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The Effect of a Music Therapy Intervention Employing Peer Models on the Social Skills Development of Young Adults with Asperger's Syndrome

James R. Maxson IV
THE EFFECT OF A MUSIC THERAPY INTERVENTION EMPLOYING PEER MODELS ON THE SOCIAL SKILLS DEVELOPMENT OF YOUNG ADULTS WITH ASPERGER'S SYNDROME

By

JAMES R. MAXSON IV

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The members of the committee approve the thesis of James Maxson defended on July 2, 2009.

____________________
Alice-Ann Darrow
Professor Directing Thesis

____________________
Jayne Standley,
Committee Member

____________________
Dianne Gregory
Committee Member

Approved:

____________________
Don Gibson, Dean, College of Music

The Graduate School has verified and approved the above-named committee members.
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ABSTRACT

The purpose of this study was to determine the effectiveness of the use of music therapy interventions on selected social skills of young adults with Asperger’s Syndrome (AS). Six dyads were formed with one young adult with AS (mean age = 24.5 years) and one neuro-typical, non-Asperger’s peer (mean age = 24.8 years). The study was conducted in 12 sessions over six weeks. The interventions focused on three main skill sets: (a) controlling impulsive behaviors, (b) listening to others, and (c) perceiving others’ emotions and intentions. Various music therapy interventions such as lyric analysis, instrument playing, musical games, and songwriting were utilized to provide participants with opportunities to learn and practice these skill sets. The dependant measures were: (1) the Conversational Skills Ratings Scale (CSRS), an assessment of conversational competence; (2) the Social Skills Inventory (SSI), an assessment of verbal and nonverbal communication skills; (3) observational analysis of AS participants’ behaviors, and (4) a post-hoc questionnaire administered to the Peer Response Partners (PRPs). Results of the CSRS revealed an increase in participants’ positive conversational skills. Analysis of the SSI revealed an increase in selected social skills of some participants. Observational data revealed high levels of participants’ contingent responses to their PRPs, as well as the ability to secure and maintain the attention of their PRPs. Additionally, formal and informal measurements revealed that PRPs gained valuable experiences and insights regarding persons with AS. The music therapy interventions used in this study appear to be effective techniques for aiding the transition of young adults with AS into community life.
CHAPTER I
INTRODUCTION

Asperger’s Syndrome (AS) and Autism are diagnoses of a Pervasive Developmental Disorder (PPD) and are generally characterized by a number of diagnostic categories: (1) severe and sustained impairment in social interaction (reciprocal interactions), (2) restrictive and repetitive patterns of behavior, (3) “extreme” interest in memorizing information, and (4) often demonstrate poor motor coordination (Brownell, 2002; Chou, Lee, Myles, Smith, Swanson, & Tien, 2007). The poor motor coordination is not listed in the Diagnostic and Statistical Manual of Mental Disorders-4'h Edition, Text Revision (DSM-IV-TR), which indicates some incongruities of diagnosis criteria. Autism is derived from the Greek word, auto, meaning “self,” and – ism, which generally denotes a pathological condition or an action or result. Autism simply means “self-ism” (Smith, n.d.). Asperger’s is often associated with high functioning autism (HFA) and there is currently much debate over weather AS and HFA are really the same diagnosis (Ghaziuddin, 2005). However, the primary difference between high functioning autism and AS is presence (HFA) versus absence (AS) of speech delay.

Hans Asperger originally characterized Asperger’s Syndrome in a paper from 1944. He named the set of unusual symptoms as “Autistic Psychopathy.” His groups of four “socially awkward boys” had difficulties in understanding the emotions and feelings of others. These boys were also prone to behavioral problems (Ghaziuddin, 2005). An American, Leo Kanner, was conducting similar research in 1943. Although not working with Asperger, Kanner found analogous traits for autism while researching in Baltimore, Maryland. Unfortunately, little notice was taken of Asperger’s research because of WWII and the hostile feelings toward papers published in German. It wasn’t until 1981 that Lorna Wing first brought Asperger’s original writings to the attention of clinicians. The similarity between Asperger’s Syndrome and Autism began to see the light of day and be more widely recognized (Howlin, 1997). Hans Asperger’s main purpose was to show that features typical of an autism diagnosis were also found in those
with high communication skills and were not correlated with a high or low IQ. This diversity of symptoms began to show a spectrum, or “continuum” for autism. As a result of this spectrum, general terms such as “high-functioning,” “low-functioning,” and “autistic tendencies.” Within the Asperger community (including parents and relatives), an individual with AS is “affectionately called” an Aspie (Urban Dictionary, 2008).

Asperger’s Syndrome is a neurological (or neurobiological) disorder that is further characterized by poor social interactions, obsessions, odd speech patterns, peculiar mannerisms, and poor coordination (Kids Health, 2008). Research indicates different rates of occurrence, but it is generally estimated that approximately 4:10,000 people have autism. Klin, VanBergeijk, and Volkmar (2008) say that an “overwhelming number” of individuals with a PDD have milder forms of autism. This claim is supported by AS being viewed as a “milder form” and a wide prevalence of 36:10,000, 16:10,000, 1:500, and a “conservative” estimate of 2:10,000 (Ozbayrak, 2008; Ghaziuddin, 2005; Mayo Clinic Staff, 2006). Most researchers agree that the ratio of boys to girls with autism or AS is about 4:1 and can appear across nationalities, cultures, and social backgrounds (Ozbayrak, 2008; The National Autistic Society, 2008). The exact cause of autism and AS is unknown. Although most current research is suggesting that it is caused by a number of genetic and environmental factors that affect a child’s brain development and structure. There appears to be a hereditary component to autism and AS, but a specific genetic marker has not been found, which may suggest multiple genetic causes. It may be associated with other mental health disorders such as depression or obsessive-compulsive disorder (Kids Health, 2008).

Several other studies have revealed that there are similar features shared between an individual with AS and his or her first- and second-degree relatives. In relatives, autistic features may seem as “eccentric” behaviors (The Asperger’s Syndrome Foundation, n.d.). Other than eccentric behaviors, individuals with Asperger’s may exhibit poor social interactions, obsessions (including specialized areas of interest), odd speech prosody, and exhibit sensory integration problems. There might also be motor delays, mood swings, and individuals appear uncoordinated and awkward. When engaged in conversation, an individual with AS might dominate the conversation, engage in repetitive speech (scripting), and exhibit awkward movements. The topic of conversation
may be only about one topic (his or her interest) and the individual may not pick up on unspoken social cues such as body language – proximity during conversations or prompts that the listener may be exceedingly bored with the topic of interest (Kids Health, 2008).

With a rise of diagnosis or an increased prevalence of autism and Asperger’s Syndrome, diagnoses are being made at younger ages for children; thus, improving their prognosis and success in later life. There are successful programs established in schools and communities for children, and due to the tremendous efforts of parents, caregivers, family members, school staff, and clinical staff, those living with autism and AS will have more opportunities when finished with school. With a carefully planned transition, appropriate accommodations, and support, students with Asperger’s Syndrome can be successful academically and socially in college and the workplace. While many adults with AS and HFA possess the cognitive abilities required for employment, they often do not continue to receive the same degree of services compared to those in a typical school system. As a result, they will lack the social and emotional support for sustaining friendships and a job.

Social Skills and Adults with Asperger’s Syndrome

Transitioning through high school into adulthood can be difficult for neuro-typical (individuals without autism) individuals. For an individual with AS who lacks many of the social skills necessary for maintaining a friendship and other relationships, this transition can be even more frustrating and often lonely. A person with AS will go through the emotional and physical changes through puberty into adulthood as any other person. These changes can also include mood or anxiety disorders and other comorbidities unrelated to AS.

While there are no pharmaceutical remedies specific to AS and autism, the most effective therapies for individuals with Asperger’s Syndrome involves a combination of treatments. Treatments can include psychotherapies, special education, behavioral modification, diet restrictions, and several medications to treat target symptoms. Medications such as selective serotonin reuptake inhibitors (SSRI), mood stabilizers, and tricyclic antidepressants can be used to treat symptoms of anxiety, depression, irritability, and preoccupations (PsychNet-UK, 2008). With better control of these symptoms, a person with AS can better cope with his or her main diagnosis.
Individuals with AS will experience the same sexual interests as the general population. However, a primary difference will be the person’s ability to effectively “read” another individual. Verbal and nonverbal language can be misinterpreted or often missed completely. A person with AS might think someone is interested in a relationship when he or she is not. This miscommunication can often cause problems in social settings or the workplace. Issues such as body image, clothing, and self-esteem are other problems faced by people with AS going through puberty as well as continuing through adulthood (Hane, 2004; Hénault, 2006).

Many programs that continue to reinforce social skills, vocational skills, and behavioral skills have been provided to adults with AS. Unfortunately, these programs are not automatically available to adults as does The Individuals with Disabilities Education Act (IDEA) guarantees education for all children. IDEA and Public Law 94-142 mandates that schools in the United States should be open to all children regardless of their abilities and disabilities from birth to 21 years old (Adamek & Darrow, 2005). As Prior (2003) says, “acceptance by normally developing peers… tends to decrease with age.” This intolerance makes it even more important to continue services into adulthood. Issues such as social competence, reading faces and body language, maintaining eye contact, remaining on-task, working with others, or requesting help are all issues adults with AS will face (Adams, 2006; Hane, 2004; Tubbs, 2008).

**Music Therapy, Social Skills, and Asperger’s Syndrome**

Music therapy has been demonstrated to be a valuable therapy for people with autism and AS and can address a number of clinical goals. Music can help a person relate to the world, relate to one’s self and others, and use active and receptive musical experiences to stimulate development in the physical, intellectual, and social-emotional domains (Bruscia, 1989). When dealing with adults with AS, Gore (2002) says that a music therapist should mold the fixations of his or her client into something that can become a career. Sessions should be tailored to the idiosyncrasies of the person.

Music has also helped clients with AS and HFA to improve daily living skills, increase self-management, improve interpersonal skills and develop the courage to approach others, and decrease anxiety or depression (Grant, 1986; Scartelli, 1989). The National Autism Society (2008) states that music can stimulate and develop more
meaningful and playful communication in people with autism because “music-making involves many of the fundamental elements of social interaction—self-awareness and self in relation to another.” In children, these fundamental elements may be displayed in the sharing of a toy and engaging in reciprocal play. For adults, it is expressed through sharing a conversation, exercising joint attention, reacting with empathy, and meeting the emotional needs of others.

