support the conclusions of several studies (i.e., Litle et al., 1986; McIlwraith et al., 1985), that adolescents who prefer "heavier music" do so to satisfy the need for external stimulation. That is, adolescents who are

irritable, aggressive, and disrespectful may choose music which reflects their personality styles and corresponding external behavior.

Expressed Concerns and Music Preferences

The expressed concerns scale of the MAPI was designed to measure issues and attitudes assumed to concern adolescents during their development. Several of the expressed concerns scales were significantly related to distinctly non-mainstream music styles. As measured by the Music Styles Scale, Self-Concept, Personal Esteem, Body Comfort, Sexual Acceptance, Academic Confidence, and Family Rapport scales were related to preferences for Country, New Age, Roots, Classic Rock, and Rock music. This is interpreted as indicating that teenagers who are comfortable with themselves, with their developing bodies, with school, and with family appear to be comfortable in preferring music styles different from the more mainstream varieties (i.e., Rap, Dance).

There were findings which indicated that problems in certain areas may lead to preferences for certain styles or qualities of music. Teenagers who struggled with acceptance of their sexual nature and feelings towards heterosexual relationships (Sexual Acceptance scale) preferred Teen Pop or "soft" (Music Qualities Scale) music, while those who felt unaccepted by their peers (Peer Security scale) also preferred "soft" music. Such preferences reflect the need to soothe and validate their concerns rather than protest them, i.e., through listening to "romantic and dreamy" and/or "soft and tender" music.

On the other hand, adolescents who were uncomfortable with the family system (Family Rapport scale) and had doubts in their ability to be successful in academic efforts (Academic Confidence scale) preferred Heavy Metal or "hard" music. Subjects who indicated that they were unsure of who they were or what they will become (Self-Concept scale) and were unconcerned about the well-

being of others (Social Tolerance scale) also preferred "hard" music. This suggests that the content of the music may serve as a source of support or validation for the way adolescents feel about these concerns; i.e., Teen Pop is characterized by its frequent treatment of issues dealing with love and relationships, while Heavy Metal music often communicates anti-establishment views of the family and school. Also, the qualities of the music represented by the "hard" designation certainly describe and reflect the harshness of the feelings (i.e., "upsetting and protesting," "tough and hard") being experienced by the adolescent listener.

The majority of the findings relating personality and music preferences suggests that whatever the needs of the individual listener, whether they be in regards to acceptance of self, physical and/or sexual development, peer acceptance, familial relationships, or school confidence, there is a style of music to compliment and affirm the difficulties being experienced.

Behavioral Correlates and Music Preference

This scale of the MAPI was designed to measure the behaviors that are often associated with a person's feelings and attitudes. It was previously found that adolescents with problem areas of behavior would prefer the heavier forms of pop music. This research question was confirmed using the Music Styles Scale. Subjects who frequently acted on their impulses (Impulse Control scale), who often failed to conform to societal rules and regulations (Societal Conformity scale), and who demonstrated poor academic performance (Scholastic Achievement scale) preferred Heavy Metal music significantly more than any other style of music. Adolescents who were less impulsive, exhibited less social nonconformity, and did not experience academic problems preferred styles of music such as Pop and Teen Pop. Similar trends were found with the Music Qualities Scale. Subjects preferring "hard" music were those who acted

on their impulses (Impulse Control scale), did not regularly conform to societal rules and regulations (Societal Conformity scale), and did not perform to their academic potential (Scholastic Achievement scale) when compared to subjects who preferred "soft" music or had "no preference."

The consistency of the relationships between the music preferences and problem behaviors support the findings of previous research in the area. Litle and his associate (Litle et al., 1986) found that adolescents who were sensation seekers, experience seekers, and who were very disinhibited preferred "hard rock" music. Hansen et al., (1990) found that subjects who preferred Heavy Metal music were those who rejected authority, accepted antisocial behavior, and did not enjoy cognitive endeavors. Thus, the past research, as well as the present study suggest that problem behaviors stemming from the feelings and attitudes of listeners are strongly associated with the style of music they prefer, in this case, Heavy Metal or "hard" music. Indeed, Litle et al. (1986) stated that preferred music provides a vehicle for satisfying the needs of the listener (e.g., stimulation) by arousing them and involving them in new experiences. It might also be added that this style of music, when listened to in large amounts (as they do on the weekends), likely reinforces their behaviors and validates their feelings. It is possible, therefore, that an escalation of impulsive, nonconforming behaviors may occur in young people who devote an increasingly large amount of time to music listening of this variety as they pass through adolescence.

