AN EXAMINATION OF MUSIC THERAPY WITH ADOLESCENT
POPULATIONS

by

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ABSTRACT

The purpose of this study was to examine the current use of music therapy with adolescent clients. Ninety-seven board certified music therapists working with adolescents between the ages of 11 and 19 completed the on-line survey. Survey results found that most of the participants worked with adolescents with Autism Spectrum Disorders, developmental disabilities, and emotional/behavioral disorders. Results indicated that music therapists are targeting a number of goals with the three most common being social, communication, and behavioral skills. The results highlighted commonly reported objectives, functional outcomes, data collection methods, the types of music used, and commonly used music interventions for these and other goals. The results of this survey may be helpful for music therapy students and young professionals who want to learn more about how music therapists are meeting the needs of their clients.

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CHAPTER I

Introduction

Adolescence is a time of great transition; however, in the United States the term is vaguely defined. For the purpose of this paper, adolescents will be defined as males and females between the ages of 11 and 19. Transitions during adolescence can be divided into three categories: (a) biological, (b) cognitive, and (c) social (Steinberg, 2008). More specifically, these transitions include such issues as sexual maturation, higher order thinking, and the gradual acquisition of responsibility that prepare adolescents for adulthood. With all these changes, it is important that the needs of adolescents' are met so they can develop to their full potential. For optimal development, adolescents need proper nutrition; exercise; social interaction; and tasks involving higher order thinking, such as problem solving; along with the basic necessities for living. However, some adolescents have extraordinary needs due to a disorder, disability, or other condition.

The term special needs includes all individuals, at any time in their lives, who have a need that is extraordinary or that requires some sort of assistance or service that a majority of others do not need. Due to the precise definition of the term "special needs" in a variety of settings, the term "clinical needs" will be used here to encompass a broader spectrum of needs. Adolescents with clinical needs experience the same transitions as other adolescents along with the unique challenges due to the nature of their conditions.

For adolescents with clinical needs, some form of direct intervention may be necessary for them to develop to their full potential. Direct intervention may include

various forms of services or therapies, including music therapy. Over the years music therapists and researchers have examined the use of music with various adolescent populations (see Appendix A).

In the United States, research pertaining to the use of music therapy for adolescents dates back to the 1960s. Since this time, a number of articles regarding music therapy and adolescents have been published in music therapy journals, including the *Journal of Music Therapy, Music Therapy, and Music Therapy Perspectives*. The number of articles has been fairly small and each article is quite specific as it looks at one element of working with a specific population of adolescents (see Appendix A). Therefore, there is a need for a resource that pulls together what is known about adolescents and music therapy so that new music therapists have a starting point for learning about and working with adolescents.

A review of relevant literature from the three aforementioned music therapy journals demonstrated that music therapists work with adolescents in a variety of settings, including hospitals, schools, and residential (facility or home) settings. Articles from these journals also indicated that music therapists have worked with adolescents with attention deficit hyperactivity disorder (ADHD), conduct disorder, learning disorders, substance abuse, intellectual disabilities, mental illness, behavior disorders, emotional disorders, developmental disorders, and traumatic brain injury. Juvenile delinquents, pregnant teens, abused adolescents and grieving adolescents have also received music therapy services. See Appendix A for article citations.

This same review of music therapy journal articles revealed that goals for adolescent music therapy clients have varied and included gross motor skills,

communication skills, social skills, auditory discrimination, self-esteem, group cohesion, and emotional awareness and insight. Additional goals have involved identity development, changing disordered behavior patterns, decreasing self-stimulatory behaviors, and facilitating adjustment to school and community settings. As the list of populations and goals suggests, music therapy may be a viable therapy option for many adolescents due to the flexible nature of music and adolescents' inherent interest in music.

It is the author's intent to bring all the relevant literature together, in one source, so that music therapists can examine what interventions have been documented to be used with adolescents. It is likely that most music therapists will work with adolescents at some point in their careers, yet not everyone may feel prepared or confident working with this population. Consequently, the purpose of this study was to examine music therapy with adolescent populations. This examination included information about populations, settings, functional outcomes, assessment, therapeutic interventions, and types of music used. Results from this study may facilitate an update of relevant literature for music therapy and adolescents and give music therapists a starting point for clinical intervention with this population.

CHAPTER II

Review of Literature

Adolescence

The term adolescence has been vaguely defined and varies depending on the source. The *Oxford American Dictionary* (Ehrlich, Flexner, Carruth, & Hawkins, 1980) defined an adolescent as a person "between childhood and maturity" (p. 13). Carson, Buthcer, and Mineka (2000) noted that the Minnesota Multiphasic Personality Inventory for adolescents was standardized using girls and boys between the ages of 14 and 18. Berk (2000) in her book, *Child Development*, did not define adolescence, but referred to eleven year olds as adolescents. Lastly, Steinberg (2008) defined adolescence as the second decade of life.

Clearly, the definition of adolescence varies. Steinberg (2008) attributed this discrepancy to the age shifts of the onset of puberty, entering the workforce and marriage over the last century. Many early adolescents are experiencing puberty at a younger age than those from the previous century. Also, many young adults are waiting to enter the workforce or marriage until their mid-twenties, which makes for a longer period of transition. In fact, many social scientists divide adolescence into three stages: (a) early adolescence (10-13 years old), (b) middle adolescence (14-17 years old), and (c) late adolescence (18-21 years old) (Steinberg, 2008). For the purpose of this study, the term adolescence refers to males and females between the ages of 11 and 19. This eight year span termed, "adolescence," is a time of much growth and transition.

Adolescence is set apart from other periods of life because of three fundamental transitions: (a) biological, (b) cognitive, and (c) social (Steinberg, 2008). As these periods of change are explored, it is important to keep in mind that each adolescent's journey is unique due to individual and environmental differences. Even so there are similar experiences among all adolescents.

The biological transition of adolescence centers around the onset of puberty. This refers to the time frame in which a person becomes capable of sexual reproduction. Along with the ability for sexual reproduction comes a variety of physical changes including:

1. Rapid growth in height and weight

2. Development of primary sex characteristics (gonads)

3. Development of secondary sex characteristics (changes in genitals and breasts and growth of pubic hair)

4. Changes in body composition (fat and muscle ratios)

5. Changes in the circulatory and respiratory system resulting in increased strength (Steinberg, 2008)

Berk (2000) also noted that during adolescence, males' and females' growth patterns change. Adolescents' hands, legs, and feet accelerate in growth followed by their torsos. This change in growth accounts for much of the awkwardness and lack of body proportion seen in adolescents. All these physical changes affect not only the adolescents' gross motor skills, but their psychological health as well.

As adolescents' bodies change, many of them become more concerned about their physical appearance. Their thoughts and feelings regarding their bodies affect their self-esteem, "the degree to which [they] feel positively or negatively about

themselves" (Steinberg, 2008, p. 270). While adolescents' self-esteem does not typically drop significantly, their feelings about themselves fluctuate daily, especially during early adolescence (Steinberg, 2008).

Along with the biological transitions during adolescence come changes in moods and emotions. Males often show their moodiness in the form of anger, irritability, aggression, or impulsivity; whereas, females tend to exhibit anger, irritability, or depression (Berk, 2000; Steinberg, 2008). In the United States, it is commonly thought that hormones contribute to extreme moodiness during adolescence; however, recent research indicates that this is not true. Studies suggest that if hormones play a role in moodiness it is likely to be early on in puberty and that adolescent mood swings are more closely related to changes in their activities rather than their hormones (Steinberg, 2008).

Since adolescent moodiness is related to changes in activities, social situations or events may also attribute to the moodiness of adolescents. The connection between moodiness and activities is important as adolescents in the United States have a large amount of leisure time. Researchers have found that adolescents' moods are at their best when participating in structured leisure activities (Steinberg, 2008). As adolescents move from one activity to another, different emotions may arise and they are forced to develop techniques for dealing with these emotions. Berk (2000) stated that in familiar situations and in situations in which adolescents have more control, they are more likely to use problem solving strategies and seek social support to deal with their emotions. However, in unfamiliar situations or in situations in

which they have less control, adolescents are more likely to turn to distraction or

redefining of the situation to manage their emotions (Berk, 2000).

Another area of transition includes cognition, the ability to think abstractly,

make predictions, and improve reasoning skills (Berk, 2000; Steinberg, 2008).

Adolescents are able to analyze thought processes and frequently go through a stage

in which they question the validity of absolutes. Adolescents' ability to manage their

thinking is an important skill for problem solving and improving academic skills,

such as reading, writing, and test taking (Steinberg, 2008). Adolescents are also able

to think about who they want to become, the consequences of their actions, and to

examine situations from different perspectives.

These cognitive and biological transitions may lead adolescents to think more

about themselves (Berk, 2000; Steinberg, 2008). Piaget believed that during

adolescence, individuals are unable to differentiate between the abstract perspectives

of self and others (Berk, 2005). Consequently, adolescents often feel that others are

constantly observing them and thinking about them. This line of thought can lead to

inflated feelings of self-importance, may attribute to self-consciousness, and to

increased concern about what others think (Berk, 2000; Steinberg, 2008). All of these

factors affect self-esteem.

Even though adolescence is not a time of extreme stress as popularly thought,

the biological, cognitive, and social transitions along with life circumstances may

bring about brief periods of problems with self-image. Researchers found that

fluctuations in self-image usually occur between the ages of 12 and 14. Studies across

all demographic groups indicate that parent approval, peer support, and success in

school all promote high self-esteem. Similarly, adolescents with high self-esteem are more likely to experience better mental health than those with low self-esteem. Also, adolescents with low self-esteem are more likely to experience emotional problems (Steinberg, 2008).

The changes in self-esteem, identity, cognition, and biological transitions during adolescence frequently drive individuals to seek autonomy. Adolescents strive to become self-governing individuals and rely more on themselves than on their parents. Autonomy for adolescents also involves developing personally meaningful values and life goals (Berk, 2000).

Adolescents' search for autonomy is greatly influenced by social transitions and how others in society perceive them. In fact the term "adolescence" exists because of the lines that society draws between adolescence and childhood and adolescence and adulthood. Consequently, some experts argue that adolescence is really more of a social phenomenon than a biological or cognitive one, even though important biological and cognitive transitions do occur (Steinberg, 2008). To a very large extent, society and culture greatly influence how adolescents experience adolescence.

One form of social transition includes the acquisition of certain privileges or rights that are reserved for adults. Along with these new privileges come increased expectations of self-management, responsibility, and social participation (Steinberg, 2008). In the United States, adolescents face changes in political and legal status with the ability to vote and legal recognition as an adult at age 18. However, in the United

States, economic and interpersonal status does not usually change until the young adult years (early to late twenties) due to the elongation of adolescence.

A second aspect of social transitioning involves adolescents' concern about being liked and viewed positively by others. Many adolescents desire to fit in. Consequently, they may emphasize social virtues such as friendliness, kindness, considerateness, and cooperativeness (Berk, 2000). According to studies, adolescents around age 14 are most susceptible to conforming to their peers, especially if the behavior is antisocial, such as cheating, stealing or trespassing (Steinberg, 2008).

A third aspect of social transitioning closely relates to changes in physical appearance. Since adolescents experience physical changes at different times, early maturing adolescents frequently turn to older adolescents for friendship. Sometimes these friendships can have negative consequences as the older adolescents may expose the younger adolescents to activities they are not able to handle emotionally, such as sexual activity, drug and alcohol use, and minor delinquent acts (Berk, 2000).

Clearly, adolescents experience many changes as they mature into adults. With the extensive biological, cognitive, and social transitions, adolescents' have many needs that impact their optimal development. For example, an adolescent's physical development depends on good nutrition, sleep, and exercise. As a result, adolescents need to learn to take care of themselves by eating healthy, getting enough sleep, and exercising. Likewise, an adolescent's emotional and social development is influenced by his or her peers and life experiences. Thus, adolescents need safe environments in which they can learn to navigate new social situations and develop relationships with peers. Likewise, adolescents need positive role models to guide

them as they learn to make important decisions and encounter difficult situations. Adolescents also need to learn constructive ways of expressing their emotions and coping with everyday stressors. Lastly, adolescents need experiences that will challenge them to think differently and solve problems.

Adolescents with Clinical Needs

Adolescence can be a difficult transition time for any child, but it is even more difficult for those with special needs. The term "special needs" encompasses all individuals, at any time in their lives, who have a need that is extraordinary or that requires some sort of assistance or service that a majority of others do not need. The term "special needs" may refer to individuals with physical, mental, medical, or developmental conditions or disabilities that require assistance or services to facilitate their optimal daily functioning. These additional services may include the following areas: thinking, communication, movement, social interaction, and self care (The Center for Improvement of Child Caring, 2007).

Due to the precise definition of the term "special needs" in a variety of settings, the term "clinical needs" will be used to encompass a broader spectrum than what is typically included under "special needs." Childhood and adolescent disorders may be divided into four main categories including: (a) disruptive behavior disorders; (b) disorders of emotional distress, (c) habit disorders; and (d) learning and communication disorders (Alloy, Riskind, & Manos, 2005). Many of the DSM-IV-TR diagnostic categories fit under these four divisions as well. However, these categories do not include issues concerning physical health, such as health disorders and physical disabilities. Consequently, a fifth category will be added titled "physical

conditions and disorders." To better understand the challenges facing adolescents with clinical needs each specific category will be examined more closely.

These specific categories were selected because adolescents may be diagnosed with them and music therapists have worked with these populations. A review of literature showed that music therapists have worked with adolescents with most of the diagnoses in the following categories; however, not all were documented in the reviewed journal articles. Still these disorders or challenges have been included because they are relevant to adolescence and music therapists have worked with clients of varying ages with these diagnoses. Examining these conditions or disabilities will demonstrate what clinical needs exist and highlight the importance of music therapy as a treatment intervention.

Disruptive Behavior Disorders

The first category of childhood and adolescent disorders includes disruptive behavior disorders. These disorders are marked by poor impulse control and acting out in situations where self-control is expected (Alloy et al., 2005). The two main disruptive behavior disorders affecting children and adolescents include attention deficit hyperactivity disorder (ADHD) and conduct disorder (Alloy et al., 2005; Hardman, Drew, & Egan, 2002). This category may also include juvenile delinquents and adolescents with emotional and behavioral disorders.

Attention Deficit Hyperactivity Disorder

Attention deficit hyperactivity disorder (ADHD) is defined as "a childhood disorder characterized by incessant restlessness and an extremely short attention span, leading to impulsive and disorganized behavior" (Alloy et al., 2005, G-1). Hallahan

and Kauffman (2003) noted that the American Psychiatric Association recognizes subdivisions of ADHD including: "1) ADHD, Predominantly Inattentive Type, 2) ADHD, Predominantly Hyperactive-Impulsive Type, and 3) ADHD, Combined Type" (p. 189).

It is estimated that three to five percent of school age children have ADHD (Hallahan, & Kauffman, 2003; Hardman et al., 2002). More males than females have ADHD (Hallahan, & Kauffman, 2003; Hardman et al., 2002). Often children are diagnosed with ADHD while in elementary school and approximately 80% of diagnosed children continue to show significant symptoms of ADHD into adolescence (Alloy et al., 2005).