**Rational and Statement of Purpose**

It is perhaps the greatest need for someone to make meaningful connections with other people, to feel they have something meaningful to offer, and have skills to make positive choices about their future. Unfortunately, many individuals with AS and HFA often lack the social and emotional skills (the main characteristics of individuals with AS) and support for sustaining a job. A person with AS has difficulty with empathy and his or her affect may seem detached, uncaring, or even intentionally hurtful. Yet, this affect may be their way of showing interest in that person (Jacobson, 2005). The most effective progress is made through accepting opportunities for social interaction, genuine affirmation, and exploration of the whole person, and acceptance his or her own individuality (Martinovich, 2006).

While there are many programs for children with Asperger’s Syndrome and autism, and much research using music therapy, there is a lack of research with music therapy and social skills training for young adults with AS. The purpose of this study is to determine the effectiveness of music therapy interventions for a person with Asperger’s Syndrome by engaging with a peer and building social skills for positive interactions in the young adult world.
CHAPTER II

REVIEW OF LITERATURE

This chapter is a review of research in the following areas: (a) Asperger’s Syndrome and autism, (b) the differences between autism and Asperger’s Syndrome, (c) adults, social skills, and Asperger’s Syndrome, and (d) music therapy and Asperger’s Syndrome. Review of previous literature will provide a framework for the current theories on what causes autism and AS and how it is being treated. This chapter will also discuss the role of music therapy in autism.

Asperger’s Syndrome and Autism

Etiology. Autism is currently classified as a Pervasive Developmental Disorder (PDD), or autism spectrum disorder and has a prevalence of approximately 4:10,000, and a 4:1 ratio of male to female (Ghaziuddin, 2005). Leo Kanner, at Johns Hopkins, researched autism in 1943 from observations on 11 children whom he felt did not have “the usual ability to form relationships with others.” This description from the initial eleven children is still widely viewed the same way, in all cultures and countries (Ghaziuddin, 2005). Exact causes of autism and AS are unknown, but several theories exist that attempt to explain autism with genetics, neurology, and biology.

One’s genes are thought to be a prime suspect for the cause of autism. This assumption is easily demonstrated by observing similar personality traits in parents and children, brothers and sisters, and other extended family members. Silicon Valley and the children of engineers there have seen a rise in autism. Often, parents of children with autism are good at mathematics and may have jobs that can be routine, repetitive, involved with electronics, and require sustained focus. People with autism are often detail oriented and analytical, and in Silicon Valley it is often referred to as the “Geek Syndrome.” Some companies have addressed the increase in prevalence or diagnosis within the company’s health care–Bill Gates provides insurance for Microsoft employees which pays for therapy for their children with AS (Tubbs, 2008). The increase in autism diagnoses could be partly due to the specific gene pool in Silicon Valley and the employees picking spouses or partners like themselves (Shute, 2008).
Other than research into the genetic roots of autism, there are several other factors being studied. Neurological imaging studies have shown abnormalities of the frontal lobes (Ghaziuddin, 2005; Amberly, Morris, Murphy, Perry, & Russell, 2006), abnormalities in the nerve structure and function of the prefrontal region (Ghaziuddin, 2005), amygdala, and face-processing dysfunction (Ashwin, Baron-Cohen, & Wheelwright, 2006). Some studies depict different areas of the brain “lighting up” when doing tasks that involve reading the minds and feelings of others. Preliminary results of recent research are finding that there is a fraction of a second delay in individuals with autism when processing sounds (Tanner, 2008). This research and the empirical evidence supporting it is why some people classify autism and AS as a neurological disorder (Ghaziuddin, 2005).

Currently, there is a large debate over autism and the use of mercury in childhood vaccinations. It is a controversy that has caught the attention of parents and autism advocates, politicians, scientists, and lawyers. A parent’s decision to not have a child vaccinated has also caused an increase of alternative and controversial therapies. These therapies, such as placing children under stringent diets, high temperature saunas, bathing in magnetic clay, forcing them to swallow digestive enzymes and activated charcoal, injections with various vitamins, minerals, and acids, and even exorcisms remain to be empirically tested in clinical settings. A London-based gastroenterologist, Andrew Wakefield, oversaw a case for individuals with autism against receiving vaccinations in 1998. Initially, Wakefield’s research on the vaccine for measles, mumps, and rubella (MMR) was thought to have caused Crohn’s disease – a chronic inflammatory bowel disease of the gastrointestinal tract that causes persistent diarrhea, abdominal cramps and pain, fever and fatigue (Abbott Laboratories, 2008). With further research, Wakefield said he discovered what was not the cause of Crohn’s disease, but what might be the cause of autism—the MMR vaccinations. His research led him to claim that the injections of the virus travels from the arm to the intestine where it causes infection and inflammation. Harmful proteins are then able to pass through a damaged intestine and enter the bloodstream where it eventually damages the brain and causes autism. Increased viral antibodies were evident in many of his test subjects. The day after Wakefield disclosed this information, there was a media explosion about the “dangers of MMR.”
This exposé caused widespread panic, a sharp decrease in MMR vaccinations, and eventually a rise in measles cases. A few years later, Wakefield’s research was questioned, and many fellow researchers involved with his paper withdrew their names due to questionable ethical practices Wakefield used to collect his data. Contrary to what he initially claimed, he was never approved by the Ethical Practice Committee in England, collected samples in controversial manners, and did not disclose a massive conflict of interest with his sample population. Several of the children with autism in his research population were also clients of a personal injury attorney (with experience in suing pharmaceutical companies) who donated $100,000 to Wakefield’s research. The number was later said to be up to $30 million. The conflict of interest could have caused a massive bias in the research to connect MMR to autism (Offit, 2008).

The cause of autism was then linked to the thimerosal, a derivative of mercury, used as a preservative in vaccinations. This “mercury poisoning” led to dangerous alternative therapies that attempted to rid the body of the mercury, some of which were also used to chemically castrate sex offenders. The media soon lined up to blame mercury for the cause of autism, politicians successfully advocated for the removal of thimerosal from vaccines, and vaccination rates dropped for children. A movie, called The Harmful Truth, was in production (by the same individuals who made An Inconvenient Truth, Fast Food Nation, and Fight Club; Offit, 2008). A four-year long study was published in the New England Journal of Medicine in 2007, hailed as the “most comprehensive and definitive study to date,” investigated 42 neuropsychological outcomes on over 1,000 children for the effects of early exposure to thimerosal. The study “did not uncover a causal association between any deficits in the subjects' neuropsychological functioning and early exposure to mercury from thimerosal-containing vaccines” (Offit, 2008; Thompson, 2007). Further investigation into the difference between the mercury in vaccines (ethylmercury) and naturally occurring mercury (methylmercury) shows as disparate a difference between alcohol consumed at a bar (that might cause headaches and a hangover) and wood alcohol (that causes blindness). In fact, mercury occurs naturally, and a typical child will ingest 400 micrograms of naturally occurring mercury in the first six months of life—more than twice the amount of mercury than was ever contain in all vaccines combined (Offit, 2008). Even though mercury poisoning causes
damage to the neurological system, the differences between symptoms of autism and mercury poisoning are the opposite (Table 1), but many people consider cases of autism a direct link of the mercury, calling autism a unique form of mercury poisoning that was “discovered” at the same time childhood vaccinations first contained mercury and is a conspiracy the pharmaceutical companies and government are trying to cover up (Bernard, Binstock, Enayati, McGinnis, Redwood, & Roger 2000). The search for a cause for autism continues through a California assessment of autism rates. In January 2008, six years after the removal of thimerosal from the vaccinations, evidence indicates a continuous rise in autism rates. This evidence indicates there is no proof that thimerosal causes autism, however, critics say more time is needed before the effects of the removal of thimerosal can be seen (Akre, 2008; Offit, 2008).

Table 1

<table>
<thead>
<tr>
<th>Mercury Poisoning</th>
<th>Autism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychosis</td>
<td>No Psychosis</td>
</tr>
<tr>
<td>Smaller Head Size</td>
<td>Larger Head Size</td>
</tr>
<tr>
<td>Vision Problems</td>
<td>No Vision Problems</td>
</tr>
<tr>
<td>Ataxia</td>
<td>Stereotypical Movements</td>
</tr>
<tr>
<td>Dysarthria</td>
<td>Speech Delay, Echolalia</td>
</tr>
<tr>
<td>Toxic psychosis; in mild cases, nonspecific depression, anxiety</td>
<td>Socially aloof, insistence on sameness</td>
</tr>
</tbody>
</table>

(Adapted from American Academy of Pediatrics 2008; Thompson, 2007)

_Aspberger’s Syndrome_. When Leo Kanner was conducting his research, Hanz Asperger was researching similar populations of children who showed several different characteristics than classic autism. Asperger himself saw a possibility for a genetic predisposition to autism and AS. Throughout Asperger’s research of over 200 children seen over ten years, almost all children had at least one parent with similar personality traits (Ghaziuddin, 2005). With further research into the characteristics of AS, Asperger documented sensory sensitivity, sensation avoiding, no (clinically significant) cognitive
delays, and impairment in theory of mind (ToM) or empathy (Chou, Lee, Myles, Smith, Swanson, & Tien, 2007; Hénault, 2006). Chou et. al claims that “despite having average to above-average IQ, individuals with AS tend to have difficulties empathizing with others because of a reported lack of theory of mind or social cognition” (2007). Chou et. al does, however, suggest that using the strengths of a person with AS (systemizing skills), educators may be able to teach concepts, including nonverbal language and ToM to individuals with AS. Many of these traits are similar to or the same as traits on the autism spectrum or other PDD diagnoses. The main difference with Asperger’s Syndrome is it is only diagnosable when another diagnosis is not possible, which has also led to debates about whether AS should be considered clinically separate from autism.

Since 1994, the DSM has listed AS as one of the five subtypes of Pervasive Developmental Disorders. However, it was Lori Wing who first used the term “Asperger’s Syndrome” in 1976 and defined it in 1981 as “children and adults who have autistic features, but who talk grammatically and who are not socially aloof.” Ten years later she revised her idea of AS to be more similar to the high-functioning end of the autism spectrum. In 1998 Wing concluded that high-functioning autism and AS are one in the same, and the only real differences are in the symptom severity and IQ. Additional individuals consider AS as synonymous with high-functioning autism. Even though there is a clinical definition in the DSM-IV, the definition and similarities are not universally accepted. There are disagreements such as to whether individuals with AS have abnormalities of language, if there is an early history of speech delay, or if there is evidence of better language and social skills when compared to autism (Prior, 2003). If a person has social impairments and restricted and repetitive interests, he is likely to also have difficulty sustaining a conversation. This diagnosis would meet the criteria for autism, and not AS. Because of the nature of autism being a spectrum disorder, and that so many individuals suffer from so many different symptoms, clinically diagnosing a person with AS or HFA may depend on their current situation and how it may impact their life (personally, economically, emotionally, socially, or if the stigma of being labeled with “autism” differs from being labeled with “Asperger’s”). Even though there are variations in diagnosing patients regarding what one doctor or another considers a symptom, most research agrees that the main difference between high-functioning autism
and AS is when speech and language begins to develop and a few other factors involved in communication. A comparison can be seen in Table 2.