CHAPTER VI

CONCLUSIONS

Overview of the Findings

Not unlike the majority of teenagers in this country, the adolescents in this study overwhelmingly reported that rock music was an important part of their daily lives. In particular, females were found to attribute greater importance to music in their lives than males, and this fact was further supported by the significantly greater time they spent listening to music. Adolescents who reported listening to greater amounts of music also indicated problems with certain areas of their personality (e.g., domineering and moody, poor family relations, impulsive and nonconforming behavior, and low academic confidence and achievement). Thus, the degree of importance relegated to music by developing teenagers may be indicative of the struggles within any number of areas which are salient to them.

The teenagers reported that the most important reasons or motives for listening to music were to relieve boredom, to pass the time, and for entertainment. Using music as a background to other activities (e.g., when doing homework), then, was emphasized by these adolescents. This finding was supported by subjects' indication that the music-related factors (e.g., rhythm) were more important in music listening than social factors (e.g., peer approval). Females, however, reported that they use music for a greater number of reasons and that it serves to meet deeper needs (e.g., emotional attunement) compared to males, while junior high subjects reported that the social factors influencing music listening were more important than the music-related factors. Thus, music listening decisions do vary according to the grade and gender of the listener.

Increased music importance was found to be related to a greater number of reasons for listening to music. In addition, teenagers who listened to greater amounts of music reported listening for reasons related to atmosphere creation and mood control. Personality was also related to motives for music listening; loud and arrogant adolescents listened to music to set the atmosphere and control their mood; moody, impulsive, nonconforming, and school-truant teens listened to music to fill in silence and pass the time; self-dissatisfied, school-truant, and academically poor students listened to music for emotional attunement and for the lyrics. It might be interpreted that these relationships indicate that adolescents who are experiencing problems in certain areas of their development listen to music for very identifiable reasons. This interpretation also holds true for very submissive and rigid adolescents who preferred listening to music they heard on the radio, as well as for the teenagers who were cold, moody, intolerant, displeased with family, nonconforming, underachieving, and school-truant who preferred music that irritated their parents.

Music preferences for the teenagers were seen to fall within the category of *Teen Pop*, with junior high subjects preferring this style significantly more than senior high subjects, who were more eclectic in their tastes. Females preferred "soft" music much more than the male subjects. Music preferences were also related to various demographic variables, with adolescents who lacked the presence of older siblings, had lower school grades, were in a lower SES level, gave music great importance in their lives, and listened to greater amounts of music preferring "loud" and Heavy Metal music. The music-related variables of melody, rhythm, and the singer's voice were important variables in preferences for mainstream music styles, in addition to the social variables of the group's appearance, hearing the music on the radio, and what their friends

liked. Thus, both social/demographic and music-related factors appear to influence music preference decisions.

Finally, several important relationships were found between personality and music preferences. Teenagers who could be characterized as domineering, disrespectful, impulsive, nonconforming, and moody, who had problems relating to their family and were intolerant of others, and who were unsure of their academic and personal potential, preferred music styles that fell within the Heavy Metal or "hard" genre. On the other hand, teenagers who were somewhat perfectionistic, who struggled with sexual feelings, and who felt unaccepted by their peers preferred Teen Pop or "soft" music styles. Thus, pop music may serve as a vehicle for exploring and gratifying the intrinsic needs of the adolescent listener. The consistency with which these relationships appeared in the present study suggest that the listening habits of adolescents are far from spurious, but rather they follow a pattern of development similar to changes experienced by the maturing teenager.

Theoretical and Methodological Considerations

Various issues related to the interpretation of the findings in the present study will now be addressed. These include (a) the importance of using various techniques for assessing music preference, (b) criticisms associated with the assessment of motives for or gratifications from music listening, and (c) the implications of using a non-clinical population in measuring variables related to adolescents' music listening behavior and personality. Each of the issues to be reviewed deal both with the limitations of the present study as well as with aspects of the study which aided in the interpretation of the findings.

The Use of Multiple Music Preference Assessments

In the present study, the rationale for using multiple measures of music preference was supported by the review of the literature. This review indicated that many different techniques for assessing music preference had been previously used. Although the five measures in the present study had been used in previous research, it was not known which measure would be the most helpful in understanding the relationships among personality, motives for listening, demographics, music involvement, and music preferences. The two measures of music preference (Music Styles Scale and Music Qualities Scale) used in the final analysis represented more general estimates of music preference. The paucity of findings related to the other three music preference measures (listing of the subjects favourite music group/artist, style, and musical recording, respectively) suggests that music preference may be best judged by way of general measures (e.g., Likert scale ratings of enjoyment) rather than through the examples provided by subjects. The overlap of the findings between the Music Styles Scale and the Music Qualities Scale provide additional assurance that no important information was lost by dropping the three "favourite" music preference measures; at the same time, the two scales that were used indicated very strong consistency in their findings and interpretation.