The impulsivity, short attention span, restlessness, and disorganized behavior characteristics of ADHD significantly impact the lives of children and adolescents. ADHD often affects an individual's academic performance, daily functioning, social relationships, rule-governed behavior, health, and sleep patterns. Cognitive problems, such as poor concentration, tend to persist into adolescence. Also, poor academic performance, expulsion, and early withdrawal from school are common in adolescents with ADHD (Alloy et al., 2005).

It is fairly common for children and adolescents with ADHD to have an additional condition such as a learning disability, conduct disorder, emotional disorder, or behavioral disorder. Some children and adolescents with ADHD may also be at greater risk for substance abuse at an early age (Hallahan & Kauffman, 2003). Unique to ADHD in adolescents is that it may lead to a conduct disorder as the child ages (Alloy et al., 2005).

Conduct Disorder

Conduct disorder is defined as a "childhood disorder in which a preadolescent or an adolescent persistently violates social norms through aggression against people or animals, destruction of property, deceitfulness or theft, or other serious violations of rules" (Alloy et al., 2005, p. G-3). Hardman et al. (2002) also stated that individuals with conduct disorders may be: (a) verbally and/or physically aggressive, (b) disruptive, (c) negative, (d) irresponsible, and (e) defiant of authority. Conduct disorder has an estimated prevalence of 4% to 16% in those under 18 and is seen in boys more than girls (Alloy et al., 2005).

Pre-adolescents who develop conduct disorders before age 10 tend to be more aggressive, have very few if any friends, and are more likely to have antisocial personality disorder as adults (Alloy et al., 2005; Carson et al., 2000). Adolescents who develop conduct disorders after age 10 may be less aggressive, usually have friends, and are less likely to develop an antisocial personality disorder as adults (Alloy et al., 2005).

Frequently, adolescents with conduct disorder, but without an antisocial personality disorder, still participate in "ordinary" criminal behavior (Alloy et al., 2005). However, most of their problems regarding their conduct disorder are limited to the time frame of adolescence (Carson et al., 2000). Also, adolescent onset of a conduct disorder does not include the same risk factors that the childhood onset includes, such as low verbal intelligence, neuropsychological deficits, and impulsive and attention problems (Carson et al., 2000).

Prevention programs to help those with conduct disorder have focused on reaching out to children and adolescents early on to reduce aggression and oppositional behavior by improving peer relations, self-control, social problem-solving ability, and early school achievement (Alloy et al., 2005). Other treatment programs involve focusing on the family patterns and finding ways to change the child or adolescent's aggressive or maladaptive behaviors (Carson et al., 2000)

Juvenile Delinquency

A juvenile delinquent is defined as a "child or adolescent who has committed a status, misdemeanor, or felony offense" (Gardstrom, 2002, p. 183). Status offenses are those that if committed by an adult would not be a crime (Gardstrom, 2002). Examples of misdemeanor offenses include traffic violations and trespassing. Felonies are the most severe crimes and can be nonviolent or violent.

Gardstrom (2002) highlighted several important areas of need for juvenile delinquents, including: (a) emotional and social needs; (b) physical needs; and (c) academic needs. Emotional and social needs of juvenile delinquents include channeling aggression; improving interpersonal skills, especially conflict resolution; and opportunities for safe, legal, and productive social activities. The physical needs of juvenile delinquents vary, but may include medical and dental care, proper nutrition and hygiene, as well as treatment for drug and alcohol abuse. Lastly, many juvenile delinquents "have learning disabilities, mental or emotional impairments, or substance abuse problems that interfere with learning" (Gardstrom, 2002, p. 185). Consequently, juvenile delinquents need tools and resources to facilitate their learning and provide them with an opportunity to succeed in academic activities.

In some cases, juvenile delinquents are also sexual offenders. It is also possible that some of these juvenile delinquents may have paraphilia. Paraphilia is defined by Alloy et al. (2005), as "sexual patterns – such as fetishism and transvestism – that deviate from the standard of normal sexuality as consisting of a nondestructive interplay between consenting adults" (p. G-10). Individuals with paraphilia often suffer from other challenges including substance abuse, relationship difficulties, personality disorders, anger control issues, anxiety, and depression (Alloy et al., 2005). Recently, the treatment trend has focused on treating adolescent sexual offenders. Adolescence is often the time when paraphilia first appears. By treating adolescents and starting treatment early on, the hope is to increase the likelihood that the treatment will be successful and will reduce the harm that sexual offenders can cause others and themselves (Alloy et al., 2005).

Emotional and Behavioral Disorders

There are many definitions of emotional and behavioral disorders, which make it difficult to clearly define. However, to be labeled with an emotional and behavioral disorder, most definitions require: (a) a display of extreme behavior, (b) a chronic problem, and (c) unacceptable behavior as set by social or cultural norms (Hallahan & Kauffman, 2003). Individuals with Disabilities Education Act (IDEA) defined emotional disturbance as including one or more of the following: (a) an inability to learn not due to intellectual, sensory, or health issues; (b) an inability to satisfactorily develop relationships with peers and teachers; (c) inappropriate behavior or feelings; (d) generally unhappy or depressed mood; or (e) a habit of developing physical symptoms or fears regarding personal or school problems

(Hallahan & Kauffman, 2003). Adolescents with schizophrenia, affective disorder, or anxiety disorders may be considered to have an emotional and behavioral disorder.

Disorders of Emotional Distress

The second category of childhood and adolescent disorders involves disorders of emotional distress. These disorders are harder to diagnose because the conflict is inward. Even so, these disorders are easier to identify in adolescence than early childhood as adolescents are capable of talking about their feelings. Two main types of disorders of emotional distress include anxiety and depression. Types of anxiety disorders include separation anxiety disorder, social phobia, post-traumatic stress, and generalized anxiety disorder (Alloy et al., 2005; Carson, Butcher, & Mineka, 2000). This category may also include adolescents in hospice, bereaved adolescents, and adolescents who have been abused as they are likely facing an emotional time and may be experiencing depression or anxiety.

Anxiety

An anxiety disorder is defined as "an unrealistic, irrational fear of disabling intensity" (Carson et al., 2000, p. 161). Alloy et al. (2005) expands on this definition by noting that anxiety, as a state of fear, affects subjective reports of tension, behavioral inhibitions and impairments, and specific physiological responses. Anxiety disorders are characterized either by the demonstration of one of the aforementioned conditions or a pattern of behavior executed to ward off anxiety (Alloy et al., 2005). Children and adolescents are most likely to have social phobia or generalized anxiety disorder.

Social phobia is marked by an intense fear of social or performance situations in which embarrassment may occur (Alloy et al., 2005; Carson et al., 2000). People with social phobia are frequently fearful of speaking in front of others (even in conversations), dating, using crowded public restrooms, and/or writing in front of others (Alloy et al., 2005). As these examples illustrate, social phobia may greatly impact a person's daily functioning and self-confidence.

Adolescents with social phobias may struggle with them their entire lives and they frequently affect their academic progress due to their social withdrawal at school. Social phobia also prevents adolescents from making friends and can be particularly painful because they cannot avoid all feared situations (Alloy et al., 2005). As a result, individuals with social phobias are more likely to consider suicide than those without social phobias (Alloy et al., 2005).

Another type of anxiety disorder is generalized anxiety disorder. Children and adolescents with generalized anxiety disorder worry excessively about many events or activities (Carson et al., 2000). Individuals with generalized anxiety live in a constant state of tension, worry, and uneasiness. It is also common for children and adolescents with generalized anxiety disorder to doubt their capabilities and to constantly seek approval from others (Alloy et al., 2005).

Depression

Common symptoms of depression in adolescents include sulkiness, negativism, low self-esteem, withdrawal, complaints of not being understood, occasional antisocial behavior, and drug abuse. These symptoms may sound characteristic of some adolescents without depression; however, the difference is that

for adolescents with depression, these symptoms are more exaggerated than their non-depressed peers (Alloy et al., 2005).

Depression along with some other disorders or conditions may cause adolescents to think, attempt, and carry out suicide. Suicide is of special concern among adolescents as the "suicide rate has risen 200 percent since 1960" (Alloy et al., 2005, p. 259). As of 2005, surveys found that 16.9% of U.S. students in grades 9 through 12 had seriously considered committing suicide at least once in the 12 months prior to taking the survey. The same survey revealed that 8.4% of U.S. high school students had attempted suicide one or more times in the 12 months prior to taking the survey (Centers for Disease Control and Prevention, 2007). Alloy et al. (2005) state that adolescents may resort to suicide to escape stressful and adult situations due to a lack of emotional self-control, problem solving, mobility, or money to deal with the situation. Depression, substance abuse, and family problems increase risk factors for suicide in adolescents (Alloy et al., 2005).

Habit Disorders

The third category of childhood and adolescent disorders is habit disorders. These disorders include eating, elimination, and sleep disorders (Alloy et al., 2005). This category may also include adolescents with substance abuse.

Eating Disorders

Two common eating disorders are anorexia nervosa and bulimia nervosa. Anorexia nervosa is a condition in which a person severely restricts food intake from fear of gaining weight (Alloy et al., 2005). About 85% to 95% of individuals with anorexia are female (Alloy et al., 2005). Frequently, the onset of anorexia occurs

between 12 and 18 years of age, however, it can start in preadolescence or as late as 30 years old (Alloy et al., 2005). Anorexia is considered a psychological disorder, but it has serious physical dangers due to extremely low weight.

In order to be diagnosed with anorexia, an individual needs to have a body weight less than 85 percent of what is normal for his/her age and height, a fear of gaining weight, unrealistic body image, and in girls, amenorrhea (suspension of menstrual periods) (Alloy et al., 2005; Carson et al., 2000). Individuals with anorexia may exhibit behaviors such as food restriction and/or binging and purging.

Bulimia nervosa is another type of eating disorder in which an individual eats uncontrollably and then compensates for it by purging, fasting, or exercising. Binges can be triggered by stress or unhappiness. Individuals with bulimia do not have the low body weight or amenorrhea that individuals with anorexia exhibit (Alloy et al., 2005; Carson et al., 2000). Many individuals with bulimia and anorexia base their self-esteem largely on their body shape (Alloy et al., 2005). As a result, people with bulimia often are ashamed of their binging, do it in secret, and try to hide it.

Substance Abuse

Adolescents may turn to drugs when facing anxiety from taking on new adult roles. Drugs may provide some adolescents with a short term solution to their problems and may be an attractive alternative, especially if the adolescents lack positive role models and coping skills. Controlling and calming emotions may be difficult for some adolescents and without proper caring and coping skills, they may turn to drugs to control their emotions (Alloy et al., 2005). Peer pressure and the desire to fit in may also contribute to drug use and lead to substance abuse.

Learning and Communication Disorders

The fourth category of childhood and adolescent disorders includes learning and communication disorders. Three primary types of learning disorders affecting adolescents include reading disorders, disorders of written expression, and mathematics disorders (Alloy et al., 2005). Communication disorders may affect speech articulation and expressive or receptive language (Alloy et al., 2005). This category may also include adolescents with developmental disabilities.

Developmental disabilities are those that are considered severe and chronic, start before age 22, and continue indefinitely to substantially affect an individual's life activity. Individuals' lives are impacted in at least three of seven areas, including self-care, learning, mobility, self-direction, economic sufficiency, receptive and expressive language, and independent living (Farnan, 2007). Examples of developmental disabilities include mental retardation, autism, cerebral palsy, and epilepsy (Farnan, 2007; Hanser, 1999).

Autism Spectrum Disorders

Autism is considered a developmental disorder that has its onset early in childhood, usually before age three, and continues throughout a person's entire life (Hardman, Drew, & Egan, 2002). The degree to which autism affects a person varies as do many of their behaviors. However, many individuals with autism demonstrate these four characteristics: (a) challenges in social interaction, (b) mental retardation, (c) language deficits, and (d) stereotyped behavior. Social interaction is very difficult for individuals with autism. Social impairment may include difficulty making eye

contact, inability to change facial affect, inability to develop peer relationships appropriate to the individual's developmental level, or a lack of emotional or social reciprocity (Hardman et al., 2002).

Many children and adolescents with autism also have mental retardation. Approximately 76% to 89% of children with autism have an IQ of less than 70; other individuals with autism show average or above average intelligence (Alloy et al., 2005). Their intelligence may be above average in a specific area or in general. Approximately 10% to 15% of individuals with autism exhibit splinter skills, which refer to areas of exceptional ability in comparison with other areas of their functioning. For example, an individual with autism may perform extremely well at memory tasks, but struggle with abstract reasoning (Hardman et al., 2002). Even with average or above average intelligence, these individuals will still likely struggle with the social impairments of having autism (Alloy et al., 2005).

About half of all children with autism do not speak. Others may vocalize or exhibit echolalia, in which individuals repeat words or phrases they hear either immediately after they are heard or later. Some individuals repeat phrases of songs, TV shows, or conversations that they overheard in ways that do not make sense to others due to the contextual environment. Still, other children with autism communicate verbally in a meaningful way, but may have peculiarities in their sentence structure and word tense. Children who communicate verbally frequently struggle with the reciprocity involved in having a conversation (Alloy et al., 2005; Hardman et al., 2002).

Lastly, many individuals with autism exhibit stereotypical behaviors, including ritualistic or self stimulating movements. For example, some individuals with autism may flap their hands, rock, tense parts of their bodies, bang their heads, or bite their hands. People with autism are also frequently resistant to change (Alloy et al, 2005; Hardman et al., 2002).

Intellectual and Developmental Disabilities

Formerly termed mental retardation, intellectual and developmental disabilities are defined by the American Association on Intellectual and Developmental Disabilities (2007) as a disability involving limitations of both intellectual functioning and adaptive behavior as demonstrated in conceptual, social, and daily living skill areas. Intellectual and developmental disabilities manifest before age 18 and are characterized by significantly sub average intellectual functioning along with related limitations in two or more of the following skill areas: communication, self-care, home living, leisure, and work (Davis, Gfeller, & Thaut, 1999; Hardman et al., 2002).

Adolescents with intellectual and developmental disabilities have unique needs in that they have a desire for independence but lack the intellectual functioning and adaptive behavior needed for independence. Adolescents with intellectual and developmental disabilities often mature at a slower rate than their peers, which can be frustrating for those adolescents who are aware of their differences from their same aged peers. Consequently, self-esteem is especially important for adolescents with intellectual and developmental disabilities who are aware of their differences (Alloy et al., 2005).

Physical Conditions and Disorders

This category includes such issues as health impairment, physical disabilities, hearing and visual impairment, and teenage pregnancy. Health impairment is a general term and refers to adolescents who are chronically sick and in need of medical attention. Two examples of health impairment include cancer and asthma. Adolescents frequent hospital visits and medical procedures may interfere with their normal daily functioning and put them at risk for getting behind in school, struggling to develop and maintain relationships with peers, and emotional concerns regarding their future, health, or current situation.