Table 2

<table>
<thead>
<tr>
<th></th>
<th>Autism</th>
<th>Asperger’s Syndrome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onset/recognition</td>
<td>Before the age of 3 years</td>
<td>After the age of 5 years</td>
</tr>
<tr>
<td>Social deficits</td>
<td>Severe</td>
<td>Mild</td>
</tr>
<tr>
<td>Type of interaction</td>
<td>Aloof or passive</td>
<td>Active but odd</td>
</tr>
<tr>
<td>Speech</td>
<td>Usually not pedantic</td>
<td>Usually pedantic</td>
</tr>
<tr>
<td>Intellectual profile</td>
<td>Low verbal IQ</td>
<td>High verbal IQ</td>
</tr>
<tr>
<td>Focused interests</td>
<td>Intense</td>
<td>More intense and usually</td>
</tr>
<tr>
<td></td>
<td></td>
<td>more sophisticated</td>
</tr>
<tr>
<td>Clumsiness</td>
<td>Present</td>
<td>Present but less severe</td>
</tr>
</tbody>
</table>

(Adapted from Ghaziuddin, 2005)

If there is indeed little difference, perhaps the DSM needs to make a distinction between autism, AS, and PDDNOS with Rett’s disorder and childhood disintegrative disorder. Rett’s disorder and childhood disintegrative disorder are clinically far more unique and more rare than anything on the autism spectrum. In fact, many parents feel they have been misled with the term PDD in relation to their child’s autism (Prior, 2003). Rett’s disorder has been linked to a specific gene (MECP2) found in females (due to the female chromosome), follows an initial period of normal development after birth, and has a much poorer prognosis (Ibrahim & Khan, 2008). Children with childhood disintegrative disorder (CDD) have a two-year period of typical development followed by a sudden or gradual loss of motor, social, intellectual, and communication skills (Carter & Wheeler, 2007).

As the individual with AS matures, their interest in social interactions increases. A person with HFA or AS may be aware of their difficulties in forming relationships with others (Fombonne, Meng, Strulovitch, Tagalakis, & Tse, 2007). A recently completed survey with young adults on the autism spectrum indicated that only half of the individuals had a “good” to “fair” outcome–based on employment, friendship, and independence. The author also noted that most unmet needs were in social areas (Eaves & Ho, 2008). Prognosis in autism is “greatly influenced by access to adequate
educational provision and, subsequently, to support structures that can enable individuals to progress through college and into appropriate employment” (Howlin, 1997). Once schooling comes to an end, integration becomes progressively more difficult to achieve. Failure to provide for these individuals ignores the research demonstrating that many individuals show improvements with age. Although, with an adequate support structure and sometimes luck, positive outcomes for individuals with AS is possible. Prior (2003) cites six articles from the *Journal of Child Psychology and Psychiatry* and the *Journal of the American Academy of Child and Adolescent Psychiatry* that discuss the improvements with age for many individuals with autism and AS, and of many people with AS obtaining a college degree or at least attending college.

**Adults, Social Skills, and Asperger’s Syndrome**

Asperger’s Syndrome was not recognized by the American Psychiatric Association (APA) until 1994, leaving many individuals undiagnosed or misdiagnosed well into adulthood. As a result, they may not be receiving the adequate services they need (Barnhill, 2007). Most of what has been documented about adults with AS has been published by the individuals with AS his or herself (Barnhill, 2007). Ghaziuddin (2005) and Tubbs (2008) talk about post-mortem diagnosing of famous individuals from the past. These individuals include Einstein, Newton, Mozart, Beethoven, and many other artists, musicians, and thinkers considered eccentric because of their personalities: socially awkward, ritualistic, obsessive, and compulsive. Even though it is possible that many of the gifted people in the past might have had personality traits that overlap with features seen in individuals with high-functioning autism or AS, it is important to “emphasize that the diagnosis of Asperger syndrome should be reserved only for those who meet the criteria of social deficits, communication impairment, and rigid ritualistic interests, and who suffer from a significant amount of distress and impairment” (Ghaziuddin, 2005). Currently there are few instruments to test for Asperger’s Syndrome in adults, and most available instruments are used to test for AS in adults who have suspected AS (Baron-Cohen, Robinson, Wheelwright, & Woodbury-Smith 2005). This lack of assessment is relevant because most existing instruments are designed for use with children (Baron-Cohen, et al., 2005). These adults with autism or AS may have
developed sustained eye contact and a good sense of humor, but there will be remnants of poor social skills that were obvious as children (Tubbs, 2008).

There appears to be a lack of a systematic effort to study older persons with autism spectrum disorders. Child psychiatrists, or pediatricians, or child neurologists often see children with autism. Once they turn 18 they are largely “forgotten” by the system, and their care is “transferred to people who do not often have a background in mental or physical health care” (Ghaziuddin, 2005). Several successful programs have been developed that work with individuals (specifically adults) with autism and Asperger’s Syndrome. The Treatment and Education of Autistic and related Communication handicapped Children (TEACCH) is an evidence-based service, training, and research program for individuals of all ages and skill levels with autism spectrum disorders (Division TEACCH, 2006). TEACCH began in 1966 by Eric Schopler who studied the relationship between parent interactions and their autistic child. By 1984 this research “grew up” with the initial children they were studying and realized that their mission should also include developing services for adolescents and adults. Currently they have developed programs for adults, including social skill groups, supported employment, in-service training, and are placed in many countries around the world. These programs are high-structured environment designed for learning. It is client-centered learning (taking into account the client’s interests, personality, feelings, quirks, and potential) without the “unsuccessful” unstructured therapies based on psychoanalytic theories. TEACCH uses predictable sequences of activities, visual schedules, routines and flexibility, organizing the physical environment, spontaneous communication, and independence. There are four different models of supported employment: One-to-One, Mobile Crew, Shared Support, and the Independent model. Each model differs only in the amount of support provided to the employee with an autism spectrum disorder (Division TEACCH).

The National Autistic Society has developed another program designed specifically to an adult on the autism spectrum. The National Autistic Society designed a program in the United Kingdom that has been successful in training and finding employment for individuals with autism and especially for people with high-functioning autism and Asperger’s Syndrome. This program is known as Prospects Employment
Services. It is designed for those looking for work, are over 16 years old, and diagnosed (or actively seeking diagnosis) on the autism spectrum. The National Autistic Society provides information about their “courses” designed to give useful strategies for prioritizing and decision-making (National Autistic Society, 2008).

Based on the positive research behind autism and social skills training, there is no reason childhood social skills training should not work for adults. Howlin (1997) believes this claim and enthusiastically suggests its possibilities. Easy adaptations can be made to work with adults. The interventions in therapies can build skills such as improving turn-taking, eye contact, problem solving, coping strategies, interpreting body language and facial expressions, and understanding tones of voice can be adapted to fit the need of a person with Asperger’s in a variety of situations. Possible examples could include getting along with coworkers, dealing with a crisis, social functions (gathering around the water cooler or going out for a drink after work), or dealing with customers and upper management. Since many individuals with AS have graduated high school and levels of university, the main concern is not about being qualified, but rather the issues involved in actively seeking a job, applying for it, obtaining the position, and sustaining the job: social skills. After all, matching the job to the client (with AS) is probably “the most crucial ingredient for success in any supported employment scheme” (Prior, 2003). There is much research about coping with decreased communication skills, emotional problems, and other common adult and workplace issues.

Decreased communication skills do not always mean less communicating. One study compared instances of communication with a familiar and unfamiliar person by an individual with autism to a neuro-typical individual. Results noticed typical autistic qualities such as echolalia, pronoun reversal, metaphorical (figurative) language, and prosodic deficits. The study, however, indicated equal or higher rates of conversation acts from the individual with autism (Rosenthal, 1986). A separate study demonstrated similar findings, showing that the differences between an individual with autism and a neurotypical person are the types of communication and if the act was contrived to regulate other’s behavior (autistic group) or to communicate in order to control others, establish social interactions, or to focus joint attention (neuro-typical group; Wetherby & Prutting, 1984). In the workplace, Rosenthal (1986) believed that those who work or interact with
individuals with autism should be trained to use more facilitative interactive style. The study showed that the autistic subjects initiated more interactions with the “unfamiliar” person than the “familiar” person. The researcher claimed though, that the unfamiliar person tended to wait for the other to say something and asked more questions to the individual with autism—the familiar did not wait as much for the individual to speak and held conversations about familiar things (home, things they have done together, etc). While communication skills can be learned, one thing is clear: people with AS tend to lack the “to-and-fro” quality of normal conversation and the individuals tend to ramble, to be one-sided, to be pedantic, and to have inconsistent eye contact (Ghaziuddin, 2005).

Conversation skills will also be used within technology. Technology has improved communication for many people living with AS. Improvements include using email to talk to partners or coworkers instead of facing them directly. Successful interventions can decrease the anxiety of social interactions and can help the individual focus on what he or she wants to say as well as encoding what is being said (Howlin, 1997). Howlin interviewed a couple, both with AS. One spouse admitted that it is “of limited use in sorting out areas of disagreement to use emails. Inflection and tone of voice is also a common problem in emails and other electronic media for much of the neurotypical world” (1997). McAfee (2002) uses video throughout her training curriculum to track progress and have students view or give feedback on his or her performance. Technology and videotaping can also help with modeling and observational learning (Michaelson & Sweet, 2007; Bandura, 1997), which will help in adult-like situations, becoming more independent, and with employment.

Unemployment rates for individuals with a mild intellectual disability are as high as 70%. Even if he or she finds a job, job status and security are typically low – often because of issues related to social competence or having a “very negative experiences” (Prior, 2003; Szivos, 1990). Howlin (1997) gathered research from a number of studies from 1966 – 2004 that were designed to see how many individuals with autism were employed. Over the years the employment rates increased, but are still relatively low. The average employment rate post-1980 was around 20% for the number of individuals participating in the study. Success sometimes occurs because individuals with Asperger’s “outgrow many of their initial characteristics and usually learn to channel their behaviors
into more acceptable and productive activities” (Tubbs, 2008). Change is still difficult, especially in a work environment. A person with AS will be resistant to that change and enjoy repeating the same routine. Preparing for change can take several hours, days, or weeks in advance to help decrease anxiety and become accustomed. Some of the higher-level jobs and careers for individuals in Howlin’s study are military positions, banking jobs, a chemist, accountant, librarian, salesman, cook, bartender, driver, and cartographer. Some of the lower-level jobs (defined by work requiring a lower IQ, or work not at an equal standard to the person’s IQ or possible degrees) included: factory work, janitor, volunteer at shelters, store hand, industrial work, gravedigger, or charcoal burner (Howlin, 1997). Enduring the demands of a job are difficult for many people, but individuals with AS will often have to deal with other issues: emotions, moods, and communicating.