Several limitations and strengths can be highlighted as a result of the present study's use of the five music preference measurements. There are at least three reasons for the failure of finding relationships between the three "favourite" music preference measures (which were factor analyzed into five groups: *Teen Pop*, *Heavy Pop*, *Pop*, *Traditional Pop*, and *Alternative Pop*) and motives for listening, music involvement, and personality: (1) The considerable variation in sample sizes representing each category of music; (2) the small

number of subjects preferring a majority of the music categories; and (3) the categorization (by external raters) of the favourite groups/artists and recordings into the various music categories often being in conflict with subjects' own choice of favourite music style measured independently. As a result of these problems, no conclusions could be drawn that would replicate or contribute to the findings of other studies (e.g., Fox et al., 1975) which also used factor analysis to group subjects according to respective styles.

One of the major findings of the present study was a strong and consistent relationship between Finnas' (1987) music descriptors and the various motives for listening, music involvement, and particularly, personality traits. This method of music preference assessment seemed to overcome many of the problems that have historically plagued the measurement of music preference; for example, (a) there was no need to provide and match actual exemplars of music (e.g., groups or artists) with the various styles of music, (b) no external raters were needed to categorize subjects' preferences into specific styles, and (c) the items composing the designations of "hard" and "soft" had been previously factor analyzed (Finnas, 1987). The results of such a method provided an estimate of adolescents' music preference based solely on descriptions of music, not on a priorily categorized styles. When statistically related with demographic, motives for listening, music involvement, and personality variables, the music preference estimates provided by the Music Styles Scale and the Music Qualities Scale were remarkably similar, and such convergent operations served to validate the relationships.

Criticisms of Assessing Motives for/Gratifications of Music Listening

Motives for listening to music were measured by asking subjects to rate how often (on a Likert scale from 1-Never to 5-Very Often) they listened to music for various reasons (e.g., "To help me relax," "To dance," "To express how I

feel"). In essence, adolescents were asked to think about the music to which they listened and the degree to which a specific phrase described their reasons for listening to that music. The 18 items had been previously factor analyzed (i.e., Roe, 1985) into three groups: Atmosphere creation/mood control, silence filling/time passing, and attention to lyrics; a fourth group (consisting of seven items) was constructed by the researcher to represent the area of emotional attunement. As a result, an estimate of subjects' motives for listening to music was quantified as falling into one or more of these factor groups.

Messaris (1977) considered three types of biases associated with the self-reports for using mass communication, in this case, music. First, he argued that "the use of self-report measures encourages the respondent to treat his/her media exposure as if it were the result of deliberate choice" (p.316). He suggested that the respondent may be put in the position of having to supply rationalizations where none existed. Thus, the results may merely reflect these rationalizations rather than their true (and perhaps unkown) reasons.

In the present study, an individual differences approach was taken, which assumes that adolescents may listen to different styles of music for different reasons, the same music for different reasons, and/or different music for the same reasons. It was found that the motives were consonant with stated music preferences. Whether the motives preceded or followed the rationalizations for music preference, such motives were associated with and possibly reinforced the preferences.

Messaris' (1977) second criticism is that self-report measures direct findings towards "the limited and short-run consequences which can be linked specifically to a particular instance of media exposure and away from the more enduring, but less obvious, consequence of cumulative exposure to mass communication" (p.316). He went on to state that three "functions" or

"gratifications" which have previously and erroneously been thought to precede media exposure are fulfilling needs, problem-solving, and social conversation. The result of this narrowed focus is that the respondent is "pinned down" to demonstrating a one-to-one relationship between specific media exposure and specific consequences, most often of the short-term variety.

The present study can shed some light on this issue by assessing the motives for listening to music and relating them to personality, an enduring feature of the media consumer. As such, the goal of the study was not to measure the "effect" of music on the listener, but rather to examine the factors (e.g., personality) and motives influencing adolescent music use and preference. Given that this study found motives for listening to music and personality to be strongly related, the motives may not have been just short-term rationalizations to the questions asked; rather, the motives were interwoven within the web of personality constructs which influence decisions on media use, and in this case, music listening.

Finally, Messaris (1977) argued that "reliance on self-report demands from the respondent a degree of analytical ability and awareness which he/she is unlikely to have" (p.316). He emphasized that the respondent is not only giving an account based on casual, unsystematic observation, but is also based on at least two conventional beliefs: (1) There is a link between manifest motive and/or purpose and consequent behavior, and (2) it is on this level that such links, if any, are to be found. As a result, the respondent may have a readily available stock of answers for questions on his/her relationship with the media, making the likelihood of unpredjudiced, unbiased responses rare. Particularily relevant to the present study, Messaris also stated that self-reported "internal states" or "psychological processes" are, by definition, unavailable for objective

inspection and, therefore, are not only impossible to validate but also immune from invalidation.