Physical Disabilities

Physical disabilities are physical limitations that interfere with a person's school attendance or learning to such a degree that special services, training, or equipment are needed (Hallahan & Kauffman, 2003). Examples of physical disabilities include traumatic brain injury (TBI), cerebral palsy, epilepsy, spinal cord injuries, muscular dystrophy, and juvenile rheumatoid arthritis. According to Hallahan and Kauffman (2003) about 290,000 students in U.S. public schools receive special education services due to physical disabilities.

Hearing Impairments

Hearing impairment is a broad term that covers individuals who are deaf and hard of hearing. These two hearing categories can be defined physiologically and educationally. The physiological approach differentiates between deaf and hard of hearing by measuring the degree of hearing loss. The educational approach differentiates the two categories based on an individuals spoken language abilities

because there is a link between hearing loss and delay in language development. For example, deafness would be defined as a condition in which the hearing impairment did not allow for development of speech with or without a hearing aid. Hard of hearing would be defined as a condition in which the individual has enough residual hearing, frequently with use of a hearing aid, to develop speech (Hallahan & Kauffman, 2003).

Hearing impairment affects an individual's ability to acquiring spoken language and consequently communicate with others who predominantly use spoken language as a means of communication. Therefore, intervention, such as hearing aids or sign language, is often provided to help children and adolescents with hearing impairments succeed in school and other social settings.

Visual Impairments

Visual impairment is a broad category that encompasses individuals who are legally blind or have low vision. Legally blind means that an individual has 20/200 vision or less in the better eye with glasses or has a narrow field of vision of only 20 degrees or less. Low vision means that an individual's visual acuity is between 20/70 and 20/200 in the better eye with correction. Frequently individuals with low vision can read large or regular print with or without some form of magnification.

Individuals with vision impairment may or may not have other conditions. Sometimes individuals with vision impairment have stereotyped behaviors, such as eye poking or body rocking, that may interfere with social acceptance and intervention may be needed to lessen or eliminate these behaviors. Individuals with visual impairment need to be taught how to navigate in their communities and schools

so that they can reach their full potential. Individuals with vision impairment frequently are trained in orientation and mobility skills and cognitive mapping, two different approaches to cognitively processing landmarks in the environment to allow for successful navigation (Hallahan & Kauffman, 2003). Individuals with vision impairment may also learn Braille, how to use their remaining sight, and how to improve their listening skills.

Teenage Pregnancy

Teenage mothers face unique challenges that adult mothers may not face because they are developmentally less mature. Adolescence is a transition time from childhood to adulthood in which individuals take on more responsibility and complex tasks that prepare them for adulthood. Pregnant teenagers deal not only with the challenges of adolescence, but also with the stress and transition involved with pregnancy (Liebman & MacLaren, 1991). Research indicates that too much stress can create complications in pregnancy (Liebman & MacLaren, 1991).

Besides the stress of fostering and delivering a baby, teenage mothers are forced into a parenting role before they are ready. Alloy et al. (2005) stated that studies indicate that adolescent mothers are "less sensitive to their children's cues, less likely to interact with their children verbally, less likely to praise them, and more likely to criticize and punish them" (p. 492). In other words, teenage mothers may lack the psychological stability and attentiveness required for parenting.

These descriptions of the disorders and conditions that some adolescents face point to needs that are unique to these adolescents. Adolescents with clinical needs not only go through the same transitions as their typically developing peers, but due

to their disorders or conditions, they have additional needs. These additional needs may require more direct learning or therapies to improve academic, social, daily living, and coping skills. Also, adolescents with clinical needs may require medical services or counseling to manage conditions or disorders. Lastly, adolescents with clinical needs need opportunities for peer interaction, techniques to improve their self-esteem, and strategies for learning how to manage their leisure time. Many of these additional needs may also be needs of typically developing adolescents; however, the degree to which direct intervention is required is the primary difference between the two groups.

Adolescents and Music Therapy

As previously mentioned, adolescents with clinical needs often require some type of intervention to facilitate their optimal development. Interventions may include behavior therapy, psychotherapy, group therapy, physical therapy, speech therapy, job training, tutoring, art therapy, or music therapy. For the purpose of this study, the use of music therapy with adolescents with clinical needs will be examined.

Music therapy has been used with many adolescents to facilitate their optimal development. The American Music Therapy Association (2007) defined music therapy as the "clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program" (p. 18). Studies from the *Journal of Music Therapy, Music Therapy Perspectives,* and *Music Therapy* indicate that music therapists have worked with adolescents in hospital, residential (facility or home), and school settings. Articles from these journals demonstrate that music

therapists have worked with adolescents with attention deficit hyperactivity disorder (ADHD), conduct disorder, learning disorders, substance abuse, mental retardation, mental illness, behavior disorders, emotional disorders, developmental disorders, and traumatic brain injury. Juvenile delinquents, pregnant teens, abused adolescents and grieving adolescents have also received music therapy. See Appendix A for article citations.

Music therapy goals for all clients are determined on an individual basis due to the unique needs of each individual and his or her diagnosis. A review of music therapy journal articles revealed that goals for adolescent music therapy clients have included improving gross motor skills, communication skills, social skills, auditory discrimination, self-esteem, group cohesion, and emotional awareness and insight. Other goals have involved developing identity, changing disordered behavior patterns, decreasing self-stimulatory behaviors, and facilitating adjustment to school and community settings (Appendix A). Due to the flexible nature of music and adolescents' heightened interest in music, music therapy is frequently a viable therapy option for adolescents.

A survey of music therapy journal articles highlighted six categories of music therapy interventions that have been used with adolescent populations. These six intervention categories include: a) music making, b) music and movement, c) music and another art form or activity, d) music for insight and expression, e) music and relaxation, and f) music as a reward. To better understand the use of music therapy with adolescents, each music intervention category will be discussed.

Music Making

The music making category incorporates a variety of music therapy interventions, including individual lessons, ensemble performance, instrument playing, and singing. Due to the variety of types of interventions, each one will be examined independently.

Individual Lessons

Two studies cited incorporating individual lessons in a music therapy treatment plan for adolescents. In these studies individual voice lessons and piano lessons were used while working with adolescents at-risk (Ragland & Apprey, 1974) and an adolescent with conduct disorder (Kivland, 1986), respectively. The goals of music therapy for the Ragland and Apprey (1974) study included improving adjustment to school, community, and domestic situations; increasing self-expression; and improving communication and problem solving skills. The voice lessons were only part of the treatment plan. Consequently, the results of the study will be discussed later.

The goal of the Kivland (1986) study incorporating individual piano lessons was to increase self-esteem. Results for the male adolescent with conduct disorder showed a decrease in negative self-statements and an increase in positive self-statements. The male adolescent also learned to state what he did well in piano lessons and transferred this skill to other settings (Kivland, 1986). Both the Ragland and Apprey (1974) and Kivland (1986) articles illustrate the effectiveness of music therapy sessions incorporating individual lessons to meet the non-musical goals of adolescent clients.

Ensemble Performance

Several journal articles cited examples of adolescents participating in music ensembles to meet non-musical goals. These studies focused on adolescents at-risk (Ragland & Apprey, 1974), as well as, adolescents with intellectual and developmental disabilities (Humphrey, 1980), and attention deficit hyperactivity disorder (ADHD) (Rickson, 2006). Music therapy goals included improving social, communication, problem solving, leadership, and auditory discrimination skills. Other goals included improving self-expression, control of motor impulsivity, and increasing music knowledge. Ensembles included choirs and a percussion ensemble.

Ragland and Apprey (1974) incorporated choir rehearsals and performances into their music therapy sessions with adolescents at-risk. Choral ensemble participation included choral singing, duets, solos, directing, and some instrument playing. The choir also worked together to make decisions regarding performances. Ragland and Apprey (1974) found music therapy to be an effective treatment for adolescents at-risk as demonstrated by an increase in self-esteem, community involvement, and improvement in communication skills assessed by researchers after participants had received music therapy services. These outcomes summarize the fifteen points, listed by the authors, regarding the participants' accomplishments in school, work, and the community.

Humphrey's (1980) study compared music ear training in a choral setting with no music ear training to discover the effect of these conditions on auditory discrimination for adolescents with intellectual and developmental disabilities.

Humphrey (1980) found that choir members who received ear training improved their auditory discrimination skills.

Rickson (2006) studied the difference between instructional and improvisational percussion ensembles on motor impulsivity in adolescents with ADHD. Rickson (2006) found no significant difference between the instructional and improvisational approaches on motor impulsivity. However, the study suggested that music therapy may contribute to a reduction of ADHD symptoms other than motor impulsivity (Rickson, 2006). All of these articles suggest that ensemble participation may be an effective music therapy intervention for adolescents.

Instrument Playing

Studies demonstrated that a variety of instrument playing interventions have been used with adolescents. These interventions included drumming, rhythm exercises, and improvising. Participants in these forms of music interventions included adolescents in chronic and acute care facilities (Brooks, 1989), adolescents with emotional disorders (Frisch, 1990; Gibbons, 1983; Haines, 1989; Larson, 1981; Montello, & Coons, 1998; Rickson, & Watkins, 2003), an adolescent with developmental delays (Ritholz, & Turry, 1994), adolescents with learning and behavior disorders (Montello, & Coons, 1998; Rickson, & Watkins, 2003), and juvenile offenders (Rio, & Tenney, 2002; Wyatt, 2002).

Goals addressed through instrument playing music interventions included attaining and maintaining attention to task, improving social interaction and group cohesion, improving communication skills, improving physical coordination,

fostering identity formation, providing a healthy outlet for self-expression, facilitating impulse control, and investigating the perceptual abilities of adolescents with emotional disorders.

Overall, most studies noted that adolescents actively participated in instrument playing interventions within music therapy sessions. Some studies focused on the specific abilities of adolescents with specific disorders. For example, Larson (1981) investigated the perceptual abilities of adolescents with emotional disorders through visual and auditory rhythmic recognition tasks. Larson (1981) found no significant differences between the performances of adolescents with emotional disorders as compared with adolescents without emotional disorders on the rhythmic recognition tasks. Likewise, Gibbons (1983) found that adolescents' aptitude for rhythmic discrimination did not vary significantly across the study groups despite their diagnosis of emotional disturbance and their differing needs for structure. Gibbons (1983) suggested that rhythm may be an important element when working with adolescents with emotional disturbance.

Other articles focused on the benefits of certain types of music interventions to meet specific goals. Several articles recommended playing percussion instruments, drumming, and improvising as an effective means for improving self-expression, developing group cohesion, maintaining attention to task, and improving self-esteem for adolescents with a variety of diagnosis, but mostly emotional disorders (Brooks, 1989; Frisch, 1990; Haines, 1989; Montello, & Coons, 1998; Rio, & Tenney, 2002; Ritholz, & Turry, 1994; Wyatt, 2002). Similarly, Rickson and Watkins (2003) suggested that active rhythm-based activities, such as call and response games,

rhythm ensemble performance, and creative improvisation may facilitate internal organization and aid in impulse control for male adolescents with attention difficulties.

Singing

Singing interventions have been cited as effective interventions for adolescents. Cohen (1988) used singing to decrease the rate of speech for an adolescent with Kluver-Bucy Syndrome. Cohen found that singing and tapping the beat decreased the adolescent's rate of speech by 11%. Cohen also found that speaking and tapping the beat decreased the adolescent's rate of speech by 28%. Brooks (1989) recommended group singing along with other music interventions when working with adolescents in chronic and acute care facilities to promote healthy forms of self-expression. Likewise, Rio and Tenney (2002) stated that singing facilitated group cohesion, captured attention, created an atmosphere for discussion of personal issues, allowed for self-expression, and provided closure to music therapy sessions for adolescent juvenile offenders.

Music and Movement

Moving to music interventions, including movements required to play instruments and exercising and stretching to music, have also been used with adolescents receiving music therapy. These populations included adolescents in chronic and acute care facilities (Brooks, 1989), adolescents at-risk (Ragland, & Apprey, 1974), adolescents with severe and profound disabilities (Boswell, & Vidret, 1993), and juvenile offenders (Rio, & Tenney, 2002). Moving to music gained the adolescents' attention and facilitated group cohesion (Ragland, & Apprey, 1974; Rio,

& Tenney, 2002). Moving to music interventions also provided adolescents with opportunities to work through and process issues regarding comfort with their bodies and sexuality and to learn personal boundaries (Ragland, & Apprey, 1974; Rio, & Tenney, 2002).

Similarly, Boswell and Vidret (1993) paired a variety of rhythmic movements with music to cue and time the movements while working with adolescents with severe and profound disabilities. Rhythmic movements involved swinging the upper body, rolling, crossing the mid-line, and moving limbs in a variety of ways. Rhythmic movements and music were used to increase movement, improve rhythmic skills, and increase vocalizations. Boswell and Vidret (1993) found that the music and movement created opportunities for adolescents with severe and profound disabilities to progress towards their goals and allowed for self-expression.

Music and another Art Form or Activity

This category incorporates music and games, videography, writing, drawing, and story telling. These interventions have been implemented with juvenile offenders (Wyatt, 2002), adolescents at-risk (Ragland, & Apprey, 1974), adolescents with emotional disabilities (Eidson, 1989; Ritholtz, & Turry, 1994), adolescents with mental illness (Brooks, 1989), as well as those with adjustment reactions to adolescence (Henderson, 1983). Goals addressed by these interventions included improving decision making skills, improving interpersonal behavior, increasing awareness of mood and emotion, improving group cohesion, and improving self-esteem.

For example, Ragland and Apprey (1974) used original music games, including "Rhythm" and "Voice Your Choice," to teach at-risk adolescents to address weaknesses in a song, improve decision-making skills, and improve social interaction and interpersonal skills. Wyatt (2002) suggested music games, such as music trivia and "Name that Jam" as effective music interventions for adolescent juvenile offenders. Ritholz and Turry (1994) wrote about the usefulness of incorporating an adolescent client's story into a music therapy session. The story was an object of fascination; however, when put to music it allowed the client to express emotions. Over the course of music therapy, the client made changes to the story and started incorporating episodes from his own life. Eventually, the music therapists changed the story to facilitate the client's adjustment and acceptance of change. All of these articles noted the benefits of pairing music with another art form or activity while working with adolescents.

Music for Insight and Expression

Music listening, discussing, and song writing interventions have all been utilized with adolescents to increase their insight or facilitate reflection upon their situation as part of their treatment plan. These forms of music interventions have often been used with adolescents with mental illness (Brooks, 1989; Caplan, 1965; Frisch, 1990), emotional disturbance (Edgerton, 1990; Larson, 1981; Montello, & Coons, 1998), intellectual and developmental disabilities (Greenwald, 1978), juvenile offenders (Rio, & Tenney, 2002), adolescents in the hospital (Kennelly, 2001; Robb, 1996), adolescents who have been sexually abused (Lindberg, 1995), and adolescents dealing with grief (Dalton & Krout, 2006).

Music listening and song discussions tend to be well suited interventions for adolescents due to adolescents' heightened interest in music. In fact, Caplan (1965) referred to adolescents as passive musicians, a term he devised through the course of treating adolescents with mental illness. Through his work with adolescents, Caplan came to realize the importance of music listening to adolescents. Over the years, music therapists have used music listening and song discussions to improve listening skills, communication skills, self-esteem, and self-expression (Brooks, 1989; Frisch, 1990; Henderson, 1983; Ragland & Apprey, 1974; Rio & Tenney, 2002). Frequently, music portrays many of the emotions that adolescents experience allowing them to identify with it. Also, adolescents may use lyrics or songs from popular music as a way of expressing their own thoughts or feelings.