Neuro-typical individuals deal with emotions frequently, but it is especially difficult for those on the autism spectrum who cannot adequately express those moods to others. How can one become aware of his or her emotions? A person with AS may experience emotions in different ways. The author of the book, Ask and tell: Self-advocacy and disclosure for people on the autism spectrum, is also coping with autism (Hane, 2004). She says she feels her emotions in different parts of her body and as having temperatures or frequencies. Other individuals may experience them with heat, sound, texture, vibrations, or frequencies of color. “After many years of sitting in Zen meditation, I have learned to transfer the emotions I feel with light and music to the people who are significant in my life” (Hane, 2004). Similar to any workplace and life, extreme emotions can also lead to stress. These stresses may be predicted or unpredicted, but having the skill to respond to them is important. Skills for dealing with stress are vital for anyone, and it is especially important for an individual with autism or AS to know how to calm down.

Stress management techniques might involve:

- Predicting change/stress
- Relaxation
- Distraction –to stop rituals or obsessions (i.e. redirection)
- Thought-stopping
Improving the general quality of life (Howlin, 1997)

Predicting stressful triggers may also help the individual with AS to cope better with other outcomes of stress: anger or depression. Emotional responses to a minor problem may erupt into a major meltdown, which can scare parents, siblings, teachers, and people at school or work. Tubbs, herself an individual with autism, suggests counting numbers or some form of tactile stimulation. She warns that using a tangible object to transfer worries and stress onto can backfire if you forget the object or rely on it too much (Tubbs, 2008).

Many children Asperger described in his case studies had features suggestive of mild depression. Reports from autism clinics and psychiatric units suggest that depression is the most common psychiatric disorder. These reports may be alarming, but depression is also the most common diagnosis in the general population. Signs of depression include an increase in withdrawal, increase in obsessive-compulsive behaviors, change in the character of the obsessions, irritability, regression of skills, or psychotic behavior. Depression can be a serious issue for individuals with AS especially if they also suffer from other conditions such as tics or Tourette syndrome, anxiety, PTSD, or suffering from ridicule at school or work (Ghaziuddin, 2005).

For individuals with AS and HFA, positive social interactions are important. In structured environments, these interactions have led to perceived and observed improvements for many individuals with AS and HFA. Viewing appropriate or inappropriate behaviors can have an effect on a person with AS–modeling, imitation, or lack of discretion can lead to changes in social conduct. Research has shown that there is no significant difference in the onset of puberty or in the age at which young people with AS become interested in sexual relations in comparison to the general population (Hendrickx, 2008). The automatic negative thoughts experienced by everyone searching for a partner (rejection, unworthiness, self-expression, etc) can be heightened by someone with Asperger’s Syndrome. Many individuals with HFA and AS have found partners and have led successful dating lives that have even developed into marriage. As with any relationship, many factors must be met in order for a sexual relationship to be considered consensual. The most important include privacy, emotional and economic commitment regarding pregnancy, methods of contraception, emotional context, and the right to refuse
sexual contact (Hénault, 2006). Because many individuals with AS are “people pleasers” (Hane, 2004), learning when to say “no” may conflict with other thoughts that you must do what other people want in order to make friends and for people to like you. It is easy to see how a person who has trouble finding hidden meanings can easily be taken advantage of (Howlin, 1997).

Positive social interactions are also included in standard interventions in therapy. Interventions in many curricula are often peer-mediated or use a circle of friends, social stories, comic strip conversations, or another form of group therapy (Prior, 2003). Fombonne, Meng, Strulovitch, Tagalakis, & Tse (2007) demonstrated that social skills groups can be an effective way of helping verbal adolescents with autism spectrum disorders to develop comfort and confidence in social interaction. The group curriculum combined psychoeducational and experimental methods of teaching social skills, with an emphasis on learning through role-play. The social skills training not only demonstrated improvements in social skills areas, but also improved other problem behaviors often associated with autism such as affect regulation disorders, anxiety, self-isolation, and self-injurious behavior. Parents of the study also indicated improvements outside of the sessions, which indicated to the authors that the skills learned in the sessions were generalizing to settings outside of the treatment group. Generalization is an important outcome for many treatment groups. Some generalization was also reported for participants in another study, Social Cognition and Interaction Training–Adults (SCIT-A). The participants showed significant improvement in theory-of-mind skills and trend level improvements in social communication skills, and the treatment as usual (TAU) participants did not show these improvements. Findings indicate the SCIT-A shows promise as an intervention for adults with HFA and demonstrates “treatment feasibility and improvements in social cognition and perceived social functioning.” Improvements in social thinking “may ultimately lead to improvements in social behavior (Bodfish, Dichter, Penn, Perry, & Turner-Brown 2008).

Social skills are often taught through social stories, pictures, or videos. Social stories may help someone with AS to anticipate and respond to what may occur and to help prepare for situations that may be problematic or unpredictable (Jacobson, 2005). Goldstein and Thiemann (2001) demonstrated that instruction using social stories, text cues, and pictures of social skills for individuals with autism and social deficits and two
of their neuro-typical peers resulted in increases in targeted social communication skills. This group-training curriculum can also be modified to a one-to-one setting. Chung, Drewry, Matthews, Mosconi, Reavis, and Tasse (2007) demonstrated that using a peer to teach social skills is effective for children with high-functioning autism. The study observed improvements in socials skills for three out of the four children participating. Increases were also observed in appropriate verbal interactions and demonstrated that children with autism can improve on basic communication skills over a relatively short (11 week) period. The authors suggest that “more frequent and shorter sessions… would allow for using a stronger research design” suggest that much of their success is due to the high level of interest of the participants for working and playing with peers.

Because autism is a life-long disability, adults with Asperger’s Syndrome and high-functioning autism are not different than when they were children. As a result, many of the social skills they lack are similar, but more pertinent in adulthood. Allison Leatzow, an autism consultant, lists seven main social skills she wants to work on with young adults (ages 18-28) with AS: (1) asking for help when needed, (2) increasing self control and decreasing impulsiveness, (3) developing an ability to soften the bluntness that they may exhibit, (4) having perspective, (5) listening to what the other person has to say, (6) reading non-verbal communication, and (7) increasing the ability to understand sarcasm, political correctness, and implications (personal communications, November, 2008). These skills can form the basis for developing objectives for many therapeutic interventions.

Reading body language and facial expressions, can be “learned” with practice, possibly by “mapping” the face to learn the different parts and how they work together. People with Asperger’s can often learn to read faces through learning what they mean. An individual with Asperger’s might learn what other people suggest in their body language, but they most often will not feel what another person is feeling, and each new expression will have to be learned too. Learning these signals is beneficial so that the person with AS can understand what is expected of him or her. Knowing what is expected is essential in a workplace environment because an employee will constantly be expected to perform assigned tasks. These tasks can change from time to time, and there may be new expectations. Learning nonverbal signals will also help individuals with AS
by letting others know what he or she wants and to increase self-advocacy. The more successful a person is with encoding and decoding nonverbal communication, the more efficient and successful he can be in the workplace (Hane, 2004).

Being able to read signs from another adult is not the only skill needed in a work environment. Taking and interpreting praise and criticism is essential for every adult, and neuro-typical individuals will generally handle most constructive criticisms. Individuals on the autism spectrum often view criticisms, even constructive criticisms, as a sign of failure. It is crucial that a person with Asperger’s Syndrome learns to accept a critique without interpreting it personally. Criticism can be used as an opportunity to grow and learn. This acknowledgment is the key to self-acceptance.

Learning these skills normally takes place in the course of growing up, but for a person with AS, additional time and resources are needed for the individual to be successful. Rules may often be learned, but they might be followed too rigidly. The social rule for when to let something “slide” will go by unnoticed or ignored—there is no “grey area.” It is a paradox to learn social rules and then learn when they must be broken. This inconsistency is an obvious problem for someone requiring strict rules that in his or her mind cannot change, whatever the circumstance. Needless to say, there is considerable information to be learned and processed. Research has demonstrated that a person might retain as much as twice the amount information when it is presented in a distributive manner rather than all at once, and even more when paired with rhythm (Balch, 2006; Childers & Tomasello 2002; Silverman, 2007). There are also tools targeting different ways of learning (visual, sensory, inductive, and active learning) to appeal and to reach to different types of learners (Deek, 2005). Small groups are more effective than when learning in a large group or lecture format, and research with college students demonstrated that the students learned more when they were required to use friends and peers to find answers before going to the teacher (Yamarik, 2007). For successful peer tutoring, five key elements must be in place: (1) Positive interdependence, (2) promotive interaction (the students interact face-to-face), (3) individual and group accountability, (4) group processing (group efforts to decide on ways to be more effective), and (5) development of small-group interpersonal skills (Yamarik, 2007). These key elements are similar to what a person with AS has difficulties with. If the individual with AS can be
matched to a peer who can meet the key elements, it is possible the person with AS can learn social skills. This concept has been demonstrated in research where children working with peers helped with learning material (phonetic awareness and letter sound recognition; Cao, Han, Kung, & McMaster, 2008)

Failures in social networking (and making friends) may make someone with AS less likely to attempt social interactions in the future. Results with the Social Cognition and Interaction Training for Adults (SCIT-A) are promising, preliminary, and should be “interpreted with caution.” SCIT-A will at least provide participants with perceived benefits from the participants, which might increase self-esteem (Bodfish, Dichter, Penn, Perry, & Turner-Brown 2008). In some inclusive school settings, though, classroom peers have been engaged as formal and informal helpers (Pasiali, 2004), and is possible that it could be helpful in an adult situations and employment situations as well.

**Current Therapies for Asperger’s Syndrome.** Current non-pharmaceutical and non-biomedical therapies for Asperger’s Syndrome do not treat the underlying impairments, but rather treat the symptoms. Therapy for adults will emphasize turning eccentricities into strengths and Asperger suggested that therapy and education be based on a firm understanding of the condition and always be aware that individuals with the syndrome are of high value to the society (Barnhill, 2007). Therapies mainly include behavior modification, social skills training, sensory integration training, speech/language therapy, and educational, occupational, or physical interventions. The best therapies will address the main symptoms of AS: poor communication skills, repetitive behaviors, and physical clumsiness. True throughout the autism spectrum, the earlier therapy begins, the better the prognosis. An effective treatment program should build on his or her interests, be predictable and highly structured, and introduce new tasks in steps (National Institute of Neurological Disorders and Stroke, 2008). For some individuals, therapy may be faded out or used intermittently as job-induced stress increases or when going through a particularly difficult time in life (Barnhill, 2007).