A major assumption of the present study, as well as others, is that motives for listening to music are quantifiable. It might be argued, however, that just as intelligence, personality, and other cognitive functions are not directly quantifiable, they can be be measured indirectly and inferred by way of many different strategies. It is important to note that motives can be reliably measured and validated by finding associations with other variables (e.g., personality); this is known as construct validation. In the present study, several of the motives for music listening were found to predict music preferences, and also showed strong relationships with music involvement and personality; thus, they are useful. In contrast to Messaris' critical approach, then, further attention should be given to refining the assessment of motives and exploring the use of different approaches (i.e., factor analysis, situational assessment, behavioral assessment, psychophysical responses).

Messaris (1977) has postulated some very important weaknesses of the self-report method of measuring functions or gratifications of media use. The effect of such possible limitations on the interpretation of the results of the present study is instructive in the sense that it helped to guide the analysis of results, thus is helped to: (1) provide evidence that motives can be related to enduring characteristics, such as personality, and (2) even if the responses to motives for listening to music were rationalizations, they still may have reinforced adolescents' listening behavior.

Implications of Using a Non-Clinical, Adolescent Population

The purpose of this research was to assess adolescents' music preferences, motives for listening, involvement with music, and personality. In light of these goals, it was necessary to focus upon a "typical" population of

adolescents rather than a clinical sample of adolescents. The following briefly outlines the strengths and limitations of using a normal adolescent population in the present study and its relationship to the previous literature.

First, the music preference choices of the subjects in the present study may have been significantly different from those in a clinical population. Indeed, several studies (e.g., Cattell et al., 1953; 1954; Gold, 1987) have used sample populations other than those found in the normal population for their measurement of music preference, especially when attempting to estimate preferences for non-mainstream styles of music (e.g., Heavy Metal, Punk Rock). The results of the present study showed that a maximum of 15% of the subjects indicated *Heavy Pop* as representing their favourite musical recording, while a maximum of 12% indicated that *Alternative Pop* was their favourite style of music. It might be postulated that the use of a clinical population (e.g., delinquent home, detention centre) would have yielded much higher proportions of subjects in these categories of music preference. Thus, the magnitude of differences among categories in their music preferences, as well as the proportion of subjects in each category, may have been different than if a clinical sample had been used. This would, of course, also attenuate the relationships between music preferences and motives for listening and personality.

Second, the use of a non-clinical adolescent population may have also influenced the level of score elevations on the MAPI. As was shown in the results, none of the overall means on the 20 scales measured by the MAPI reached the critical Base Rate level of 75 that would have indicated the clinical "presence" of a particular trait. As a result, each of the significant findings among personality and the variables of music preference, motives for listening, and music involvement have to be understood as representative of a typical

adolescent population, as there was no indication of a relationship between a clinical-level personality trait and any of the variables. If the present study had included clinical representation in the adolescent population, it may be the case that many more and stronger relationships would have been found between music preferences and personality. On the other hand, that so many were found attests to the considerable individual variation within a "normal" population. It would be helpful to replicate this with a clinical population.

Finally, the use of a typical adolescent population in the present study provided several methodological inconveniences. As described earlier, meeting the goal of collecting data from a normal sample of adolescents necessitated the use the local public school system. The constraints of time, classroom space, and academic scheduling only allowed for group or classroom testing, as opposed to individual or small group testing; the former may have resulted in distractions and subtle peer interaction during the testing. Also, the fact that adolescents were used in the present study necessitates the consideration that a portion of their responses may have been distorted or even false, possibly for no other reason than that the subjects are at a developmental level that includes a level of immaturity that cannot be controlled for through methodology. Finally, the limited time allowed for data collection from each subject may have also diminished the quality of thought and effort put into the questionnaires by the subjects.

Each of the limitations noted above must be considered within the context of the purpose of the present study. One of the criticisms against studies that have used clinical or non-adolescent populations in measuring variables related to pop/rock music is that the results of such research are not readily generalizable to the population most involved with this music, adolescents. Thus, although the present study cannot claim to have gathered information that

is generalizable to all adolescents, the findings do represent an attempt to closely approximate the music preferences, motives for listening, music involvement, and personality of a typical adolescent population. The methodological concerns associated with the use of a non-clinical adolescent population must be taken into consideration when the findings are interpreted, but should not be exaggerated to the extent that they detract from the utility and value of the present study's results.

Implications and Suggestions for Future Research

The implications of the findings of the present study are two-fold. First, it became apparent that the trends pertaining to each of the areas of music were, to a certain extent, developmental in nature. That is, there were many differences between the grades and genders in their music preferences, motives for listening to music, and music involvement. This suggests that deviant music preferences or extensive music involvement which are worrisome to parents, teachers, and other persons working with children are subject to change over time, and they are related to the specific needs at particular times in their development and maturation. Unless other issues are associated with such music preferences (e.g., co-morbidity), extensive intervention may be unnecessary.