A review of the music therapy literature, identified song writing as another beneficial music intervention for adolescents to facilitate emotional expression, self-expression, group cohesion, increase self-esteem, and improve decision making skills (Brooks 1989; Dalton & Krout, 2006; Edgerton, 1990; Kennelly, 2001; Lindberg, 1995; Rio & Tenney, 2002; Robb, 1996). Several authors provided detailed descriptions of songwriting interventions they have successfully used with adolescents. For example, Edgerton (1990) recommended a group songwriting process that incorporated the following steps: lyric analysis, music analysis, selection of theme and style, lyric writing, music composition, and culmination. Robb (1996) suggested fill-in-the-blank scripts, group song writing, improvisation song writing, and discharge songs as possible forms of song writing for adolescents. Lastly, Dalton

and Krout (2006) devised a detailed, ten stop protocol called Group Song Writing Process, which they effectively used with bereaved adolescents.

Music and Relaxation

Another music therapy intervention cited in two journal articles involved pairing music with relaxation techniques. Music and relaxation interventions were used with adolescents in chronic and acute care facilities (Brooks, 1989) and pregnant adolescents (Liebman, & Maclaren, 1991). The goals for music and relaxation were to teach a safe and socially acceptable stress coping mechanism (Brooks, 1989) and to decrease anxiety levels (Liebman, & Maclaren, 1991). Brooks (1989) recommended guided imagery along with music as a possible coping strategy for adolescents with mental disorders. Liebman and Maclaren (1991) paired music and progressive muscle relaxation to determine the effect on state anxiety levels. Liebman and Maclaren (1991) found that situational stress, or state anxiety, levels decreased for adolescents receiving the music and relaxation interventions.

Music as a Reward

The final music therapy intervention category cited in the three music therapy journals involved using music as a reward. Four articles incorporated music as a reward to reinforce a desired behavior when working with adolescents with intellectual and developmental disabilities (Greenwald, 1978), aggressive and delinquent behavior (Madsen, & Madsen, 1968), elective mutism (Castellano, & Wilson, 1970), and emotional disabilities (Eidson, 1989). All but one of the studies demonstrated the effectiveness of the contingent use of music with adolescents to reinforce positive behavior.

In an effort to decrease self-stimulatory behaviors in adolescents with intellectual and developmental disabilities, Greenwald (1978) allowed participants to listen to music when behaving appropriately. However, once participants exhibited self-stimulatory behaviors they listened to either silence or distorted music. Ultimately, Greenwald (1978) found that self-stimulatory behaviors did not significantly decrease with the use of music as a reward. Greenwald (1978) speculated that the findings may be due to the low functioning level of the participants and the high frequency of self-stimulatory behaviors.

Unlike Greenwald, Madsen and Madsen (1968) saw improvement in their client's behavior with music serving as a reward. Madsen and Madsen (1968) rewarded their client with aggressive and delinquent behavior with time to play the electric guitar upon completion of work tasks and appropriate behavior. Music listening and song discussions were also used to improve communication between the adolescent and his mother. The adolescent was rewarded with short guitar lessons for talking with his mother, as well as, satisfactory completion of work tasks. Thirty days after termination of the contingent use of music for behavior modification, the adolescent improved his work and interpersonal skills and had not been arrested. As a result, the authors suggested that contingent use of music and music activities might be an effective means for behavior modification for adolescents (Madsen, & Madsen, 1968).

Likewise, Castellano and Wilson (1970) employed music as a reward as part of a music therapy intervention to improve the verbal behavior of an adolescent with elective mutism. Castellano and Wilson (1970) discovered that music therapy

sessions were rewarding to the adolescent, therefore, the sessions themselves became the reward for verbalizations. For example, music therapy sessions did not start until the adolescent verbally greeted the music therapist. The session stopped if the adolescent did not respond to a question. Once the adolescent responded to the question, the session resumed. To facilitate generalization of verbalizations to the classroom setting, the adolescent was required to talk to the teacher a certain number of times each day to be allowed to participate in music therapy sessions. Over the course of therapy, the adolescent increased his verbalizations in music therapy and in the classroom.

Lastly, Eidson (1989) utilized a token economy system in which adolescents were rewarded for improved interpersonal behavior with opportunities to purchase preferred roles in a music video. Eidson (1989) found that music therapy sessions focusing on improving specific interpersonal skills in adolescents with emotional disabilities were more successful in improving behaviors and generalizing them to other settings than the general music and classroom control groups. In three of the four studies, the use of music as a reward facilitated a positive change in behavior for those adolescent clients.

These six categories of music therapy interventions may also be used with other populations served by music therapists. However, to meet the unique needs of each adolescent client, the interventions must be adapted by a skilled music therapist. Many music therapists will likely work with adolescents at some point, however, at the same time many music therapists feel unprepared for working with adolescents.

Purpose

The purpose of this study was to examine the current role of music therapy with adolescent populations. The study addressed the following questions:

1. What adolescent populations do music therapists currently serve?

2. What goals are music therapists targeting?

3. What non-music outcomes are music therapists working towards through their music interventions?

4. How do music therapists determine client progress towards objectives?

5. What treatment interventions are being used to facilitate progress towards these goals?

6. What types of music are music therapists using?

Results from this study may facilitate an update of relevant literature for music therapy as most of the articles pertaining to adolescents are over ten years old. Results may also give music therapists a starting point for clinical intervention with adolescents.

CHAPTER III

Method

Participants

Participants (N = 97) for this study were music therapists who work or have worked with adolescents. For the purpose of this study, an adolescent is defined as a male or female between the ages of 11 and 19. The music therapists are board certified by the Certification Board for Music Therapists (CBMT) and reside in the United States.

The researcher obtained a list of potential participants from the Certification Board for Music Therapists and paid appropriate fees. The list included names and e-mail addresses of board certified music therapists who reported working with adolescents (13 to 18 years old) and with "mixed ages." Each participant received an e-mail with an attached cover letter, explaining consent and confidentiality, and a link to an on-line survey. The cover letter introduced the potential participants to the researcher and the research topic (Appendix B). Those music therapists who completed and returned the survey were considered participants in this study. Completion of surveys was viewed as consent (Appendix C). All participation was voluntary and responses were confidential.

Apparatus and Procedures

A survey created by the researcher was distributed to the participants to gain insight into how music therapists are currently meeting the needs of their adolescent clients (Appendix D). Participants received an e-mail with a web link which directed

them to the on-line survey. The on-line survey was created using Survey Monkey.

Using Survey Monkey allowed the participants' responses to remain confidential.

The on-line survey consisted of nine pages with a total of twenty-two

questions. Completion of the survey was estimated to take between 15 to 20 minutes.

The survey questions addressed: a) the ages and diagnoses of adolescent clients, b)

the clinical settings where services are provided, c) examples of goals, objectives,

outcomes, and interventions commonly used, and d) the type of music used with

adolescent clients.

The first page of the survey provided participants with information regarding

the research topic and participation in the study. The second page asked participants

to provide professional demographic information. The third page focused on

demographic information about the adolescent clients. Page four asked participants to

indicate the settings in which they have worked and to mark any other professionals

they have co-led sessions with while serving adolescent clients. Page five focused on

the size of adolescent groups the participants have worked with and which

interventions they have used. Page six contained four questions regarding the type of

music used by participants when working with adolescents. Page seven invited

participants to answer three questions regarding assessment and goals for adolescent

clients. Page eight requested participants give examples of three goals they frequently

address with their adolescent clients. In addition, participants were asked to provide

an example objective, functional outcome, explain how participants knew the

objective was met, and list several appropriate treatment interventions. Lastly, page

nine thanked participants for completing the survey and invited them to share any

other information they find important to practicing music therapy with adolescent clients. The survey was open and responses were collected for one week. At the end of the week, the survey was closed and data analysis began.

Data Analysis

      Descriptive analysis, primarily in the form of frequency count data was collected for the majority of survey questions. Key words or short phrases from responses to open ended survey questions were highlighted and grouped into appropriate categories to make it easier to see what participants reported. Percentages of responses for a majority of the questions were taken from the data provided by Survey Monkey. Some data were entered into Excel for the purpose of making figures. Several comparison tables were made to examine the trends between specific groups of data, such as years practicing versus years working with adolescents. The analysis for these tables was done by Survey Monkey. The researcher then created tables within Microsoft Word to display the data.

CHAPTER IV

Results

Participant Information

Out of the 330 music therapists who started taking the survey, 97 completed it. The following results were taken from the responses of those 97 completed surveys. Participants' ages varied with 38.1% of them between 21 and 30 years old, 33% between 31 and 40 years old, 19.6% between 41 and 50 years olds, 7.2% between 51 and 60 years old, and 2.1% over 60 years old. Most participants were female (94.8%) with only 5.2% male.

Participants from all seven American Music Therapy Association (AMTA) regions completed the survey. Of the 97 participants, 27.8% were from the Great Lakes region; 16.5% were from the Mid-Atlantic region; 13.4% were from each of Southeastern, Southwestern, and Midwestern regions; 9.3% were from the Western region; and 6.2% were from the New England region. Levels of education varied; however, 55.7% of participants had earned a bachelor's degree. Only 2.1% of the participants completed a graduate equivalency alone. A master's degree was earned by 37.1% of the participants and 5.1% had earned a doctoral degree.

Most participants have been music therapists for the past 10 years with 36.1% of them practicing for zero to five years and 25.8% of them practicing for six to ten years. Most of the participants had worked with adolescents for ten years or less with 44.3% working with them for zero to five years and 24.7% working with them for six to ten years. See Table 1 for relevant data.

Table 1.

Percentage of participants practicing by years.

Categories	0–5 years	6-10 years	11–15 years	16-20 years	21-25 years	Over 26 years
Music Therapist	36.1	25.8	14.4	11.3	5.2	7.2
Work with Adolescents	44.3	24.7	18.6	5.2	4.1	3.1

Participants indicated that they worked in a variety of settings. Percentages add up to more than 100% as one participant may work in more than one setting. The setting with the highest percentage was school (private or public, including alternative) with 58.8% of the participants working there. Other settings in which participants worked included 25.8% at the client's home, 21.6% at a hospital (general or children's), 19.6% at a private clinic, 18.6% in psychiatric placements, and 12.4% in residential placements. Less than five percent of the participants reported working in each of the following settings: early childhood centers (4.1%), group homes (5.2%), detention centers (1.0%), rehabilitation centers (2.1%), and hospice houses (1.0%). Seventeen participants (or 17.5%) stated "other" as there work site. These other settings included a public therapeutic recreation division, community music school, day program setting, music therapy department of a community based music school, transitional care facility, domestic violence shelter, camp, and children's grief center.

With participants working in a variety of settings they have an opportunity to come into contact with a variety of professionals each day. Participants reported co-leading sessions while working with adolescents with a number of other

professionals. The four professionals with the highest percentage of participants co-leading with them included special educators (41.2% of participants), speech and occupational therapists (each 40.0% of participants), and other (35.3% of participants). Other professionals participants listed were art therapists, other music therapists or music therapy interns, recreation therapists or specialists, behavior analysts, and mental health professionals.

Participants also reported serving adolescents in several types of sessions. Individual sessions received the highest percentage of responses with 85.6% of the participants using them. Next were small group sessions with 84.5% of participants using this type of session. Large group sessions received 37.1% of the participants' responses. Finally, 5.2% of the participants indicated "other" for session type. These other session formats included family, co-treatment, and procedural support sessions. Again, due to the fact that therapists could use more than one session format, percentages add up to more than 100%.

Adolescent Populations

Participants reported working with adolescents from 11 to 19 years of age. The percentage of participants working with each age included 82.5% with 11 year olds, 83.5% with 12 year olds, 86.6% with 13 and 14 year olds, 81.4% with 15 year olds, 78.4% with 16 year olds, 79.4% with 17 year olds, 75.3% with 18 year olds, and 67.0% with 19 year olds. The two ages of adolescents that most participants served were 13 and 14 year olds.

Participants also reported working with a variety of adolescent populations. The three populations with whom the highest percentage of participants reported

working included adolescents with autism spectrum disorders (78.4% reported),

developmental disabilities (77.3% reported), and emotional or behavioral disorders

(68.0% reported). In the "other" category participants reported working with

adolescents with multiple disabilities, chronic pain, stroke, specific types of brain and

spinal cord injuries, burns, intellectual disabilities, asthma, and William's Syndrome.

One participant also reported serving refugee youth. See Figure 1 for additional

details.

Diagnotistic Populations Served
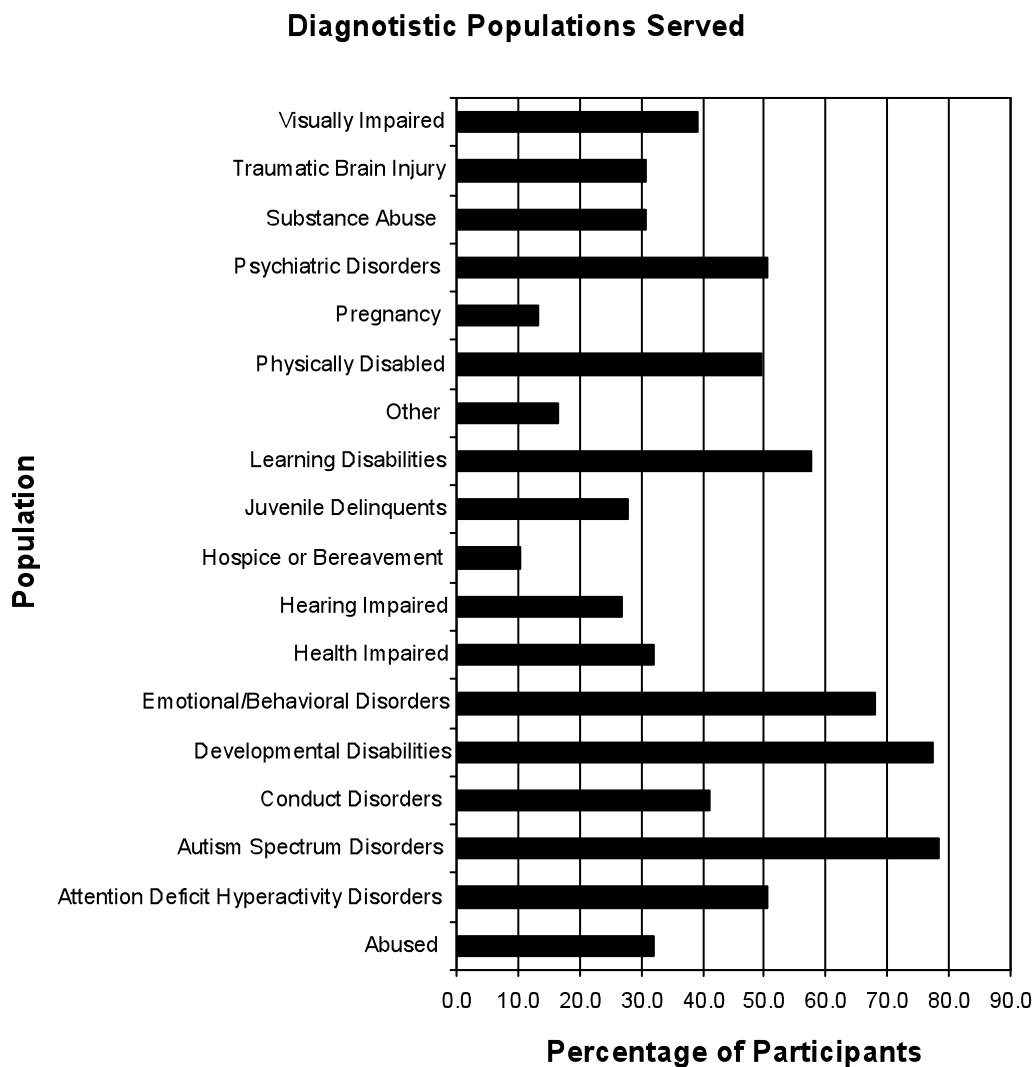
Figure 1. Diagnostic populations that participants serve.