Behavior modification, such as cognitive-behavioral therapy (CBT), has been shown to be one of the most successful strategies in treating the symptoms. Research established that even brief CBT interventions could help reduce anxiety and increase the child’s ability to generate positive strategies in anxiety producing situations (Attwood,
Hinton, & Sofronoff 2005), and self-modeling through watching video-taped sessions has increased self-regulating strategies (Delano, 2006). After CBT interventions, individuals with Asperger’s Syndrome have improved social skills and demonstrate an improvement in adaptability (Lopeta, Nida, Thomeer, & Volker, 2006).

**Music Therapy and Asperger’s Syndrome**

Music therapy has been used with many clients across the autism spectrum and it has been suggested that within the auditory modality, different reactions are triggered by musical stimuli than by verbal speech (Menard, Mottron, & Peretz, 2000). Because Asperger’s Syndrome is multifaceted and affects a range of senses, a multimodal approach is a valuable tool to touch the senses. Music has been used to practice clear and rhythmic enunciation and articulation or words, and help promote prosody and expression. Music can also include active listening, turn taking, teamwork, social connections, and motor skills.

Children with autism often demonstrate natural and intrinsic music ability. Heaton (2003) demonstrated superior pitch memory and labeling of her experimental group (children with autism) than the neuro-typical control group. An HBO series demonstrated music’s appeal to individuals with autism and how music has also helped with the expressive side of autism (Shute, 2008). Bruscia (1989) was concerned with a broad spectrum of clinical goals. In his work he addresses educational needs and developmental tasks (that may have been delayed during one’s lifespan) such as relating to the world, self, and others.

Music therapy and individuals with autism employs a wide variety of interventions. These interventions can include interactive instrument playing, musical instrument instruction, interactive singing, instrument choices, and song choices. Some research has shown that differences in specific interventions did not affect accomplishment of initial objectives—meaning that all music interventions were successful and preferred music played a major role in interventions. Music therapy interventions have demonstrated an increase of novel sentences, increased communication, increase in voice quality, increase on-task behavior, initiating and sustaining conversations, increase of self confidence, and other non-music daily living
skills (DLS) such as shopping skills or how to behave in public (Kaplan & Steele, 2005; Flowers & Staum, 1984).

Music has also been used with children with autism and the repetition of another person’s speech. Music can emphasize speech and increase communication in echolalic speech patterns (Gore, 2002). Gore has used music to reinforce positive social interactions, and used a preferred musical activity to increase less preferred activities. Rhythmic activities and motions are implemented to facilitate the coordination of verbal and nonverbal components of communication, to increases communicative responsiveness, and general coordination and motor control.

Some research supports the notion that children with autism talk to themselves in relevant ways while problem solving and that such speech is helpful in normalizing their executive functioning. Similar problem solving techniques are also found in neuro-typical children who would also talk themselves through a task, and especially harder ones (Abar, Feder, Rubio, Schunn, & Winsler, 2007). Self-management skills have been increased through music, as well as using music to increase interaction and repetition of task (Grant, 1986). If someone with AS is also suffering depression or anxiety, physiological control to help relax or decrease worry can be a powerful tool. Music therapy has been implemented to decrease stress, decrease anxiety, and promote wellness (Scartelli, 1989). It is possible to use progressive muscle relaxation training, biofeedback (classical conditioning aimed to train a person to “alter physiological and bioelectrical events occurring within the body”), operant conditioning, and systematic desensitization in the therapeutic process with music. The use of melodic-rhythmic mnemonics has been an effective aid in short-term memory through rehearsing, modeling, and cueing exercises (Bosco, 1974; Scartelli, 1989).

Use of Social Stories. Research demonstrates that talking through a task can assist with executive functioning, and music therapists have blended that idea with social stories. Social stories consist primarily of descriptive and perspective sentences to provide information (rather than instructions) and have been shown to be effective in treating behavioral issues and teaching information. Adapted for music, these musical social stories have decreased problem behaviors, taught skills, increased on-task performance, and increased positive social experiences in people with AS (Brownell,
Children with autism appear to be more visual learners (compared to being aural learners), however, they appear to prefer musical auditory stimulus over a visual stimulus (Pasiali, 2004). Brownell has taken advantage of the finding that the music centers in the brain are distinct from the receptive language centers. Brownell has researched that composing original music to these social stories is as effective as reciting the stories, and in some instances is more effective (Brownell, 2002).

**Lyric Analysis, Songwriting, Playing Instruments, and Improvisation.**

Opportunities for increasing expression, ToM skills, and emoting present themselves when participating in music activities such as lyric analysis, songwriting, and improvisation. Songwriting and lyric analysis are common techniques for music therapists in order to elicit emotional change (Jones, 2005). When analyzing lyrics, the reader must discover the meanings of the text. Often songs sing about love, loss, happiness, or dreams, and the meaning might present themselves explicitly in the lyrics. Other times, the lyrics of a song may only hint at the true meaning through the use of imagery, metaphors, figurative language, or as phrases that are impossible, such as *Eight Days a Week*, by the Beatles (having eight days in one week in which to love is impossible, because there are only seven days in a week). In other words, the reader must be aware of whether or not the lyricist is being literal. The ability to decipher hidden meanings or to understand the feeling the lyricist is singing about is precisely what individuals with Asperger’s Syndrome have difficulty with, and music can be an effective tool to increase emotional understanding, which is important to their social life. Katagiri (2007) demonstrated that pairing background music with song/lyric texts greatly increased emotional understanding for children with autism. Research shows that music is able to represent the various innate qualities of emotion through a range of musical aspects such as pitch, rhythm, timbre, melodic line, or tempo. Many feel that it is especially true with improvisation where music can hijack the mechanisms in the brain that are responsible for tracking both our own emotions and the emotions of others (Cochrane, 2008). Some research proposes four basic relationships between music and induced emotion for the person in relationship to the music expressed: positive (happy music leads to happy feelings, sad music leads to sad feelings), negative (happy music to
sad feelings), no systematic relationship (the listener is not affected), and no general underlying relationship (the music may be appropriate for expressing emotions, but not for experiencing them; Schubert, 2007). An individual with decreased ToM skills might see a relationship between the music and emotion, but might not feel the emotion (no sympathetic relationship). Songwriting techniques commonly practiced in music therapy sessions can include replacing specific words of songs, piggybacking (writing new lyrics to a previously composed song), or fully composing a song (Brownell 2002; Pasiali, 2004; Petterson, 2008).

**Rational for Study**

For most neuro-typical individuals, the teenage years (13-19) are difficult. Adolescence produces social change and search for individuality. Questions such as, “Who am I,” “Who do I want to be,” “Do other people like me,” or “Am I a good person” will often be answered through positive social experiences and after the physical, emotional, and psychological changes become established (Patrick, 2008). Adolescent questions and thoughts will filter into adulthood if they are not answered during adolescence. For an individual with AS, these questions might not be answered because of their struggles with sensory integration, emotional regulation, and a strong need for sameness. The transition into adulthood and the new desire for independence will form a blend of adolescence and adulthood. A decrease in services when the individual with AS reaches adulthood indicates a strong need for research and development in this age group. Improving and sustaining social skills is important, and combining music therapy techniques and neuro-typical peers with individuals with Asperger’s Syndrome can offer instances where social skills can be practiced in a real-life environment.

The use of peer modeling has been shown to be beneficial to children (Chung, et al., 2007) and there is a strong desire by individuals with AS to find peers to relate to, make friends with, or to have someone to turn to who is not their parent (Baron-Cohen, Robinson, Wheelwright, & Woodbury-Smith, 2005). Through songwriting, the individual with Asperger’s Syndrome can express emotions by relating to lyrics, and learn to elaborate those expressions with different styles and moods of music. Producing a quality product has also been known to increase a person’s self esteem and sense of worth, which may also result from learning to sing or play an instrument (Whipple, 2004). The lyrics
can also be altered at specific locations to include figurative language or add hidden meanings. Using these strategies, the following research questions will be investigated.

Research Questions

1. What is the effect of music therapy interventions employing peer models on the conversation skills of young adults with Asperger’s Syndrome?

2. Can young adults with Asperger’s Syndrome identify, express, and increase social skills as a result of music therapy interventions employing peer models?

3. What is the effect of participation in the project for the peer-partner?
Participants

Participants with Asperger’s Syndrome. Participants with Asperger’s Syndrome were recruited from an autism agency in northwestern Florida that specialized in working with young adults with Asperger’s Syndrome, as well as sending out emails to various online forums for individuals with AS and parents of individuals with AS. Each participant was asked for a signature of intent to complete the curriculum. The participants knew they had the option to withdraw at any point. The signature was merely a means to promote participation throughout the study. Participants (N=6) ranged from age 20 to 29 with a mean age of 24.8 years.

Participants without Asperger’s Syndrome. Participants with Asperger’s Syndrome were paired with one participant without AS. This partner was called the Peer Response Partner (PRP). These pairings were matched and scheduled by availability and chronological age (no more than a 5 year difference between participant and PRP). PRPs were recruited from siblings of participants as well as from a northwest Florida university. If a PRP was a sibling of a participant, the PRP was paired up with a participant to whom he or she was not related. This pairing with a stranger was based on research by Rosenthal (1986), where the individual with autism initiated more interactions with the “unfamiliar” person than the “familiar” person. PRPs (N = 6) ranged from age 21 to 30 with a mean age of 24.5 years. Requirements for participants and PRPs were that they be young adults (approximately 18-28 years old), have an appreciation for music, and a willingness to participate in the study. Additional requirements for participants with AS include no cognitive deficits, no (or minimal) hearing loss, and no other behavioral problems. Participant demographic data (gender and age) of the six dyads are reported in Table 3.
Table 3

<table>
<thead>
<tr>
<th>Dyad</th>
<th>AS or PRP</th>
<th>Gender</th>
<th>Age (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dyad 1</td>
<td>AS</td>
<td>F</td>
<td>20</td>
</tr>
<tr>
<td>“Morgan”</td>
<td>PRP</td>
<td>F</td>
<td>23</td>
</tr>
<tr>
<td>Dyad 2</td>
<td>AS</td>
<td>F</td>
<td>28</td>
</tr>
<tr>
<td>“Ellen”</td>
<td>PRP</td>
<td>F</td>
<td>24</td>
</tr>
<tr>
<td>Dyad 3</td>
<td>AS</td>
<td>M</td>
<td>29</td>
</tr>
<tr>
<td>“Ryan”</td>
<td>PRP</td>
<td>M</td>
<td>30</td>
</tr>
<tr>
<td>Dyad 4</td>
<td>AS</td>
<td>M</td>
<td>24</td>
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<tr>
<td>“Charlie”</td>
<td>PRP</td>
<td>M</td>
<td>24</td>
</tr>
<tr>
<td>Dyad 5</td>
<td>AS</td>
<td>M</td>
<td>20</td>
</tr>
<tr>
<td>“Robert”</td>
<td>PRP</td>
<td>M</td>
<td>21</td>
</tr>
<tr>
<td>Dyad 6</td>
<td>AS</td>
<td>M</td>
<td>28</td>
</tr>
<tr>
<td>“Matt”</td>
<td>PRP</td>
<td>M</td>
<td>25</td>
</tr>
</tbody>
</table>