At the same time, however, the results have shown that teenagers choose to listen to certain styles of music and to devote large amounts of time, energy, and money to their music for very specific and identifiable reasons (e.g., emotional attunement, personality issues). Given that adolescence represents a period in life of intense questioning, peer comparison, and behavioral experimentation, one cannot ignore the relationship between adolescents and their preferred music and listening behavior. The findings in the present study

suggest that teenagers use their music as a major source for this inner exploration; and because the music they listen to may speak directly to the problems they are facing, they may choose to act according to the messages (e.g., sexual expression, racism, aggression) they are seeking through the music. It is at this point that intervention with the adolescent may become not only an option, but a necessity. Stated differently, this study has shown that teenagers may choose to listen to certain styles of music to satisfy various needs within themselves, and if the needs are severe enough to warrant acting upon the messages of their music, the consequences of these actions may be detrimental to the adolescent.

Second, because there were consistent relationships found among the music preferences, motives for listening to music, music involvement, and personality of these teenagers, the findings may then be used to a certain degree for establishing a picture of both the internal and the social world of adolescents. Such information may be put into practical use within a clinical or guidance setting, and may serve as a very useful diagnostic tool when used in conjunction with other measures. For example, Mark (1988) has stated that the lyrics of pop music can be used as a valuable and meaningful means of communication with adolescents, since the values in the lyrics can be identified, challenged, and/or supported in dialogue with teenagers. In turn, adolescents can talk about experiences in the lyrics (e.g., war, feelings, friendship, family, pressure, independence), while at the same time distance themselves from the conflicts they feel but cannot address directly. Most adolescents are eager to show an understanding of their favourite music groups and artists and speak up about the issues addressed and feelings elicited in the songs. For example, an adolescent can first talk about a particular singer's experience and his/her

interpretation, then he can talk about his own experiences which may parallel the singer's.

Future research which uses both non-clinical and clinical adolescent populations, employs individual testing settings, and utilizes larger samples of adolescents may provide additional useful information regarding the complex relationships among music preferences, motives for listening, involvement with music, and personality. Studies which extend the present study by including the measurement of emotional and/or behavioral responses to music (possibly to specific samples of a population with particular types of music, e.g., subjects who prefer *Heavy Pop* versus those who prefer *Teen Pop*) may also provide important information. For example, McFarland (1984) used the Thematic Apperception Test (TAT) to measure the emotions produced in subjects while they listened to different styles of music.; the results indicated that different music styles produced different emotions in the listener. Further, by sytematically manipulating the presentation of various music styles (e.g., order of presentation; random versus "high impact" music), the conclusions drawn regarding the interrelationships found in this study could be validated or refuted depending on how the subjects respond emotionally to certain styles of pop/rock music that are . Longitudinal research may also be useful in examining changes adolescent music affiliation, as well as the long-term effects of heavy versus light involvement with certain styles of pop/rock music. By administering evaluations of music interest and listening behavior, as well as other attitudinal and personality scales, at specific intervals over the course of late childhood and adolescence, one might be able to grasp a more complete picture of the patterns of development both in regards to music listening and the social/emotional aspects of the maturing adolescent.

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APPENDIX A

DESCRIPTIONS OF VARIOUS MUSIC PREFERENCES OF ADOLESCENTS

Descriptions of Various Music

Preferences of Adolescents

RAP: A chanted rhyme backed by the rhythms of a beat box - either human or mechanical.

HIP HOP: Much the same as *RAP*, but includes spoken verses of a song with sung choruses.

DANCE: Music which usually communicates themes of love and relationships to a beat written and produced for dancing.

HOUSE: A sleek, rumbling rhythm with brief snippets of existing records captured by keyboard samplers, piano fills, string sections, and unstoppable mid-tempo dance grooves.

POWER POP: Light, bouncy, and melodic metal or party sound.

TEEN POP: Characterized as teenagers singing about teenagers to teenagers, and usually dominates the airwaves of TOP 40 or All Hits radio station formats.

SOUNDTRACKS: Theme-appropriate music taken from the scores of feature films.

HEAVY METAL: Loud, fast, and often discordant music.

ROCK FUNK: Can be similar in style to *HEAVY METAL*, but often utilizes classical, rhythm and blues, and rap to complete their distinctive sound.

NEW WAVE: Characterized by a fast, driving beat that provides rhythm rather than melody for dancing.

WORLDBEAT: Described as a corrolary of black-oriented reggae, and may include jazz or Latin-based oriented rhythms.

ROOTS: A form of country-tinged rock music which prides itself in being unconcernced about studio-perfect recordings.

APPENDIX B

PARENTAL CONSENT FORM

Parental Consent Form

Dear Parent or Guardian,

As a parent, it comes as no surprise to you that most adolescents give music a central place in their daily lives. In examining the relationship between the young listener and his/her favourite style of music, the question arises: What are the factors which influence teenagers' preferences for certain styles of music (and the groups or artists that represent the many styles)? The purpose of the present study is to investigate the role of personality, age, and/or gender in determining adolescents' music preferences.