Music Therapy Assessment Process

After reviewing all of the participants' written responses on their methods of assessing clients to determine goals for therapeutic intervention, two main forms of assessment appeared. The first form was a formal, standardized, written assessment such as the Special Education Music Therapy Assessment Handbook (SEMTAP), Music Therapy Special Education Assessment Scale (MT-SEAS), Individualized

Music Therapy Assessment Profile (IMTAP), or the Woodcock Johnson III Standardized Test of Cognitive Achievements and Abilities. One participant reported assessing communication, academic, motor, emotional, organizational, and social needs referred to as CAMEOS. Other formal assessments included hospital or school assessment forms and a Neurologic Music Therapy Assessment tool.

The second and most frequently reported form of assessment was an informal assessment created by the music therapist. Some participants wrote out these informal assessments, while others noted their observations in session documentation. Informal assessments frequently involved (a) client observation, either in the music therapy session, in a home or classroom environment, or in both settings, (b) interviews with the client, parents or guardians, and other professionals such as speech therapists, treatment teams, occupational therapists, physical therapists, teachers, behavioral specialists, and medical professionals, and (c) review of client hospital charts, Individualized Education Plans (IEP), or documentation from other therapies.

Many participants stated that they assessed the cognitive, emotional, social, physical, spiritual, and musical needs and abilities of the clients. Other assessment areas included behavior, use of leisure time, sensory processing, coping skills, adjustment issues, communication skills, and academic and daily living skills. Almost all informal assessments also took into account the clients' interests and musical preferences.

The participants' written responses indicated that many of them created their own music therapy goals; however, many participants also looked to other therapists' goals or the clients' IEPs for goal ideas. Some participants indicated that they did not

set the music therapy goals. In some cases, the goals were set by the interdisciplinary team of which the music therapist was a part. In other cases, the goals were set by other professionals such as social workers, teachers, or therapeutic recreation staff.

The length of the assessment process varied. Some participants reported completing the assessment in the initial session while other participants took two or three sessions to complete the assessment. A few participants said their assessment process took two to four weeks. The length of the assessment varied depending on the setting in which the participants saw the clients. Participants working in hospitals or acute care settings frequently reported completing assessments within the first session. Participants working in hospitals or acute care settings often work with groups that change frequently and need to be assessed during each group session. Participants working in settings in which services are provided to the same clients over a period of time tended to report longer assessment times.

Music Therapy Goals and Objectives

Completion of the assessment, whether formal or informal, led to the assignment of music therapy goals. Participants were asked to indicate all goal domains they addressed when working with adolescents. The three goal domains receiving the highest percentage of participant responses included social (96.9%), communication (90.7%), and behavioral (89.7%). For a full report of all the goal domains see Figure 2. The goal domains participants reported in the "other" category included problem solving, spiritual, interpersonal skills, vocation skills, daily living skills, speech, empowerment, coping skills, and academic skills.

Goal Domains for Adolescents
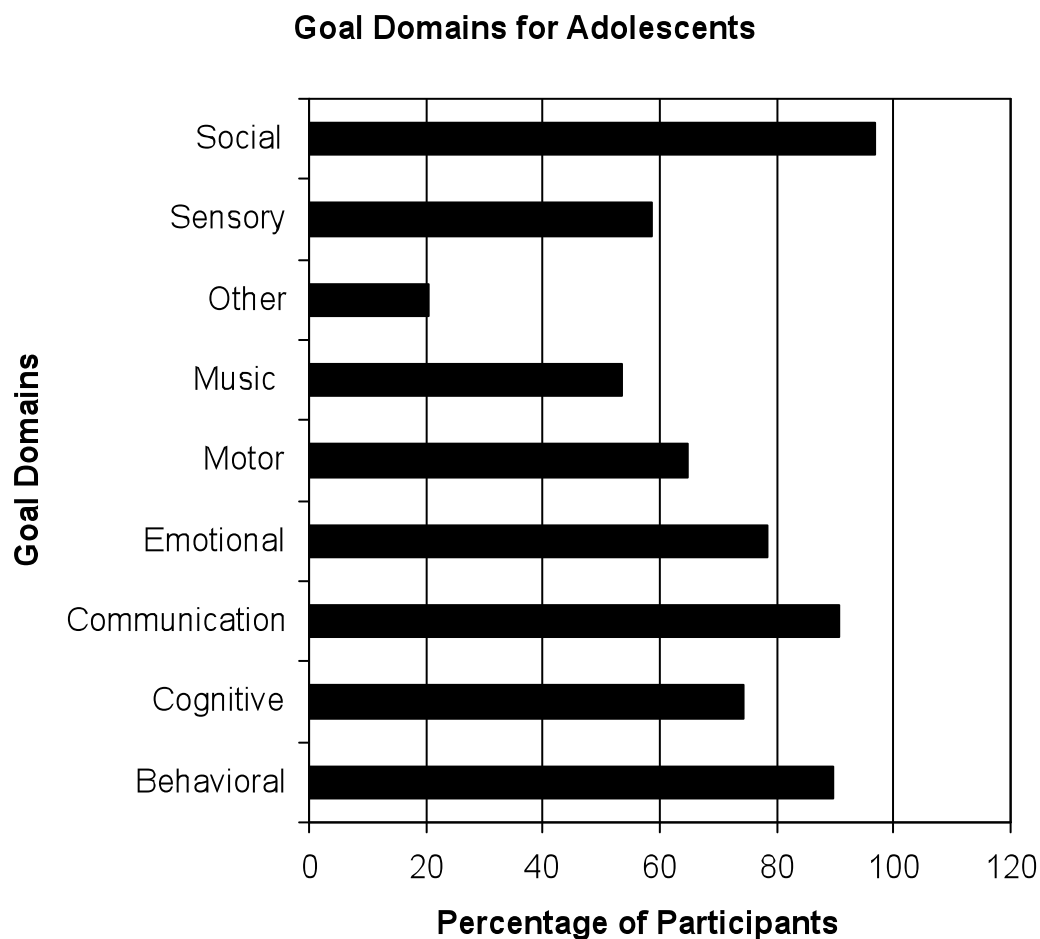
Figure 2. Reported goal domains for adolescents.

After determining the goals, objectives were created. Participants were asked to select the three goals they used most often and write an example of an objective for each goal. The three goal domains with the greatest number of objectives written in included: communication (57 responses), social (43 responses), and emotional (39 responses). Common communication objectives participants reported pertained to making choices, improving self-expression, improving receptive language skills, increasing vocalizations, and improving conversation skills. Social objectives frequently dealt with improving social interaction, working as a team, taking turns,

and participating in the music intervention. Lastly, emotional objectives focused on identifying emotions, expressing emotions, and improving coping skills. For a complete listing of objectives by goal domain see Appendix E.

Desired Non-Musical Outcomes

After listing examples of common objectives for frequently used goals, participants were asked to share the functional or non-musical outcomes they look for from their clients to know the goal and objective were met. Examples of functional outcomes for communication objectives included expressing wants and needs, improving communication with others, improving speech articulation, and increasing vocalizations. A few examples of functional outcomes for social objectives included appropriately interacting with others, improving greetings, and taking turns. Lastly, examples of functional outcomes for emotional objectives included recognizing and expressing feelings, identifying emotions, and improving coping skills. See Appendix F for a breakdown of all the responses from each goal domain.

Determination of Client Progress

Participants reported a variety of means to track a client's progress towards a goal and objective. The most commonly reported method of data collection was a frequency count. As many as 94 participants named counting the number of times a behavior occurred as the method they use to know when the client has met the objective. The second most frequently reported data collection method was observation with 57 participants indicating this method. Through observation these participants said they would keep track of whether or not the behavior occurred to

know if the objective was met. Other forms of data collection included narrative or written notes (24 participants), duration recording (13 participants), and other (14 participants).

Narrative forms of data collection involved describing a client's behavior or writing down what the client said. Duration recording meant that participants recorded the length of time the client exhibited a specific behavior and kept track of the client's progress to know if the objective was met. Lastly, a few examples of responses in the "other" category include using a Likert scale to measure pain or feelings, making a video or audio recording, or noting the client's pain medication dosages. There were 226 responses collected from all three parts of question 21 regarding data collection from an average of 75 participants who completed this part of the question. Most participants answered the first part of question 21 with 85 participants stating at least one form of data collection they used. As participants continued to answer question 21 there responses declined so that only 72 participants filled in a second form of data collection and 69 participants wrote in a third form of data collection. See Appendix D for question 21.

Treatment Interventions

Once participants identified the goals, objectives, functional outcomes, and data collection methods they frequently use when working with adolescents, they reported interventions they use to facilitate the client's progress towards meeting these goals. Not all participants reported treatment interventions they used for question 21, however, all of them answered the "check all that apply" treatment intervention question earlier in the survey (See Appendix D, question 13). Therefore,

percentages of responses for each intervention were taken from question 13 and the written responses from question 21 were mentioned to provide a better understanding of the types of interventions in each category. Figure 3 displays the percentages of responses for each intervention. To summarize the data, the four most frequently reported interventions included playing instruments (88.7%), singing or chanting (85.6%), and listening and song writing each with 78.4% of responses.
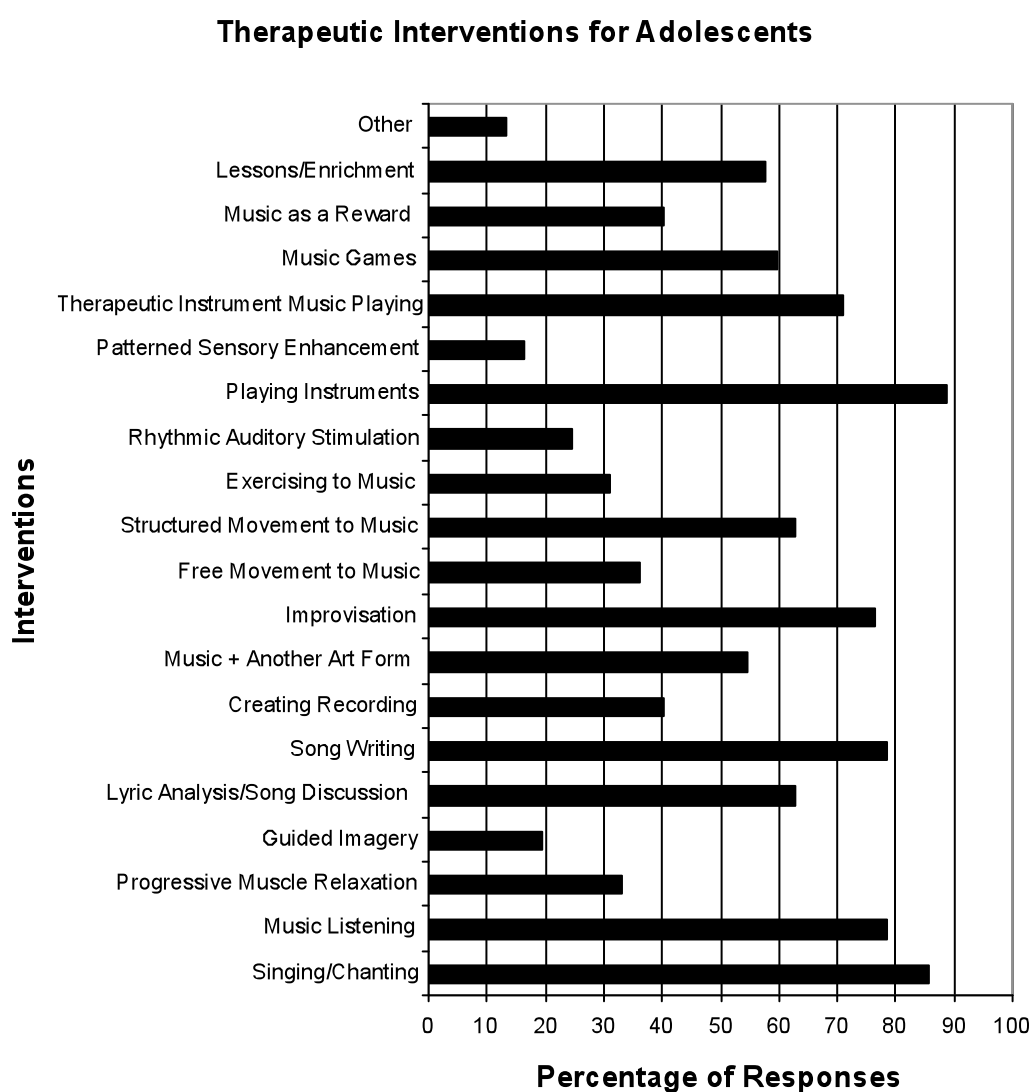
Therapeutic Interventions for Adolescents

Figure 3. Therapeutic interventions participants reported using with adolescents.

Written responses from survey question 21 give more insight into the specific types of interventions used in each intervention category. Participants reported using drum circles, piano playing, and rhythm imitation instrument interventions. Responses from question 21 also illustrated the purpose behind using instrument playing interventions. For example, participants indicated using instrument playing interventions to provide opportunities for instrument choices, taking turns, maintaining attention, following directions, leading the group, playing emotions, playing to calm down, and playing to improve fine and gross motor skills.

Examples of singing interventions included choices, vocal warm-ups, incorporating books with songs, and songs with turn taking, greetings, conversation, and fill in the blanks. Other song interventions incorporated call and response, original songs, and chanting or rapping.

Participants reported a variety of specific listening interventions including listening to songs with directives, listening to identify feelings within the song, breathing with the beat of the music, and relaxing to the music. Lastly, examples of song writing interventions included writing musical compositions, raps, or personalizing a song. Other song writing interventions focused on writing about a specific topic, such as coping with emotions. See Appendix G for a complete list of specific interventions in each intervention category.

Therapeutic interventions written in the "other" category included non-musical means of facilitating progress towards goals and objectives through verbal and non-verbal prompting, positive reinforcement, repetition, behavior redirection, and hand over hand assistance. Interventions in the "other" category included

incorporating coloring, puzzles, books, turn taking activities, peer interaction activities, Nordoff Robbins Music Therapy, and Community Music Therapy.