AS Mean Age 24.5
PRP Mean Age 24.8

Description of Research Setting

Sessions were held at a music studio open to the public. Room usage was granted by the owner of the studio and was large enough for three people to sit and talk comfortably with three chairs in a circle. The room contained an acoustic guitar, a Powerbook G4 laptop with portable speakers, three djembes, a drum set, percussion instruments, pencils, blank paper and a table approximately 2’ x 4’. Across the room there was a DCR-HC20 Sony video camera on a tripod to record sessions for data gathering. The settings on the camera were changed to turn off the red “recording” light when recording. Turning off the recording light was done because the light may have been a distraction if participants noticed the light on. When beginning each session, the chairs were set up in a small circle without the table. The table was used when participants needed to work on the computer (for typing lyrics, listening to music, writing music) or other times when a table was necessary. For improvisational instrument playing, the participants sat in the chairs in a circle, or were allowed to move more freely around the room. For songwriting and lyric analysis the chairs were set up in a circle to facilitate more intimate and natural communication. A dry-erase board and poster-board was used to write on as needed. The final session was held in the “recital hall” of the music studio, which also had a Yamaha grand piano and enough room for all the
participants. In the recital hall, chairs were set up in a circle to facilitate conversation and the same laptop and portable speakers were used.

**Materials**

Videos were taken on a Sony Handycam (DCR-HC30) and transferred to an Apple iMac with iMovie HD. Composing and arranging was done on Garageband. Musical instruments used in the music group included acoustic guitars, djembes, a xylophone, a drum set, various percussion instruments, a mandolin, and a piano (at the final session). The guitar was the primary instrument used by the author based on research defending guitar preference for motivation in music therapy (Krout, 2007). An Apple Powerbook, an iPod, and portable speakers were used at various times during the study for typing, music playback, and recording songs. Recording equipment for the songwriting sessions included a Peavey PV6 6-channel mixer, a Shure Beta 98H/C instrument microphone, and an unknown brand vocal microphone. The microphones were connected to the mixer, which was then connected to the audio-in port on the laptop from the RCA-out on the mixer. An RCA to mini-headphone jack was used for the mixer/laptop connection. A headphone splitter was used to connect two pairs of headphones to the laptop for listening to the recordings. Songs used for lyric analyses were selected by the researcher based on the following criteria:

1) Song lyrics contain no obscene language or violent, sexual, or otherwise inappropriate themes.
2) Songs contain lyrics that are intelligible and audibly understandable.
3) Content of songs contain a balance of hidden themes and straightforward ideas.
4) Songs or artists chosen would be relatively unknown, so that the songs would be new to the listeners, and relatively contemporary.

A number of songs for lyrical analysis were selected so that multiple songs could be used for the sessions. Songs were imported onto the author’s iPod and connected to speakers for the session.

**Procedures**

Participants were scheduled for a total of 12 sessions (twice a week for 6 weeks). Sessions lasted approximately 50 minutes. This format was chosen based on suggestions from previous research that recommended more frequent and shorter sessions to allow for
a stronger research design (Chung, Drewry, Matthews, Mosconi, Reavis, & Tasse, 2007). Dyads met in the same location each time and followed the same basic plan each session:

- Hello (video taping – 5 minutes)
- Explanation of skill to be learned
- Teaching skill (video taping – 5 minutes)
- Practice skill (video taping – last 5 minutes)
- Explanation of homework (if any)
- Ending/Goodbye
- CSRS Questionnaire

At the final session, all individuals who participated in the study met in a general location for a pizza party to practice skills learned and to act as motivation to complete entire program. The schedule for sessions is summarized in Table 4, and a detailed plan for the sessions is in Appendix A.

Table 4

<table>
<thead>
<tr>
<th>Session Schedule for Social Skills</th>
</tr>
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<tbody>
<tr>
<td><strong>Week</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
</tr>
</tbody>
</table>

The first session was used for formal introductions and to administer the pretest. Samples of video were observed at 5-minute intervals from the beginning, middle, and end of each session to track and assess skills.

Measurements

*Social Skills Inventory*. Participants were given the Social Skills Inventory (SSI; Riggio, 2002; Appendix I) as a pretest and posttest. The SSI is a self-report assessment designed to measure the possession of basic emotional and social communication skills. The participants were measured based on reading and rating statements about encoding,
decoding, and regulating skills. The measurements assessed six domains within two main categories: emotional (nonverbal) and social (verbal). The two main categories are broken in the subcategories of expressivity, sensitivity, and control. Over the course of 90 questions, participants rated how much a statement (such as, “I am easily able to make myself look happy one minute and sad the next”) applies to him or her. The rationale behind using the SSI as a measurement was for its reliability (test-retest reliabilities ranging from .81 to .96 within a two-week interval; Riggio, 2002). Another reason for the SSI is for its ability to measure across different aspects of social skills and measure the balance across the six domains.

*The Conversational Skills Rating Scale.* At the end of sessions 2-11, all participants filled out a brief survey to assess the conversation skills of the individual with Asperger’s for that day. The Conversational Skills Rating Scale (CSRS; Spitzer, 1987; Appendix I) is a brief rating scale to be filled out by the participant, the author, and the peer-partner about how skillfully the participant used specific communicative behaviors in conversation. The 30 questions on the CSRS measured aspects of communication such as attentiveness, composure, expressiveness, and coordination. The skills practiced in each session were based on what skills were being assessed throughout the study. The CSRS was favored in the study because it measured the “appropriate use” of skills from “inadequate” to “excellent” rather than a quantitative measurement. This scale is ideal for conversation skills such as eye contact and proximity because using too little or too much of each can be considered “inappropriate.”

*Social Skills Observation Form.* Skills were assessed with a basic behavior checklist modified from previous research (Chung, Drewry, Matthews, Mosconi, Reavis, & Tasse, 2007; Goldstein & Thiemann 2001; Madsen & Madsen, 1988). Measurements were recorded on an observation form while viewing video of a portion of the session. The coding system was from an observational analysis used in previous research with children and adolescents with autism (Chung, Drewry, Matthews, Mosconi, Reavis, & Tasse, 2007; Goldstein & Thiemann, 2001). The observational form tracked behavior in 15-second intervals, for three 5-minute lengths of time per session, and determined the types of communication responses given by the participant. The possible outcomes were
appropriate talking and inappropriate talking, which was measured in eight ways (detailed definitions are located in Appendix G):

Table 5

<table>
<thead>
<tr>
<th>Observational Outcomes</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate</td>
<td>Inappropriate</td>
</tr>
<tr>
<td>CR: Appropriate Contingent Response</td>
<td>TO: Inappropriate Topic Change</td>
</tr>
<tr>
<td>SA: Securing Attention</td>
<td>UN: Unintelligible</td>
</tr>
<tr>
<td>IC: Initiating Comments</td>
<td>O: Other</td>
</tr>
<tr>
<td>IR: Initiating Requests</td>
<td>NR: No Response</td>
</tr>
</tbody>
</table>

Reliability was measured by: number of agreements / (total agreements + total disagreements) x 100. To demonstrate interrater reliability, a second viewer rated 12 sessions chosen randomly (20% or total sessions). Interrater reliability was determined for individual categories rated (i.e. choosing CR, SA, IC, etc.) and for appropriate or inappropriate responses. Based on this procedure, interrater reliability for individual categories was 71%. Reliability for appropriate or inappropriate responses was determined to be 98%. The observation form can be found in Appendix F.

Post Session Questionnaire for Peer Response Partners. Research demonstrates that a peer-model approach can increase targeted social communication skills in children with autism. This approach also had a positive impact on the peer-model. The PRPs were requested to fill out a short questionnaire to determine the effect the study had on the neuro-typical individual (Post-Session Questionnaire for Peer Response Partners; Appendix E). This questionnaire consisted of a yes/no question about the PRP’s comfort working with individuals with AS and describing any possible benefits the PRP gained as a result of the project. The answers provided by the PRPs will be assessed as qualitative data and discussed in the following chapters.
CHAPTER IV

RESULTS

Data Analysis for Research Question One

*What is the effect of music therapy interventions employing peer models on the conversation skills of young adults with Asperger’s Syndrome?*

The Conversational Skills Ratings Scale was used at the end of every session to track the conversation skills of the participants. The participant, PRP, and the author gave the participant between 30 and 160 possible points to answer the 30-question Likert-based scale. Overall, the CSRS scores from the sessions indicate an improvement in the conversational skills for the participants. Observation analysis was conducted for 15-minutes of each session, and reviewed in Table 6. Overall scores are shown on Figures 1-3 and Table 6, and results for individual participants are discussed below.

“Morgan.” Morgan’s scores clearly indicated an upward trend for her CSRS scores (Figure 4). Morgan, her Peer Response Partner, and the author all rated her at approximately the same score (approximately 100) and moved upward at a similar rate for the first six sessions before they began to deviate. Although the rest of the scores continue their upward trend, Morgan’s PRP eventually reaches the maximum score on the CSRS (160) by the eighth session. The author did not reach the maximum score, but did reach 136 by the final session. Morgan ranked herself with a steady incline throughout the sessions with similar scores to her PRP.