The purpose of this letter is to inform you that such a study is being conducted at your teen's school, and we wish to ask your permission to allow your son or daughter to participate in this study in the near future (approximately two weeks).

The study will be carried out during a regularly scheduled class period, and will require a maximum of 90 minutes to complete. The study will simply involve each student completing (1) a personality questionnaire measuring a variety of characteristics of typical adolescents, and (2) a music questionnaire aimed at identifying adolescent's favourite popular music groups, the extent of their involvement with music, and their motivations for listening to popular music.

All information gathered will be anonymous and confidential. Your teen will have the right to withdraw from the research at any time if he/she wishes, while the experimenter also retains the right to terminate involvement of any participant. Either a written or oral summary of the results (depending on the teacher's schedule and classroom time) will be given at a later date once the data have been analyzed.

The study has been approved by both the University of Calgary (Education Joint Research Ethics Committee) and the Calgary Board of Education Research Council.

To indicate whether or not you wish your teenager to participate in the study, complete the Parental Consent Form below and have your youngster return it to his/ her homeroom teacher as soon as possible. Please feel free to call Kelly Schwartz at the University of Calgary (220-3151), or leave a message at 220-5659, if you have any questions or concerns regarding the study.

Thank-you for your time.

Sincerely,

Kelly Dean Schwartz, B.A. (Hons.)
Graduate Student, Dept. of Ed. Psych.

Gregory T. Fouts, Ph.D. (Supervisor)
Professor, Dept. of Psych.

Today's Date:_____,1991

Student Name: _____ Homeroom Teacher: _____

Please check one:

___ I **DO** give permission for my son/daughter to participate in the study.

___ I **DO NOT** give permission for my son/daughter to participate in the study.

Parent/guardian signatures: _____ _____

Student signature: _____ Teacher's signature: _____

APPENDIX C

MUSIC INFORMATION QUESTIONNAIRE (MIQ)

Paper #_____ **Music Information Questionnaire (MIQ)**

Please answer the following questions by circling the number that best describes your answer to the question, or by filling in the blank in the question. Try to answer the questions as honestly as possible. All answers are strictly confidential.

Section I

1. Please list, in order, your three (3) favourite musical groups or artists.

(1) _____ Favourite

(2) _____ 2nd Favourite

(3) _____ 3rd Favourite

How much do you like the following kinds of music? (Circle the number that best describes your answer, OR circle X if you are not familiar with the music category)

	Not at All	Very Little	Somewhat	Quite a Bit	A Great Deal	Not Familiar
2. **Country** (like Randy Travis, K.T. Oslin)	1	2	3	4	5	X
3.**Dance** (like Paula Abdul, Cathy Denis)	1	2	3	4	5	X
4.**Reggae** (like Bob Marley, Third World)	1	2	3	4	5	X
5.**Rap** (like M.C. Hammer, Maestro Fresh Wes)	1	2	3	4	5	X
6.**Rock Funk** (like Living Color, Red Hot Chili Peppers)	1	2	3	4	5	X
7.**New Age** (like Yanni)	1	2	3	4	5	X
8.**Heavy Metal** (like Metallica, Megadeath)	1	2	3	4	5	X
9.**Pop** (like George Michael, Allanah Myles)	1	2	3	4	5	X
10. **Classical** (like Beethoven, Mozart)	1	2	3	4	5	X
11. **New Wave** (like The Cure, Depeche Mode)	1	2	3	4	5	X
12. **Folk** (like Tracy Chapman, Susanne Vega)	1	2	3	4	5	X
13. **Soundtracks** (like Dirty Dancing, Young Guns II)	1	2	3	4	5	X
14. **Teen Pop** (like New Kids On The Block, Mitsou)	1	2	3	4	5	X
15. **Classic Rock** (like The Rolling Stones, The Who)	1	2	3	4	5	X
16. **Rhythm and Blues** (like Stevie Ray Vaughan)	1	2	3	4	5	X
17. **Gospel/Christian** (like Michael W. Smith, Whiteheart)	1	2	3	4	5	X
18. **Worldbeat** (like Paul Simon, Ladysmith Black Mambazo)	1	2	3	4	5	X
19. **House** (like Technotronic, D Mob)	1	2	3	4	5	X
20. **Power Pop** (like Bon Jovi, Aerosmith)	1	2	3	4	5	X
21. **Roots** (like REM, Cowboy Junkies)	1	2	3	4	5	X
22. **Hip Hop** (like Soul II Soul, Deee-Lite)	1	2	3	4	5	X
23. **Jazz** (like Harry Connick, Jr., George Benson)	1	2	3	4	5	X
24. **Rock** (like Kim Mitchell, Winger)	1	2	3	4	5	X

25. Using the categories above, please list, in order, your three favourite kinds of music.

(1) _____ Favourite

(2) _____ Second Favourite

(3) _____ Third Favourite

26. If you could take only three (3) albums/tapes or CDs with you to a desert island, which ones would they be? (Please give the title and the name of the group/artist)