Breaking the music interventions reported by participants down by goal domain helped to give a better picture of the types of interventions that were commonly used with adolescents focusing on a specific goal. Due to the subjective nature of question 21 the percentages regarding interventions by domain areas were taken from earlier survey questions that all 97 participants completed.

The most frequently reported music interventions for addressing the motor or physical domain included singing or chanting and playing instruments, both with 92.1% of the responses. The intervention with the highest percentage of responses for the communication domain was playing instruments with 92%. Likewise, the most commonly reported intervention for emotional, behavioral, social, cognitive, and sensory goal domains included playing instruments. Singing and chanting received the highest percentage of responses for working on sensory and music goal domains. Lastly, song writing received the highest percentage of responses for the other category. See Table 2 for percentages regarding all goal domains and all therapeutic interventions. Since participants reported the most commonly used music interventions for each goal domain, a specific intervention may appear under more than one goal domain.

Table 2.

Percentages of responses for interventions by goal domains.

Interventions	Mo	Com	Emo	Behav	Soc	Cog	Sen	Mu	O
Sing	**92.1**	86.4	85.5	85.1	86.2	90.3	**94.7**	**92.3**	80.0
Listen	81.0	81.8	82.9	81.6	79.8	81.9	78.9	76.9	80.0
PMR	33.3	34.1	40.8	35.5	34.0	36.1	36.8	38.5	45.0
Guided Imagery	20.6	19.3	22.4	19.5	20.2	20.8	17.5	17.3	35.0
Lyric Analysis	58.7	62.5	68.4	65.5	62.8	59.7	57.9	63.5	70.0
Song Writing	77.8	79.5	82.9	80.5	77.7	79.2	77.2	78.8	**85.0**
Create Recording	39.7	40.9	43.4	43.7	41.5	38.9	38.6	38.5	55.0
Music and Art	50.8	55.7	60.5	59.8	55.3	51.4	52.6	55.8	60.0
Improvisation	77.8	75.0	80.3	75.9	77.7	75.0	80.7	82.7	70.0
Free Movement	39.7	36.4	35.5	39.1	37.2	34.7	42.1	40.4	35.0
Structured Movement	77.8	68.2	61.8	67.8	64.9	70.8	78.9	67.3	55.0
Exercise	38.1	34.1	31.6	33.3	31.9	34.7	38.6	32.7	35.0
RAS	34.9	26.1	25.0	25.3	25.5	31.9	35.1	30.8	20.0
Instruments	**92.1**	**92.0**	**89.5**	**89.7**	**89.4**	**91.7**	**94.7**	90.4	80.0
PSE	22.2	18.2	14.5	17.2	17.0	20.8	22.8	15.4	15.0
TIMP	69.8	72.7	75.0	71.3	72.3	73.6	75.4	71.2	80.0
Music Games	61.9	61.4	61.8	60.9	59.6	58.3	61.4	63.5	40.0
Music as Reward	46.0	43.2	38.2	42.5	41.5	40.3	45.6	42.3	35.0
Lessons	61.9	59.1	61.8	60.9	58.5	56.9	61.4	71.2	55.0
Other	17.5	13.6	13.2	12.6	13.8	15.3	15.8	15.4	30.0

Note. Mo = motor; Com = communication; Emo = emotional; Behav = behavioral;

Soc = social; Cog = cognitive; Sen = Sensory; Mu = music; O = other. PMR =

Progressive Muscle Relaxation; RAS = Rhythmic Auditory Stimulation; PSE =

Patterned Sensory Enhancement; TIMP = Therapeutic Instrumental Music

Performance.

Music Used with Adolescents

Participants reported using a variety of styles of music; however, the three most frequently reported included (a) popular music (86.6%), (b) classic rock (67.0%), and (c) country (60.8%). See Figure 4 for a list of all the styles of music and the percentage of participants indicating they use this style with their adolescent clients. Examples of music styles listed under "other" included kid's music, world music, folk, E-Mo, educational songs, relaxation music, and original compositions.

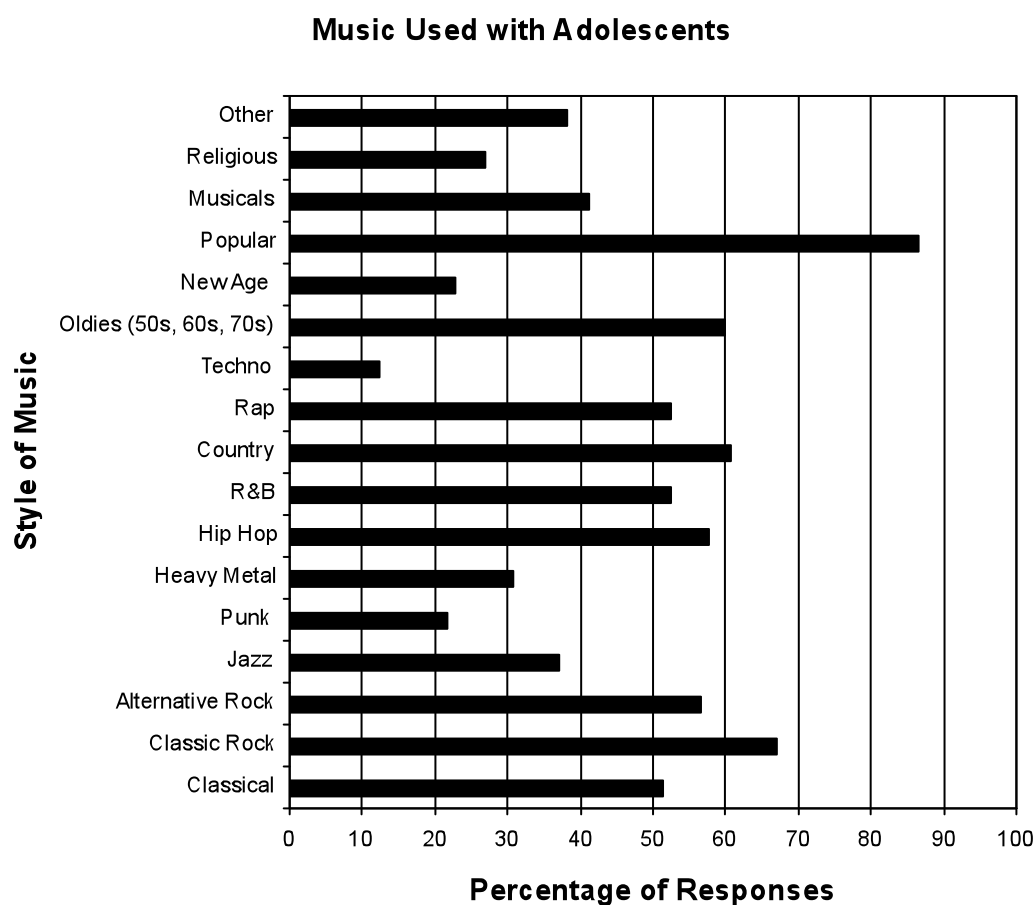**Music Used with Adolescents**

Figure 4. Percentage of participant responses for music styles used with adolescent clients.

In addition to determining the style of music participants used with adolescent clients, participants were asked to share whether they use live or recorded music most frequently. A majority of participants (71.6%) indicated that they use live music most frequently. The other 28.4%, stated that they use recorded music most frequently. Participants were also asked to indicate whether they used commercially available or therapist/client composed music more. Out of 97 participants, 94 answered the question. Most participants (64.9%) reported using commercially available music while 35.1% reported using therapist/client composed music.

Trends

A table was created to compare the number of years participants worked as music therapists versus the number of years they worked with adolescents. Table 3 contains percentages of responses and in parentheses the number of participants responding with the highest percentages across each category of years of experience bolded. There is a trend that the number of years music therapists have been practicing is similar to the number of years they have worked with adolescents. For example, 100% of the 35 participants working as music therapists for zero to five years also reported working with adolescents for zero to five years. However, participants working between 6 and 30 years reported more variation in the number of years they have worked with adolescents. For example, of the total number of participants working as music therapists for 6 to 10 years, 80% of worked with adolescents for 6 to 10 years while 20% worked with adolescents for only 0 to 5 years.

Table 3.

Years participants worked as music therapists versus years working with adolescents.

	Years as	MT-BC					
Years with Adolescents	0 to 5	6 to 10	11 to 15	16 to 20	21 to 25	26 to 30	30 +
	100	20	0	27.3	0	0	0
0 to 5	**(35)**	(5)	(0)	(3)	(0)	(0)	(0)
	0	**80**	14.3	18.2	0	0	0
6 to 10	(0)	**(20)**	(2)	(2)	(0)	(0)	(0)
	0	0	**85.7**	18.2	**40**	**50**	0
11 to 15	(0)	(0)	**(12)**	(2)	**(2)**	**(2)**	(0)
	0	0	0	**36.4**		0	0
16 to 20	(0)	(0)	(0)	**(4)**	20	(0)	(0)
	0	0	0	0	**40**	**50**	0
21 to 25	(0)	(0)	(0)	(0)	**(2)**	**(2)**	(0)
	0	0	0	0	0	0	**100**
25 +	(0)	(0)	(0)	(0)	(0)	(0)	**(3)**

   Table 4 compares the various goal domains with each population to see which populations were most frequently listed for each goal domain and includes percentages of participants' responses for all populations and domains. The table shows that for several goal domains, the highest percentage of responses was tied between two populations. Since the table shows the highest percentage of responses under each goal domain, it is possible for one population to receive the most frequent percentage of responses under several goal domains. For example, autism and developmental disabilities received the highest percentage of responses for the motor and cognitive goal domains. Communication, social, and music goal domains were most frequently used with adolescents with autism. Emotional, behavioral, and sensory goal domains were most frequently used with adolescents with developmental disabilities. The "other" goal domain area was most frequently

reported for adolescents with emotional/behavioral disorders. This means that for some adolescents with emotional/behavioral disorders, their music therapists' used a goal domain that was not listed. Several examples of goal domains reported for the "other" category included vocation skills, empowerment, and functional skills.

Table 4.

Percentages of responses for goal domains with adolescent populations.

Population	Mo	Com	Emo	Behav	Soc	Cog	Sen	Mu	O
Autism	**87.3**	**83.0**	75.0	80.5	**79.8**	**80.6**	87.7	**84.6**	60
ADHD	55.6	52.3	56.6	52.9	51.1	50.0	54.4	55.8	40.0
DD	**87.3**	81.8	**76.3**	**82.8**	78.7	**80.6**	**89.5**	80.8	45.0
EBD	66.7	67.0	73.7	73.6	68.1	65.3	70.2	71.2	**65.0**
Conduct Disorder	34.9	40.9	48.7	44.8	41.5	38.9	36.8	42.3	50.0
Health Impaired	42.9	34.1	31.6	34.5	31.9	37.5	43.9	36.5	15.0
Visually Impaired	52.4	43.2	40.8	43.7	40.4	44.4	54.4	44.2	25.0
Physically Disabled	69.8	54.5	46.1	52.9	51.1	58.3	71.9	61.5	30.0
Hearing Impaired	39.7	29.5	25.0	29.9	27.7	34.7	40.4	30.8	20.0
Psychiatric	41.3	50.0	61.8	54.0	50.0	47.2	45.6	50.0	60.0
Pregnancy	11.1	13.6	17.1	14.9	13.8	13.9	12.3	15.4	35.0
Substance Abuse	22.2	30.7	38.2	34.5	29.8	26.4	24.6	30.8	50.0
Abused	23.8	29.5	39.5	35.6	30.9	29.2	26.3	32.7	50.0
Juvenile Delinquents	20.6	26.1	34.2	31.0	26.6	25.0	21.1	28.8	45.0
Learning Disabilities	57.1	59.1	65.8	59.8	58.5	56.9	57.9	67.3	40.0
Hospice/Bereaved	9.5	10.2	13.2	10.3	10.6	11.1	8.8	7.7	20.0
TBI	41.3	34.1	31.6	34.5	31.9	37.5	43.9	36.5	30.0
Other	19.0	17.0	15.8	13.8	16.0	19.4	15.8	13.5	35.0

Note. Mo = motor; Com = communication; Emo = emotional; Behav = behavioral; Soc = social; Cog = cognitive; Sen = Sensory; Mu = music; O = other. Attention Deficit Hyperactivity Disorder (ADHD), Developmental Disabilities (DD), Emotional/Behavioral Disorders (EBD).

Table 5 was created comparing the various populations with music interventions listed in survey question 13 (See Appendix D). Once again, two music interventions may be most frequently reported for one specific population. For example, listening and music with another art form each received 100% of the participants' responses for use with pregnant adolescents. Table 5 also demonstrates that instrument playing interventions were the most commonly reported interventions for adolescents with autism, ADHD, developmental disabilities, health impairment, learning disabilities, traumatic brain injury, and those with psychiatric disorders.

Listening interventions were the most frequently reported interventions for adolescents with emotional/behavioral disorders, conduct disorders, and those who were pregnant. Music with another art form was the most frequently implemented intervention with pregnant adolescents. Lyric analysis or song discussion was the most commonly reported intervention for adolescents with substance abuse, juvenile delinquents, and those in hospice or bereavement programs. Song writing was the most commonly used intervention with adolescents suffering from abuse and adolescents under the other category. Therapeutic Instrumental Music Performance was the most frequently reported intervention for adolescents in hospice or bereavement programs. Structured movement was listed as the most commonly used intervention with juvenile delinquents. Lastly, singing or chanting was the most

frequently implemented intervention for adolescents with traumatic brain injury and those under the "other" category

Table 5.

Percentages of responses for music interventions by population.

Interventions	Autism	ADHD	DD	EBD	Conduct Disorder	Health Impaired	Psych	Preg
Sing	88.2	85.7	90.7	81.8	77.5	90.3	77.6	76.9
Listen	78.9	89.8	80.0	**87.9**	**90.0**	83.9	87.8	**100.0**
PMR	30.3	46.9	34.7	42.4	55.0	32.3	55.1	69.2
Guided Imagery	15.8	28.6	18.7	24.2	32.5	19.4	28.6	53.8
Lyric Analysis	59.2	77.6	62.7	72.7	80.0	58.1	85.7	92.3
Song Writing	76.3	79.6	78.7	78.8	82.5	77.4	85.7	76.9
Create Recording	36.8	42.9	40.0	39.4	40.0	45.2	42.9	53.8
Music and Art	53.9	71.4	56.0	68.2	80.0	58.1	77.6	**100.0**
Improvisation	75.0	71.4	76.0	72.7	67.5	67.7	69.4	61.5
Free Movement	38.2	34.7	38.7	37.9	37.5	51.6	28.6	38.5
Structured Movement	69.7	65.3	72.0	63.6	57.5	77.4	49.0	53.8
Exercise	34.2	40.8	36.0	28.8	35.0	41.9	30.6	38.5
RAS	23.7	24.5	25.3	22.7	22.5	32.3	14.3	30.8
Instruments	**89.5**	**93.9**	**93.3**	86.4	85.0	**96.8**	**89.8**	84.6
PSE	18.4	14.3	17.3	12.1	10.0	25.8	6.1	15.4
TIMP	67.1	69.4	70.7	66.7	70.0	77.4	71.4	84.6
Music Games	61.8	71.4	65.3	65.2	72.5	77.4	67.3	53.8
Music as a Reward	43.4	49.0	44.0	40.9	42.5	54.8	42.9	53.8
Lessons	59.2	71.4	61.3	65.2	65.0	64.5	63.3	76.9
Other	14.5	10.2	14.7	12.1	17.5	6.5	14.3	23.1

Table 5. Continued

Percentages of responses for music interventions by population.