As indicated in Table 6, Morgan displayed a high average of 13 (out of 30 times per session) contingent responses (CR). Part of this high number was due to Morgan saying “uh-huh” or “yeah” to her partner when listening. She often remained on-task and paid a lot of attention to her partner. She frequently continued conversations with securing attention (SA) and initiation comments (IC) nine and six times per session on average. She rarely initiated requests of her partner or engaged in inappropriate responses (0-1 times per session).
Figure 1: Self-rated CSRS Scores

Figure 2: PRP-rated CSRS Scores
Figure 3: Author-rated CSRS Scores

Table 6

<table>
<thead>
<tr>
<th>Social Skills Observations</th>
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</thead>
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<tr>
<td>Participant</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>----------------------------</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Morgan</td>
</tr>
<tr>
<td>Average</td>
</tr>
<tr>
<td>Percentage</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Ellen</td>
</tr>
<tr>
<td>Average</td>
</tr>
<tr>
<td>Percentage</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Charlie</td>
</tr>
<tr>
<td>Average</td>
</tr>
<tr>
<td>Percentage</td>
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Table 6–continued

*Social Skills Observations*

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<tr>
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<th>SA</th>
<th>IC</th>
<th>IR</th>
<th>Ttl</th>
<th>TC</th>
<th>UN</th>
<th>O</th>
<th>NR</th>
<th>Ttl</th>
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<tr>
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<td>75</td>
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<td>282</td>
<td>10</td>
<td>0</td>
<td>3</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>Robert</td>
<td>11</td>
<td>10</td>
<td>8</td>
<td>1</td>
<td>28</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Percentage</td>
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<td></td>
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<td>1%</td>
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<td>6%</td>
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<tr>
<td>Total</td>
<td>116</td>
<td>101</td>
<td>46</td>
<td>11</td>
<td>274</td>
<td>14</td>
<td>0</td>
<td>10</td>
<td>2</td>
<td>26</td>
</tr>
<tr>
<td>Matt</td>
<td>12</td>
<td>10</td>
<td>5</td>
<td>1</td>
<td>27</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Percentage</td>
<td>91%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9%</td>
<td></td>
<td></td>
<td></td>
<td>9%</td>
</tr>
</tbody>
</table>

*Note:* Totals are based on 300 possible chances overall and averages are out of 30 possible chances to respond each session. Percentages represent the amount of time observed giving either appropriate or inappropriate responses.

**Figure 4:** Morgan's CSRS

“Ellen.” Ellen’s CSRS scores vary between herself, her PRP, and the author. Although the author and PRP rank on an upward trend, Ellen consistently ranked herself with a score of approximately 95 throughout the project (Figure 5). This score was obtained by ranking herself down the middle of the Likert-based questionnaire.
According to Ellen’s PRP and the author, her scores approached 130-140 by the end of the session in the final sessions. From Table 6, 90% of Ellen’s responses were appropriate, and one-third of her total responses were securing and maintaining attention (SA). She had the highest number of topic changes (TC) out of all the participants, which is supported by the highest number of initiating comments (IC). This TC/IC relationship was displayed by Ellen often making comments or jokes, yet sometimes they were not within the context of the conversation.

![Ellen's CSRS](image)

**Figure 5:** Ellen’s CSRS

“Ryan.” Ryan’s CSRS (Figure 6) displays varying results between the author, PRP, and the participant. The author and PRP scored Ryan on an upward trend, although the trend is not as evident for the PRP due to the high scores from the beginning of the sessions. Ryan scored himself perfect or near perfect for every session. Table 6 indicates Ryan having the highest contingent response (CR) score out of all the participants, due to often responding with “yeah” and “uh-huh.” Ryan also had a high number for securing and maintaining attention (SA), and an average amount of initiating comments (IC). Ryan also had a low level of initiating requests (IR; an average of one time per session) and inappropriate responses (4% of total responses).
“Charlie.” Charlie demonstrated steady improvement to approximately 130, as indicated by the author’s score on the CSRS (Figure 7). Charlie’s PRP indicated an initial climb that evened off at roughly 130 by the seventh session. Charlie rated himself fairly high throughout the project but maintained an upward trend. Table 6 indicates Charlie responded appropriately 91% of the time. Charlie displayed the highest number of other (O) inappropriate responses, often from playing instruments at incorrect times or other general off-task responses. Charlie had a notably high amount of securing attention (SA) responses, meaning he followed directions often, was on-task, and listening during many interventions and conversations. Charlie also scored highest for initiating requests (IR), meaning he often requested something from his partner.

“Robert.” The results for Robert’s CSRS scores are mixed between Robert, the author, and the PRP. While the scores for the author indicate a clear increase of the CSRS scores, Robert and his PRP both show a fairly flat score. Upon investigation, Robert’s scores show an increase from sessions 3-7 with a sudden drop and another increase from sessions 8-11. This trend is somewhat paralleled in the PRP’s scores on a slightly lower overall score. Investigating the CSRS the PRP completed, the low scores partially account for the overall low scores for Robert’s posture and vocal inflection each session.
Robert’s conversations contained appropriate responses 94% of the time. The majority of his responses were 106 contingent responses (CR) and 96 times securing attention (SA).

**Figure 7: Charlie's CSRS**

**Figure 8: Robert's CSRS**
“Matt.” Matt demonstrated an increase on CSRS scores (Figure 9) for his self-report score and the author’s score, moving from an initial value of approximately 100 to a score of 140 (author’s score) and 133 (self-report). Matt’s partner gave him a higher initial score of 143, with scores that varied throughout the sessions before reaching a final score of 130 at the eleventh session. Matt’s observational data revealed high scores for appropriate responses. He averaged 12 contingent responses (CR) and 10 instances of securing and maintaining attention (SA) out of 30 chances per session. This contributed to an overall score of 91% appropriate responses during the length of the project. Matt was highly conversational during sessions and occasionally told jokes and stories, which contributed to his 14 topic changes (TC) and 10 other (O) instances of inappropriate responses during the project.

**Figure 9**: Matt's CSRS

*Summary response to the research question.*

Graphing of the Conversational Skills Ratings Scale data indicated an overall increase of scores. The scores, as indicated by self-report by the participants, yielded an 18-point average increase. The PRP yielded a 24-point average increase and the author
yielded an average increase of 36 points from the first session to the last session (Table 7). Although two participants did not indicate a change in conversational skills, the PRP and author did indicate an increase for those participants. One PRP indicated a decrease in conversational skills, but the author and participant’s scores indicated an increase.

The outcomes from the observational data show that there was a high incidence of contingent responses (CR) and securing and maintaining attention (SA). There was also a fair amount of initiating comments (IC) and few initiating requests (IR). It is unknown whether this imbalance of appropriate responses might be true for other individuals with Asperger’s Syndrome, or if it also represents how conversations occur with neuro-typical individuals.

Table 7

Average CSRS Scores From the First and Last Sessions

<table>
<thead>
<tr>
<th></th>
<th>First Session</th>
<th>Last Session</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant</td>
<td>123</td>
<td>141</td>
<td>+18</td>
</tr>
<tr>
<td>PRP</td>
<td>113</td>
<td>137</td>
<td>+24</td>
</tr>
<tr>
<td>Author</td>
<td>102</td>
<td>138</td>
<td>+36</td>
</tr>
</tbody>
</table>

Data Analysis for Research Question Two

Can young adults with Asperger’s Syndrome identify, express, and increase social skills as a result of music therapy interventions employing peer models?

The Social Skills Inventory (SSI) is a self-report assessment designed to measure the possession of basic emotional and social communication skills. It is designed to measure three basic types of skills (expressive, sensitivity, and control) on an emotional (nonverbal) and social (verbal) level. The 90 questions answered by the participants and PRPs supplied data for the six domains to calculate an overall SSI score and an Equilibrium Index (EI). The overall SSI score represents a total combined score for all of the questions. It is used to determine areas of strength and weakness. For example, a high score in Emotional Expressivity (EE) means that an individual can accurately express felt emotional states, such as with a highly enthusiastic and emotionally charged individual.
No one domain receiving a higher or lower score would represent the ideal scores for all six domains. To represent this balance, the Equilibrium Index was calculated by a formula that calculates the degree of imbalance for the individual and subtracted score from a constant of 50. According to the authors of the SSI, “If the Equilibrium Index is greater than 39, then the profile is in balance, suggesting that the individual is consistent across the various skill dimensions – a positive sign from a social competence standpoint” (Riggio, 2003). The scores for each domain and the EI were also compared to scores from other individuals in the participant’s age group and gender, which was supplied by the creator of the assessment. The scores were assigned to a high (H), medium (M), and low (L) score category (See Appendix I for the cutoff scores). Through a pretest and posttest, it is possible to find changes in social skills for each domain, the overall SSI, and the EI.

“Morgan.” After Morgan’s pretest, she initially scored in the lower bracket of scores for her age group and gender for social expressivity (SE), emotional control (EC), and social control (SC). Her low scores in SE indicate difficulty in expressing verbally and engaging others in social discourse. Her low scores in EC and SC suggest difficulty controlling and regulating her own verbal and nonverbal emotions and knowing how to act in social situations. Her EI dropped slightly by .6 from the pretest to posttest, however, her scores for SE and SC increased by ten and eight points, which brought her scores for those two categories to the medium score range for her age and gender. Her emotional expressivity (EE) almost fell into the high category at the posttest (an increase of nine points). The manual and her pretest scores on the SSI indicate that she is someone who acts shy, keeps fairly quiet, and displays a flat affect. By the final sessions, she was highly engaged with her PRP by laughing, singing, and talking about common interests. Morgan’s PRP had a higher SSI score, but maintained only a slightly higher EI. The PRP scored in the low category for EE, and in the high category for emotional sensitivity (SE). This imbalance indicates that the PRP does not express her emotions nonverbally, yet interprets the subtle nonverbal cues of others (Table 8).
Table 8

SSI for Morgan and PRP

Participant SSI

Pretest:

<table>
<thead>
<tr>
<th></th>
<th>Expressivity</th>
<th>Sensitivity</th>
<th>Control</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional</td>
<td>46</td>
<td>51</td>
<td>34</td>
<td>131</td>
</tr>
<tr>
<td>Social</td>
<td>31</td>
<td>47</td>
<td>37</td>
<td>115</td>
</tr>
<tr>
<td>Total</td>
<td>77</td>
<td>98</td>
<td>71</td>
<td>246</td>
</tr>
</tbody>
</table>

*L<76
EI = 42.63 M

Posttest:

<table>
<thead>
<tr>
<th></th>
<th>Expressivity</th>
<th>Sensitivity</th>
<th>Control</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional</td>
<td>55</td>
<td>53</td>
<td>31</td>
<td>139</td>
</tr>
<tr>
<td>Social</td>
<td>41</td>
<td>43</td>
<td>45</td>
<td>129</td>
</tr>
<tr>
<td>Total</td>
<td>96</td>
<td>96</td>
<td>76</td>
<td>268</td>
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</table>

*H>56
EI = 42.04 M

PRP SSI

Pretest:

<table>
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<th>Expressivity</th>
<th>Sensitivity</th>
<th>Control</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional</td>
<td>38</td>
<td>60</td>
<td>50</td>
<td>148</td>
</tr>
<tr>
<td>Social</td>
<td>45</td>
<td>47</td>
<td>46</td>
<td>138</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td>107</td>
<td>96</td>
<td>286</td>
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</tbody>
</table>

EI = 43.39 M

Posttest:

<table>
<thead>
<tr>
<th></th>
<th>Expressivity</th>
<th>Sensitivity</th>
<th>Control</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional</td>
<td>43</td>
<td>67</td>
<td>52</td>
<td>162</td>
</tr>
<tr>
<td>Social</td>
<td>51</td>
<td>50</td>
<td>48</td>
<td>149</td>
</tr>
<tr>
<td>Total</td>
<td>94</td>
<td>117</td>
<td>100</td>
<td>311</td>
</tr>
</tbody>
</table>

EI = 42.62 M

“Ellen.” Ellen’s EI score dropped by .9 of a point between the pretest to the posttest (Table 9). She had a low SE score; the cutoff for the low category is a score lower than 34, and the mean for her age and gender was 45. This category represents her “ability to engage others in social discourse” (Riggio, 2003) and corroborates with her stated dislike for most other individuals and her aversion to customers at her place of employment. Her low EE and ES scores demonstrate a lack of nonverbal encoding and
decoding skills, common traits for individuals with Asperger’s Syndrome. One major change in scores from the pretest to the posttest was in Ellen’s social control scores (an increase of nine points). This change might have been influenced by her PRP, who scored in the high category for emotion control (EC) and social control (SC). This high level of control indicates the PRP’s ability to know how and when to act in certain situations (laugh at jokes, or perhaps putting on a cheerful face to cover sorrow).