(1) _____ First Choice

(2) _____ Second Choice

(3) _____ Third Choice

How much do you enjoy music which is . . . (Circle the number that best describes your answer)

	Not at All	Very Little	Somewhat	Quite a Bit	A Great Deal
27. "romantic and dreamy"	1	2	3	4	5
28. "wild and violent"	1	2	3	4	5
29. "mild and quiet"	1	2	3	4	5
30. "upsetting and protesting"	1	2	3	4	5
31. "sad and gloomy"	1	2	3	4	5
32. "peaceful and relaxing"	1	2	3	4	5
33. "tough and hard"	1	2	3	4	5
34. "soft and tender"	1	2	3	4	5
35. "loud, played at a great volume"	1	2	3	4	5
36. "serious and thoughtful"	1	2	3	4	5
37. "played with many guitars"	1	2	3	4	5
38. "good-natured and kind"	1	2	3	4	5
39. "played at a fast tempo"	1	2	3	4	5
40. "played with synthesizers"	1	2	3	4	5

Section II

41. How many parents or guardians are presently living with you at home? ____

42. How many older brothers and sisters do you have presently living in your family? ____

43. What is your average letter grade in school this year? ____ Percentage? ____

44. What is the highest educational level attained by either your mother or your father? (Circle the number that best describes your answer)

1 = less than 12 years
2 = high school graduate
3 = some college
4 = college or university graduate
5 = graduate or professional school

Section III

How often do you listen to music for the following reasons? (Circle the number that best describes your answer).

	Never	Seldom	Sometimes	Often	Very Often
45. To help me relax.	1	2	3	4	5
46. To help get me in a particular mood.	1	2	3	4	5
47. To help pass the time.	1	2	3	4	5
48. To stop thinking about certain things.	1	2	3	4	5
49. To be less bored when I am doing something else (e.g., homework).	1	2	3	4	5
50. To dance.	1	2	3	4	5
51. To feel less lonely.	1	2	3	4	5
52. To listen to the words.	1	2	3	4	5
53. To fill the silence when no one else is talking.	1	2	3	4	5
54. To create a good atmosphere when I am with others	1	2	3	4	5
55. To express how I feel.	1	2	3	4	5
56. To make the time go faster when there is nothing else to do.	1	2	3	4	5
57. To keep me in the mood I am in.	1	2	3	4	5
58. To get rid of frustration or anger.	1	2	3	4	5
59. To get excited.	1	2	3	4	5
60. To be entertained.	1	2	3	4	5
61. To feel better.	1	2	3	4	5
62. To be alone with my thoughts and feelings.	1	2	3	4	5

How important are the following items in determining your preference for a musical group or artist? (Circle the number that best describes your answer)

	Not Important	Little Importance	Somewhat Important	Important	Very Important
63. Melody	1	2	3	4	5
64. Rhythm	1	2	3	4	5
65. Harmony	1	2	3	4	5
66. Instruments	1	2	3	4	5
67. Singer's voice	1	2	3	4	5
68. What the group or artist looks like	1	2	3	4	5
69. What you've heard on the radio	1	2	3	4	5
70. Music that irritates your parents	1	2	3	4	5
71. What your friends like	1	2	3	4	5

Section IV

72. Do you presently sing or play a musical/percussion instrument? (Circle the number beside your answer)
    1 = yes
    2 = no
    If yes, what specifically do you play (for example, guitar, drums, trumpet, piano)? _____

73. Total number of years (if any) of instrumental or vocal music lessons: ____

74. Total number of years (if any) played or sang in a band, orchestra, or group: ____

75. Rate your own general level of understanding of music: (Circle the number)
    1 = I don't understand anything about music
    2 = I understand a little about music
    3 = I understand some aspects of music
    4 = I understand many aspects of music
    5 = I understand almost all aspects of music

76. How important has music been in your life in the past three (3) years?
    1 = not at all important
    2 = little importance
    3 = somewhat important
    4 = important
    5 = very important

77. On the average, how many minutes per day do you actually spend listening to music, either while doing something else or as your main activity? Be sure to answer in MINUTES.
    ____ Monday to Friday
    ____ Saturday
    ____ Sunday

78. How many minutes per day would you prefer to spend listening to music if you were able to? Be sure to answer in MINUTES.
    ____ Monday to Friday
    ____ Saturday
    ____ Sunday

79. Think about yesterday, how many minutes did you actually spend listening to music? Be sure to answer in MINUTES. ____

80. Rank the following sources of music you use, with 1 being the source you use the most, 2 being the second most used, down to 4 being the least used:
    ____ Record Player
    ____ Cassette Player (including car)
    ____ Compact Disc Player (including car)
    ____ Radio (including car)

81. In the past year, approximately how many records, tapes, and CDs have you purchased or received as gifts?
    Total: ____