Interventions	Sub	Abused	J.D.	L.D.	Hospice	TBI	Other
Singing	70.0	80.6	66.7	83.9	70.0	**93.3**	**87.5**
Listening	90.0	80.6	88.9	85.7	90.0	76.6	81.3
PMR	60.0	58.1	66.7	41.1	60.0	36.7	37.5
Guided Imagery	36.7	35.5	37.0	25.0	50.0	20.0	37.5
Lyric Analysis	**96.7**	87.1	**96.3**	71.4	**100.0**	56.7	62.5
Song Writing	86.7	**90.3**	85.2	78.6	70.0	80.0	**87.5**
Creating Recording	46.7	45.2	51.9	46.4	70.0	56.7	50.0
Music and Art	86.7	**90.3**	92.6	66.1	90.0	53.5	43.8
Improvisation	70.0	71.0	70.4	82.1	60.0	80.0	68.8
Free Movement	30.0	32.3	37.0	41.1	30.0	43.3	18.8
Structured Movement	43.3	51.6	**44.4**	64.3	60.0	86.7	68.8
Exercise	26.7	35.5	22.2	30.4	30.0	50.0	37.5
RAS	16.7	22.6	22.2	25.0	30.0	36.7	43.8
Instruments	86.7	83.9	88.9	**91.1**	90.0	**93.3**	81.3
PSE	10.0	12.9	11.1	16.1	0.00	30.0	31.3
TIMP	70.0	77.4	81.5	71.4	**100.0**	80.0	75.0
Music Games	73.3	61.3	70.4	69.6	40.0	56.7	37.5
Music as a Reward	40.0	45.2	37.0	42.9	30.0	56.7	37.5
Lessons	63.3	64.5	70.4	66.1	80.0	63.3	43.8
Other	20.0	16.1	18.5	10.7	10.0	16.7	18.8

Note. ADHD = Attention Deficit Hyperactivity Disorder; DD = Developmental

Disabilities; EBD = Emotional/Behavioral Disorders; Psych = Psychiatric Disorders;

Preg = Pregnancy; J.D. = Juvenile Delinquents; L.D. = Learning Disabilities; Sub =

Substance Abuse; TBI = Traumatic Brain Injury.   PMR = Progressive Muscle

Relaxation; RAS = Rhythmic Auditory Stimulation; PSE = Patterned Sensory

Enhancement; TIMP = Therapeutic Instrumental Music Performance.

CHAPTER V

Discussion

Adolescent Populations

While studying music therapy and interacting with other music therapists, the researcher noted that there was considerable interest in working with adolescents and a perception that it is a difficult population. This inspired the researcher to conduct this survey to find out what music therapists who routinely work with adolescents are doing. The survey showed that music therapists work with adolescents of all ages, ranging from 11 to 19, from a variety of clinical populations. The survey also demonstrated that music therapists frequently work with more than one age group and more than one clinical population. Adolescents with autism spectrum disorders, developmental disabilities, and emotional/behavioral disorders were the three populations participants most frequently indicated working with. Also, the survey indicated that a majority of participants working with adolescents did so in a school setting. The other top two settings included clients' homes and hospitals.

This demographic information regarding adolescents receiving music therapy may be of use to new clinicians wanting to work with adolescents, which is especially relevant as 44.3% of the participants had been working in the field for only zero to five years. The demographic information gleaned from this study will inform future or new clinicians of what adolescent populations they can expect to work with and in what types of settings. Also, new clinicians may be encouraged by the fact that so many participants were relatively new to the field of music therapy and have been working with adolescents.

Assessment, Goals, and Objectives

The survey indicated that music therapists use formal and informal methods of assessment. In fact, many of the participants created their own assessment forms. It was evident from the participants' responses that they do not have a lot of time to complete paperwork so the assessment must be efficient and easy to use.

It was also evident that the form of paperwork and the clients' goals and objectives varied depending on whether it was an acute or long term setting. For example, participants working in acute settings reported assessments that were very short and usually occurred in each session because the group changed frequently, whereas, participants in long term settings took more time with their assessments since the group did not change frequently. Also, objectives for clients in acute settings usually focused on one session, whereas objectives for clients in long term settings usually focused on meeting the objective for a number of consecutive sessions or by the end of a semester.

Written responses from participants indicated that many of them chose goals and objectives for their clients, while others used the team goals given to them. One participant shared that she allowed the clients to help decide the goals. This participant stated that allowing the clients to collaborate in creating goals provided them with a sense of ownership of their own treatment process.

The goals and objectives participants reported aligned with the populations they reported. For example, adolescents with autism spectrum disorders were the most frequently reported population and the most frequently reported goal domain was social, which is an area of difficulty for individuals with autism. The second most

frequently indicated goal domain was communication, which also fits the needs of individuals with autism and developmental disabilities.

The information regarding assessment, goals, and objectives will likely be most informative for music therapy students. As they start to write assessments, goals, and objectives, this study could provide them with realistic information regarding how music therapists in the field are assessing, what goals they are focusing on, and what specific skills the objectives are targeting. Of course, goals and objectives are very individualized and depend upon the unique needs of each client. However, for students this information might give them a head start in the appropriate direction.

Functional Outcomes and Client Progress

The most frequently reported functional outcomes matched the needs of the client populations most therapists reported working with. This information on functional outcomes would most likely be helpful for students of music therapy as the examples illustrate that music therapists target non-musical outcomes and participants provided real life examples of such outcomes.

Similarly, the information regarding data collection for client progress was anticipated by the researcher. Music therapists are very busy and need efficient ways of collecting data. Consequently, it was no surprise that frequency counting was the most popular form of data collection. The survey also demonstrated that many participants wrote narrative notes and explained the client's progress towards his or her goals but may not have collected specific quantitative data.

Once again, this information is most pertinent to music therapy students as they learn about collecting data and struggle to make it function for them in practicum or internship settings. The survey data regarding client progress may also give new clinicians, working alone, ideas on how to set up their documentation.

Treatment Interventions

Participants reported using a variety of treatment interventions to meet the needs of their adolescent clients. Instrument playing, singing/chanting, song writing, music listening, and improvising were the five most frequently reported therapeutic interventions. Breaking the treatment interventions down by goal domains, it became clear that music therapists are adapting one type of intervention and using it for several different goal domains. For example, instrument playing was frequently marked for use in working on motor, communication, emotional, behavior, social, cognitive, and sensory goal domains.

The survey also showed that one type of intervention, such as instrument playing, can be used with a variety of client populations. This is not a surprise as music is very adaptable and music therapists are trained to learn how to adapt music interventions to meet the needs of their clients. However, for music therapy students this information does not come naturally and the information provided in the survey may be useful from them when trying to find a starting point for creating interventions for a specific goal domain or a specific client population. Also, current and new clinicians may find the information on treatment interventions interesting to see what others are doing and to get ideas for their own practice.

On the last page of the survey at least three participants wrote in the importance of age and developmental appropriateness of the music used in music therapy sessions. One participant stressed that music therapists must be musically proficient to gain the attention and respect of adolescent clients. Other participants noted the importance of listening to the music their clients prefer, asking them about their preferred music, and listening and validating what the clients say to build rapport. Several participants pointed out that choosing appropriate music for music therapy sessions was just as important as choosing the goals and objectives. Participants also shared that the music is often what adolescents are passionate about so it is important to use it to build rapport.

While it is important that music therapists are musically proficient, one participant noted that a music therapist may not be an expert on all types of music so it is important to be honest about that with clients and learn from them about their preferred music. Another participant commented that presentation matters for adolescent clients. This participant found success using music games, such as "Name that Tune," but changed the title to "Don't Forget the Lyrics" to appeal to her adolescent clients.

Limitations of the Current Study

The present study consisted of 97 participants; however, 330 music therapists started the survey. As surveys were coming in the researcher noted that most music therapists completed the "check all that apply" questions of the survey, but as the open ended questions came up response rates dropped. Many potential participants stopped the survey and did not return once they got to the second to last page. Some

potential participants even said they had to stop the survey because they did not have time to complete it. Based on how the surveys were completed and some of the participants' responses, the dropout rate was likely attributed to the number of written responses and the fact that it took participants more than 15 minutes to complete the survey. Consequently, the information from the survey while helpful for new professionals and students may not be entirely representative of the work music therapists are doing with adolescents.

Another limitation of the survey is that it was written from a behavioral view. In the space provided in the last survey question, several participants mentioned that they did not write goals and objectives in the format requested in the survey or that a behavioral approach was not always used with adolescent clients. This behavioral bias may have affected the survey results as those populations most frequently reported often lend themselves to behavioral approaches.

Future Recommendations

This survey was intended to be a starting point for music therapy students and new clinicians to learn more about with whom and how practicing music therapists are serving adolescents. More research could be done with all of the diagnostic populations listed in this survey to learn more about how music therapists are meeting the unique needs of each population.

Several participants made suggestions for future research areas. One recommended area involved exploring the role of building alliance, therapeutic presence, and working with resistance with adolescents. Another participant recommended researching how music therapists choose treatment interventions based

on the level of development of the group. In other words, exploring how group dynamics, for example the degree of rapport or group cohesion, impact the treatment interventions used by music therapists. Lastly, one participant noted that more research is needed to look into comparing the effects of structured, cognitive-behavioral techniques versus music and teen centered approaches to music therapy for adolescents and families dealing with domestic violence. The participant has used both methods, but suggested more research be done to determine when to use the various approaches or music interventions that fall under the different approaches.

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APPENDIX A

Articles Regarding Music Therapy and Adolescents

Year	Author(s)	Journal	Volume/ Number	Page	Ages	Diagnosis
1965	Caplan, L.M.	JMT	Vol 2, No 3	92	17	Psychiatric Disorders
1968	Madsen, C.K., & Madsen, C.H.	JMT	Vol 5, No 3	72	15	Juvenile Delinquent
1970	Castellano, J.A., & Wilson, B.L.	JMT	Vol 7, No 4	139	14	Electively Mute
1974	Ragland, Z., & Apprey, M.	JMT	Vol 11, No 3	147	12 to 17	At-risk
1978	Greenwald, M.A.	JMT	Vol 15, No 2	58	Adolescents	Mental Retardation
1980	Humphrey, T.	JMT	Vol 17, No 2	70	Adolescents	Mental Retardation
1981	Larson, B.A.	JMT	Vol 18, No 3	128	11 to 15	Emotional Disturbance
1983	Gibbons, A.C.	MT	Vol 3, No 1	94	11 to 15	Emotional Disturbance
1983	Henderson, S.M.	JMT	Vol 20, No 1	14	15 & 16	Adjustment Reaction to Adolescents
1986	Kivland, M.J.	JMT	Vol 23, No 1	25	12	Conduct Disorder
1988	Cohen, N.S.	JMT	Vol 25, No 2	85	18	Kluver-Bucy Syndrome
1989	Eidson, C.E.	JMT	Vol 26, No 4	206	11 to 16	Emotionally Handicapped
1989	Brooks, D.M.	MTP	Vol 6	37	Adolescents	Psychiatric Disorders
1989	Haines, J.H.	MT	Vol 8, No 1	78	11 to 16	Emotional Disturbance
1990	Edgerton, C.D.	MTP	Vol 8	15	Adolescents	Emotional Disturbance
1990	Frisch, A.	MT	Vol 9, No 1	16	Adolescents	Psychiatric Disorders
1991	Liebman, S.S., & MacLaren, A.	JMT	Vol 29, No 2	89	13 to 18	Pregnant
1993	Boswell, B., & Vidret, M.	MTP	Vol 11	37	Adolescents	Severe and Profound Disabilities

1994	Ritholz, M.S., & Turry, A.	MT	Vol 12, No 2	58	17	Developmental Delay and Emotional Handicap
1995	Lindberg, K.A.	MT	Vol 13, No 1	93	18	Physically and Sexually Abused
1996	Robb, S.L.	MTP	Vol 14	30	Adolescents	Traumatically Injured
1998	Montello, L., & Coons, E.E.	JMT	Vol 25, No 1	49	11 to 14	Emotional, Learning, and Behavioral Disorders
2001	Kennelly, J.	MTP	Vol 19	104	16	Leukemia
2002	Rio, R.E., & Tenney, K.S.	MTP	Vol 20	89	Teens	Juvenile Offenders
2002	Wyatt, J.G.	MTP	Vol 20	80	12 to 18	Juvenile Offenders
2003	Rickson, D.J., & Watkins, W.G.	JMT	Vol 40, No 4	283	11 to 15	Aggressive
2006	Dalton, T.A., & Krout, R.E.	MTP	Vol 42	94	Adolescents	Bereaved

Note. JMT = *Journal of Music Therapy*; MTP = *Music Therapy Perspectives*; MT = *Music Therapy*

APPENDIX B

Cover Letter

Dear Music Therapist,

My name is Stephanie Seagren and I am a graduate student at the University of Kansas. This e-mail is an invitation to participate in a survey regarding your clinical practice of music therapy with adolescents. You have received this e-mail because the Certification Board for Music Therapists had you listed as working with adolescents (13 - 18) or mixed ages. To participate in this study you should have at least one client between the ages of 11 and 19.

The link below will lead you to the survey, which will take about 15 minutes to complete. Your responses will be confidential and your name will not be associated with the research findings. Completion of the survey is considered your voluntary consent to participate. If you would like additional information concerning this study please contact me by phone or e-mail. Thank you for your time and your responses.

Sincerely,

Stephanie Seagren

952-888-2544
srseagren@gmail.com

APPENDIX C

Consent Form

The Department of Music and Dance at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time without penalty.

We are conducting this study to better understand the clinical practice of music therapy with adolescents. This will entail your completion of a questionnaire. The questionnaire packet is expected to take approximately 15 minutes to complete.

The content of the questionnaire should cause no more discomfort than you would experience in everyday life. Although participation may not benefit you directly, we believe that the information obtained from this study will help us gain a better understanding of the clinical practice of music therapy with adolescents (ages 11 -19). Your participation is solicited, although strictly voluntary. Your name will not be associated in any way with the research findings. It is possible, however, with internet communications, that through intent or accident someone other than the intended recipient may see your response.

If you would like additional information concerning this study before or after it is completed, please feel free to contact us by phone or mail. Completion of the survey indicates your willingness to participate in this project and that you are at least age eighteen. If you have any additional questions about your rights as a research participant, you may call (785) 864-7429 or (785) 864-7385 or write the Human

Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving

Hill Road, Lawrence, KS 66045-7563, email dhann@ku.edu or mdenning@ku.edu.

Approved by the Human Subjects Committee University of Kansas, Lawrence

Campus (HSCL). Approval expires one year from 12/5/2008.

Sincerely,

Stephanie Seagren
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APPENDIX D

Survey Instrument

1. In what age category do you fall?

　　　□ 21-30　　　□ 31-40　　　□ 41-50　　　□ 51-60　　　□ over 60 years old

2. Please indicate your gender.　　　□ Female　　　□ Male

3. In what AMTA region do you live?

　　　□ New England　　　□ Southeastern　　　□ Southwestern

　　　□ Midwestern　　　□ Great Lakes　　　□ Mid-Atlantic　　　□ Western

4. How many years have you been a practicing music therapist?

　　　□ 0-5　　　□ 6-10　　　□ 11-15　　　□ 16-20　　　□ 21-25

　　　□ 26-30　　　□ 30 or more

5. What is your highest academic degree obtained?

　　　□ Bachelor's Degree　　　□ Graduate Equivalency

　　　□ Master's Degree　　　□ Doctoral Degree

6. For how many years have you been a practicing music therapist with adolescents?

　　　□ 0-5　　　□ 6-10　　　□ 11-15　　　□ 16-20　　　□ 21-25

　　　□ more than 25

7. With what ages of adolescents do you work?

　　　□ 11　　　□ 12　　　□ 13　　　□ 14　　　□ 15

　　　□ 16　　　□ 17　　　□ 18　　　□ 19

8. With what diagnostic populations of adolescents have you worked?

□ Autism Spectrum Disorders	□ Visually Impaired
□ Attention Deficit Hyperactivity Disorders	□ Psychiatric Disorders
□ Developmental Disabilities	□ Pregnancy
□ Emotional/Behavioral Disorders	□ Substance Abuse
□ Conduct Disorders	□ Abused
□ Health Impaired	□ Juvenile Delinquents
□ Physically Disabled	□ Learning Disabilities
□ Hearing Impaired	□ Hospice or Bereavement
□ Other (please specify) _____	□ Traumatic Brain Injury

9. From the list above, choose the population with whom you have the most clinical experience and answer the remaining questions on this survey based on that population.

Please indicate that population selection here: _____

10. In what type of clinical facility have you worked with this population of adolescents?

□ Early Childhood Center	□ Private Clinic
□ School (private or public including alternative)	□ Client's Home
□ Group Home	□ Rehabilitation Center
□ Residential Placement	□ Psychiatric Placement
□ Hospital (general or children's)	□ Hospice House
□ Detention Center	□ Other (Please specify)
	_____

11. With what professionals have you co-led any of your sessions with adolescents?

□ Physical Therapist   □ Social Worker

□ Speech Therapist   □ Psychologist/Counselor

□ Occupational Therapist   □ Classroom Teacher

□ Medical Personnel   □ Special Educator

□ Child Life Specialist   □ Music Educator

□ Other (please specify) _____

12. What types of sessions have you used when working with this adolescent population?

□ Individual   □ Small Group   □ Large Group

□ Other (please specify) _____

13. What therapeutic interventions do you use in your music therapy practice with adolescents?

□ Singing/Chanting   □ Free Movement to Music

□ Listening   □ Structured Movement to Music

□ Progressive Muscle Relaxation   □ Exercising to Music

□ Guided Imagery   □ Rhythmic Auditory Stimulation

□ Lyric Analysis/Song Discussion   □ Playing Instruments

□ Song Writing   □ Patterned Sensory Enhancement

□ Creating a Music Audio/Video Recording □ Music Games

□ Therapeutic Instrument Music Playing □ Improvisation

□ Music with another Art Form/Activity □ Instrument Lessons or Group
                                          Music Making

□ Music as a Reward   □ Other (please specify)

                                        _____

14. What style(s) of music do you use with your adolescent clients?

□ Classical   □ Hip Hop   □ New Age

□ Classic Rock   □ R & B   □ Popular

□ Alternative Rock   □ Country   □ Broadway/Musicals

□ Jazz   □ Rap   □ Religious

□ Punk   □ Techno   □ Heavy Metal

□ Oldies (50s, 60s, 70s)   □ Other (please specify) _____

15. Rank order the three styles of music (from the list above) that you use the most frequently with adolescents.

    1. _____

    2. _____

    3. _____

16. Do you use live or recorded music most frequently?   □ Live   □ Recorded

17. Do you use commercially-available or therapist/client-composed music more frequently?

    □ Commercially-Available   □ Therapist/Client-Composed

18. Briefly describe your assessment process for determining goals for therapeutic intervention. _____

_____

_____

19. What goal domains do you address when working with this adolescent population?

    □ motor   □ social   □ communication   □ cognitive

    □ emotional   □ sensory   □ behavioral   □ music (enrichment or leisure-based)

    □ other (please specify) _____

20. In examining the goal domains listed above, please list the five goal areas that you address most frequently in your clinical work with adolescents.

An example for an adolescent client with developmental disabilities in a school setting might be: Communication: To increase expressive verbalizations.

1. _____

2. _____

3. _____

4. _____

5. _____

21. Choosing your top three most frequent goals from the five you listed above, please do the following:

a) Indicate your observable, measurable objective to meet this goal.
b) State the functional non-music outcome for this objective.
c) Indicate how you will determine that the client has met the objective.
d) Describe one or more treatment interventions you would use address this objective.

Example:
Goal #1: To increase expressive verbalizations.

Objective: At the end of one 50 minute music therapy session, the client will respond to 5 stimulus questions with two-word utterances.

Functional Outcome: To be able to express more specific wants and needs in response to a stimulus question.

Met the Objective: Record the frequency of stimulus questions by therapist and frequency and content of subsequent two-word utterances.

Treatment Interventions:
To address the objective of using two-word utterances, the client can be required to indicate the name and a qualifier for an instrument before obtaining it. For example, brown maraca or blue shaker. When the client successfully identifies using a phrase with two-words, he would receive that choice. This would obviously be implemented on a successive approximations plan beginning with one-word utterances and expanding to two-word identifiers.

Goal #1 _____

Objective _____

Functional Outcome _____

Met the Objective _____

Treatment Interventions _____

Goal #2 _____

Objective _____

Functional Outcome _____

Met the Objective _____

Treatment Interventions _____

Goal #3 _____

Objective _____

Functional Outcome _____

Met the Objective _____

Treatment Interventions _____

22. Thank you for participating in this survey.

If you have any additional information that you feel is pertinent to the clinical practice of music therapy with adolescents please include that information below.

_____

_____

_____

APPENDIX E

Compiled Objectives for Question 21

Objectives pertain to these goal domains:
Physical: 32 participants cited the following interventions for physical objectives
       Range of Motion: 6
       Gross Motor Skills: 7 (Imitate/execute movements)
       Coordination: 2
       Sensory: 5 (Tolerate touch/manage pain)
       Fine Motor Skills: 6 (Grasp object/strengthen hand)
       Relaxation: 2
       Head Control: 1
       Oral Motor Skills: 1
       Physical Therapy: 1 (Complete)
       Decrease Response Time: 1

Communication: 57 participants cited the following interventions for communication objectives
       Choices (verbal + non-verbal)/wants/needs: 29
       Self-Expression: 6
       Receptive Skills: 3 (ex. follow directions)
       Ask questions/for help: 2
       Improve Articulation: 3
       On topic statements/conversation skills: 4
       Use sentences/phrases when speaking: 1
       Express Assertiveness: 1
       Vocalizations: 4
       Communication Skills (general): 3
       Greetings: 1

Emotional: 39 participants cited the following interventions for emotional objectives
       Relax: 3
       Identify Emotions: 13
       Coping Skills: 8
       Emotional Expression: 10
       Improve Self-esteem: 3
       Decrease anxiety: 1
       Stabilize Mood: 1

Behavioral: 10 participants cited the following interventions for behavioral objectives

     Alternative Behaviors: 2
     Appropriate Behavior: 5
     Transitions: 1
     Decrease Self-injurious Behavior: 1
     Improve Impulse Control: 1

Social: 43 participants cited the following interventions for social objectives

     Directions: 1
     Appropriate Social Interaction: 19
     Greetings: 6
     Conversation Skills: 2
     Team work: 5
     Participation: 4
     Taking Turns: 4
     Eye Contact: 1
     Adaptive Social Skills: 1

Cognitive: 30 participants cited the following interventions for cognitive objectives

     Academic Skills: 14
     Task Completion: 1
     Attention Skills: 9
     Reality Testing: 1
     Manage Schedule: 1
     Community Knowledge: 1
     Orienting to Environment: 1
     Following Directions; 1
     Problem Solving; 1

Music (enrichment/leisure based): 3 participants cited the following interventions for music objectives

     Music/ Music Knowledge: 2
     Leisure Skills: 1

Other: 1 participants cited the following interventions for "other" objectives

     Regaining Lost Life Roles: 1

No Response: 20

Total: 235

Note: The above information summarizes qualitative data from goals 1, 2, and 3 from question 21. Therefore, each participant responded more than once, which is why the total came to 235 when in fact only 97 participants completed the survey.

APPENDIX F

Compiled Functional Outcomes for Question 21

Non-musical outcomes participants indicated for each goal domain
Physical: 31 participants reported outcomes concerning the following areas
      Play an instrument: 1
      Dance: 2
      Increase comfort with body: 1
      Improve coordination: 2
      Increase range of motion: 4
      Improve Gross motor skills: 6 (improve balance, motor planning, gait)
      Fine motor skills: 5 (increase strength in fingers/hand)
      Sensory: 4
      Decrease pain: 2
      Head Control: 1
      Oral Motor Skills: 1
      Improve Relaxation: 1
      Physical Therapy Participation: 1

Cognitive: 31 participants reported outcomes concerning the following areas
      Identify and obey community signs: 1
      Academic Skills: 14 (money, colors, months,
      Attention to Task: 9 (increase attn span; follows directives)
      Identify when and complete task independently: 1
      Orienting to Environment/Events: 1
      Following Directions: 1
      Problem Solving: 1
      Retain and retell info: 2
      Increased Internal Organization: 1 (improved cognitive processing/thinking)

Communication: 57 participants reported outcomes concerning the following areas
      Express wants/needs and make choices/as for help: 25
      Improve communication with peers/others: 7
      Improve communication skills in general: 8
      To improve breath support needed for verbal communication: 1
      To improve expressive communication: 4
      To improve receptive communication skills: 2 (follow directions)
      Improve conversation skills: 6
      Improve speech articulation: 1
      Greetings: 1
      To increase vocalization: 2

Emotional: 39 participants reported outcomes concerning the following areas
       Recognize and express feelings: 16
       Improve self-esteem: 3
       Increase range of affect: 1
       Identify/Label emotions: 6
       Improve coping skills: 12 (ex.deep breathing to calm down; play guitar)
       Decrease Anxiety: 1

Social: 40 participants reported outcomes concerning the following areas
       Follow directions: 1
       Appropriately Interact with others: 25
       Greetings: 5
       Appropriately make requests w/o grabbing desired object: 1
       Turn Taking: 1
       Active Participation: 2
       Teamwork: 3
       Eye Contact: 1
       Contribute to Community: 1

Behavioral: 10 participants reported outcomes concerning the following areas
       Decrease assaultive behavior towards peers: 1
       Cl. will refrain from interrupting during session: 1
       Improve impulse control: 2
       Transitions: 1
       Decrease Self-injurious Behavior: 1
       Behave Appropriately: 4

Music: 3 participants reported outcomes concerning the following areas
       Increase music knowledge:1
       Improve Leisure Skills: 1
       Improve Music Skills: 1

Other: 1 participant reported an outcome concerning the following area
       Regaining Lost Life Roles: 1

No Response: 17

Total: 229

Note: The above information summarizes qualitative data from goals 1, 2, and 3 from question 21. Therefore, each participant responded more than once, which is why the total came to 235 when in fact only 97 participants completed the survey.

APPENDIX G

Compiled Treatment Interventions for Question 21

Numbers indicate the number of participants who indicated that intervention category

Singing/Chanting: 62
> Sing Directives/Choices/Song Choices
> Vocal warm-ups
> Songs with pictures or books
> Songs with turn taking
> Greeting Songs
> Sing and Discuss Songs
> Sing preferred music to work on clear articulation
> Sing original songs
> Chanting and rapping
> Conversation Songs
> Fill in the Blank Songs
> Call and Response Songs
> Academic Songs

Listening: 13
> Listen to Music
> Listening songs with directives
> Identifying feelings within a song
> Breathe with beat of music
> Music assisted relaxation
> Listen to "soft" music to calm down

Progressive Muscle Relaxation: 5

Guided Imagery: 5
> Music and visualization
> Guided Imagery and Music (GIM)

Lyric Analysis/Song Discussion: 19

Song Writing: 28
> Write songs explaining methods of dealing with emotions
> Write a song about a topic or write a social song
> Music Composition
> Rap
> Personalizing a Song
> Write and process the song/ praise each other

Creating a Music Audio/Video Recording: 4 (Video Creation)

Improvisation: 27
      Instrumental improv with processing
      On black keys of piano
      Analysis of improv covering problem solving/conflict resolution
      Improvise Solos
      Referential/non-referential group improv
      Musical Attention Control Training: interactive improv where specific
      musical cues have predetermined and/or natural responses.
      Drum Improv

Free Movement to Music: 0

Structured Movement to Music: 6
      Use CD and assist client with movements as needed
      Move to the music (music cues and times movement)
      Move with parachute/scarves
      Dance to song; take turns leading

Exercising to Music: 0

Rhythmic Auditory Stimulation: 1

Playing Instruments: 56
      Use verbal and non-verbal communication to request instrument
      Drum Circle
      Keyboard duets/Piano play
      Instrument playing with turn taking
      Instrument playing focusing on maintaining attention
      Following directions
      Lead group; Imitate rhythms
      Play horn/whistle
      Play emotions
      Play to calm down
      Play to improve fine motor skills
      Play to improve range of motion in arms

Patterned Sensory Enhancement: 0

Therapeutic Instrument Music Playing: 4
*Only marked if someone specifically said they used this method due to training
needed.*

Music Games: 12
      Games with sung directives for movement
      Song Games
      Jeopardy

Music and Another Art Form: 5
    Drawing how a song makes the client feel
    Mandala creation
    Draw on paper to pre-recorded music
    Create Murals

Music as a Reward: 4
    Live/Recorded Music
    Reward for transitioning appropriately
    Reward for making choices/ participation
    Music contingent on client's participation in physical therapy

Instrument Lessons or Group Music Making for Enrichment/Leisure: 12
    Lessons - Chord/Note reading; Guitar/Piano; Theory
    Music Performances
    Bell Choir
    Keyboard duets

Other: 48
    Verbal prompting and/or modeling
    Nordoff Robbins Music Therapy/Community Music Therapy
    Choices throughout session
    Verbally processing situation/issue
    Praise and Positive Reinforcement
    Repetition
    Redirect Behavior
    Provide mediation and conflict resolution
    Worksheets
    Music relaxation (styles based on what works best for client)
    Work with a partner
    Hand over hand assistance/adapted mallets
    Session schedule
    Structured music activities w/turn taking
    Appropriate peer interaction
    Coloring and puzzles
    A book with musical elements
    Somotron matress bed

No Response: 23