82. In the past year, approximately how many records, tapes, and CDs have you taped?
    Total: ____

83. How many of the following musical events have you attended in the past year?
    ____ Concerts (e.g., Saddledome, Jubilee Auditorium, etc.)
    ____ Dances (including school, community centre, etc.)
    ____ School-related concerts (e.g., band, choral, musicals)

THANK YOU FOR PARTICIPATING IN THIS RESEARCH PROJECT

APPENDIX D

STUDENT LETTER OF EXPECTED RESULTS

Student Letter of Expected Results

Dear Student,

Let me begin by thanking you for your participation in my study (about 1 month ago) on the factors influencing teenagers' preferences for certain styles of popular music. I want you to know that you have made an important contribution to science, especially with regards to better understanding why young people prefer a particular music style over the many styles they have to choose from. I hope you found the personality and music questionnaires interesting (and maybe even enjoyable?), and that you had the opportunity to think about yourself and your music in a different way than you have before.

I want to begin this brief explanation of the study by sharing with you some interesting facts about teens and rock music. Approximately two-thirds of all records and tapes are purchased by listeners aged 10-24 years old, and one-third of all radio stations aims their broadcast music at this age group. I has also been estimated that rock music reaches at least 66.5 million North American people under the age of 19. Young people aged 12-14 listen to music an average of 2 hours per day, while adolescents aged 17-19 listen over four hours per day. Between the 7th and 12th grades, teenagers spend approximately 10,500 hours listening to rock music, only 500 hours less than the total amount of time spent in the classroom over 12 school years.

Given the fact that there is such a strong and growing relationship between adolescents and rock music, one would expect a great deal of research to have already been completed on the question of why young people listen to rock music. What one finds, however, is that very few studies have looked at the reasons why adolescents prefer different styles of popular music, and even fewer have looked at the relationship between a listener's personality and music preference.

As I explained to you before you started the questionnaires, the purpose of the study was to examine the relationships between the factors of personality, age, and gender and the preferences for particular styles of music (e.g., Rap, Top 40, Heavy Metal, etc.), the degree of involvement with that music (e.g., hours of listening per day), and the reasons for listening to that music (e.g., "It helps pass the time"). We are trying to answer several questions with regards to this relationship. For example, do young people having different personalities prefer different styles of music? Do high school students have different reasons for listening to music than junior high students? Do females listen to music more than males?

Previous studies have found that there is a definite relationship between personality and music preferences. For example, several studies have found that music listeners who were quiet and unemotional, had few friends, and were not close to their families preferred different styles of music than those who were outgoing, had many friends, and were close to their families. Another study found that persons classified as 'thrill and adventure seekers' preferred Folk and Classical music, while those persons identified as 'experience seekers' and 'disinhibited' preferred Hard Rock and Soft Rock music. Finally, a very recent study found that persons who were disrespectful, antisocial, and did not enjoy school preferred 'harder' forms of rock music than those who were respectful, socially acceptable, and enjoyed school.

In addition to personality, the variables of age and gender (male or female) have been found to be related to music preferences and involvement. For example it has been found that females listen to music more than males, and prefer different styles of music (e.g., Mainstream, Top 40, etc.) than males (e.g., Rock, Classic Rock, etc.). Also, older adolescents (aged 16-18) listen to music more than younger adolescents (aged 12-14), and prefer different styles of music (e.g., New Wave, Power Pop, etc.) than the younger group (e.g., Rap, Teen Pop, etc.).

My research differs from those just outlined in a number of ways. First, my study is one of the very few to use a valid and reliable personality questionnaire (i.e., Millon Adolescent Personality Inventory) in looking at the relationship between personality and music preferences. In addition, my study used adolescents (aged 13-18) to provide the information in the study, whereas many of the other studies collected the information from people in college or older. Finally, the music styles or categories (e.g., Rap, Hip Hop, Rock Funk, etc.) you chose from in indicating your music preferences included many more options than most other studies provided for their participants. Because of these differences, I am expecting to find slightly more accurate and valid results than previous studies.

As you can see, we are trying to answer quite a few questions by way of this one study. And as I have already experienced, many of these questions can get confused with each other, and all the information gathered can seem like one big pile of numbers. If this brief explanation has not made a whole lot of sense, or if you have other questions that I did not answer, don't panic. Even as you are reading this letter, I am starting to analyze the data from the two questionnaires that you to completed in your classroom, and will <u>definitely</u> have most of the results computed by the first week in September. Please feel free to call me during the day (at 220-3151), or leave a message with Debbie (at 220-5659) if you have any questions related to the study or rock music in general. I'll be glad to help if I can.

Thanks again for helping me out with this study. I am looking forward finding out how you have helped to better understand why we like a certain style of popular music.

Talk to you soon,

Kelly Schwartz
University of Calgary
Department of Educational Psychology