Table 9

SSI for Ellen and PRP

<table>
<thead>
<tr>
<th>Participant SSI</th>
<th>Expression</th>
<th>Sensitivity</th>
<th>Control</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Pretest:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>35</td>
<td>L</td>
<td>37</td>
<td>L</td>
</tr>
<tr>
<td>Social</td>
<td>19</td>
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<td>M</td>
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<tr>
<td>Total</td>
<td>54</td>
<td>L</td>
<td>88</td>
<td>M</td>
</tr>
<tr>
<td>EI = 39.69 L</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

| Posttest:       |            |             |         |       |
| Emotional       | 35         | L           | 37      | L     | 43    | M     | 115   | L     |
| Social          | 22         | L           | 55      | M     | 53    | M     | 130   | M     |
| Total           | 57         | L           | 92      | M     | 96    | M     | 245   | M     |
| EI = 38.77 L    |            |             |         |       |

| PRP SSI         |            |             |         |       |
| Pretest:        |            |             |         |       |
| Emotional       | 54         | M           | 48      | M     | 57    | H     | 159   | H     |
| Social          | 50         | M           | 36      | L     | 73    | H     | 159   | M     |
| Total           | 104        | M           | 84      | M     | 130   | H     | 318   | M     |
| EI = 38.9 L     |            |             |         |       |

| Posttest:       |            |             |         |       |
| Emotional       | 48         | M           | 47      | M     | 43    | M     | 138   | M     |
| Social          | 48         | M           | 38      | M     | 73    | H     | 159   | M     |
| Total           | 96         | M           | 85      | M     | 116   | H     | 297   | M     |
| EI = 38.9 L     |            |             |         |       |
“Ryan.” Ryan’s scores on Table 10 rated highly in the sensitivity column, and lower for the control column on both the pre- and posttest. This imbalance suggests a highly sensitive nature to verbal and nonverbal cues from others, and low confidence with fitting in at social situation and controlling his nonverbal displays. Even though Ryan scored in the medium range of his total SSI, it was the imbalance between ES/SC and EC/SC that caused his lower EI (he scored in the medium range of EI, but the cutoff for the low category is 39.25 for his age and gender). Ryan’s PRP had similar scores, but scored higher for the social and emotional control, contributing to a higher EI.

Table 10

SSI for Ryan and PRP

<table>
<thead>
<tr>
<th>Participant SSI</th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Expressivity</td>
<td>Sensitivity</td>
<td>Control</td>
<td>Total</td>
</tr>
<tr>
<td>Pretest:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>46</td>
<td>M</td>
<td>55</td>
<td>H</td>
</tr>
<tr>
<td>Social</td>
<td>49</td>
<td>M</td>
<td>59</td>
<td>H</td>
</tr>
<tr>
<td>Total</td>
<td>95</td>
<td>M</td>
<td>114</td>
<td>H</td>
</tr>
<tr>
<td>EI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>53</td>
<td>H</td>
<td>55</td>
<td>H</td>
</tr>
<tr>
<td>Social</td>
<td>57</td>
<td>H</td>
<td>58</td>
<td>H</td>
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<tr>
<td>Total</td>
<td>110</td>
<td>H</td>
<td>113</td>
<td>H</td>
</tr>
<tr>
<td>EI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PRP SSI

<p>| | | | | |</p>
<table>
<thead>
<tr>
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<th></th>
<th></th>
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<tr>
<td></td>
<td>Expressivity</td>
<td>Sensitivity</td>
<td>Control</td>
<td>Total</td>
</tr>
<tr>
<td>Pretest:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>41</td>
<td>M</td>
<td>50</td>
<td>M</td>
</tr>
<tr>
<td>Social</td>
<td>46</td>
<td>M</td>
<td>61</td>
<td>H</td>
</tr>
<tr>
<td>Total</td>
<td>87</td>
<td>M</td>
<td>111</td>
<td>H</td>
</tr>
<tr>
<td>EI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
“Charlie.” Charlie’s equilibrium index presented a noticeable drop from 44.01 (medium category) to 39.01 (low category; Table 11). This low EI in the posttest can be attributed to high values in social/emotional sensitivity (SS/ES) and social expressivity, and low social control (SC). The SSI indicates that Charlie can be highly expressive in social situations and engages others in conversation. He is talkative and initiates new topics of discussion frequently. Although the low scores in social control indicate that he is not tactful in social situations, talks mainly about his own interests, and might not fit in completely with others around him. The EI score for Charlie’s PRP remained similar from the pretest to the posttest, and had similar total SSI scores as Charlie, especially in the posttest (303 for Charlie, and 301 for his PRP). A similar SSI, but different EI in the posttest can be attributed to the PRP’s more balanced scores, such as having lower expressivity and higher control.

“Robert.” Robert displayed an increase from 39.23 to 41.26 on his EI from the pretest to the posttest (Table 12). With an EI score of 39.23 on the pretest, Robert fell into the low category for his EI. The low cutoff category, however, is an EI score of 39.25, a difference of .02. This increase of his EI was a result of a more balanced score across the six domains. His social sensitivity decreased from 59 (in the high category, compared to his age group and gender) to 49 (within the medium category). His emotional expressivity (EE) increased from the low category to the medium category, ranking him on par with his peers for his ability to communicate nonverbally. Interestingly, Robert’s EI was higher than his PRP in the pre- and posttest.
Table 11

SSI for Charlie and PRP

<table>
<thead>
<tr>
<th>Participant SSI</th>
<th>Pretest</th>
<th>Expressivity</th>
<th>Sensitivity</th>
<th>Control</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Emotional</td>
<td>Social</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>45</td>
<td>56</td>
<td>47</td>
<td>M</td>
<td>148</td>
</tr>
<tr>
<td>Social</td>
<td>50</td>
<td>57</td>
<td>40</td>
<td>L</td>
<td>147</td>
</tr>
<tr>
<td>Total</td>
<td>95</td>
<td>113</td>
<td>87</td>
<td>M</td>
<td>295</td>
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<tr>
<td>EI</td>
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<td></td>
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<td>44.01</td>
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<th>Sensitivity</th>
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<th>Total</th>
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<tr>
<td>Emotional</td>
<td>44</td>
<td>61</td>
<td>42</td>
<td>M</td>
</tr>
<tr>
<td>Social</td>
<td>61</td>
<td>61</td>
<td>34</td>
<td>L</td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>122</td>
<td>76</td>
<td>L</td>
</tr>
<tr>
<td>EI</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>PRP SSI</th>
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<th>Sensitivity</th>
<th>Control</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional</td>
<td>46</td>
<td>49</td>
<td>52</td>
<td>M</td>
<td>147</td>
</tr>
<tr>
<td>Social</td>
<td>41</td>
<td>41</td>
<td>60</td>
<td>M</td>
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<tr>
<td>Total</td>
<td>87</td>
<td>90</td>
<td>112</td>
<td>M</td>
<td>289</td>
</tr>
<tr>
<td>EI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>43.38</td>
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</table>

<table>
<thead>
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<th>Sensitivity</th>
<th>Control</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional</td>
<td>46</td>
<td>50</td>
<td>54</td>
<td>M</td>
</tr>
<tr>
<td>Social</td>
<td>45</td>
<td>43</td>
<td>63</td>
<td>H</td>
</tr>
<tr>
<td>Total</td>
<td>91</td>
<td>93</td>
<td>117</td>
<td>H</td>
</tr>
<tr>
<td>EI</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

“Matt.” Matt’s equilibrium index (EI) score increased dramatically from the pretest to the posttest, from 32.82 to 40.45. He also went from the low category to the medium category for his age and gender, nearly resulting in the average EI, which was 42.48. This improved score is a result of a decrease in scores for social sensitivity (SS), an increase in emotional control (EC), and an increase in his score for social control (SC). Matt maintained a low score for emotional sensitivity (ES), which can be interpreted as
low skills in receiving and interpreting the nonverbal communications of others. Matt’s PRP does not have pretest data for the SSI, but scored slightly above average for his equilibrium index during the posttest.

Table 12

SSI for Robert and PRP

<table>
<thead>
<tr>
<th>Participant</th>
<th>Pretest</th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Expressivity</td>
<td>Sensitivity</td>
<td>Control</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td></td>
<td>36 L</td>
<td>42 M</td>
<td>45 M</td>
<td>123 M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td></td>
<td>29 L</td>
<td>59 H</td>
<td>27 L</td>
<td>115 L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>65 L</td>
<td>101 M</td>
<td>72 L</td>
<td>238 L</td>
<td>EI = 39.23</td>
<td>L*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*Almost M</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

|             |         | Expressivity | Sensitivity | Control | Total |         |            |
| Emotional   |         | 38 M        | 44 M        | 47 M       | 129 M    |         |            |
| Social      |         | 24 L        | 47 M        | 30 L       | 101 L    |         |            |
| Total       |         | 62 L        | 91 M        | 77 L       | 230 L    | EI = 41.26 | M         |

|             |         |             |             |           |         |            |            |

PRP SSI

|             |         | Expressivity | Sensitivity | Control | Total |         |            |
| Emotional   |         | 55 H        | 60 H        | 57 H       | 172 H    |         |            |
| Social      |         | 74 H        | 40 M        | 72 H       | 186 H    |         |            |
| Total       |         | 129 H       | 100 M       | 129 H      | 358 H    | EI = 38.64 | L         |

|             |         |             |             |           |         |            |            |

|             |         | Expressivity | Sensitivity | Control | Total |         |            |
| Emotional   |         | 54 H        | 64 H        | 68 H       | 186 H    |         |            |
| Social      |         | 72 H        | 40 M        | 71 H       | 183 H    |         |            |
| Total       |         | 126 H       | 104 H       | 139 H      | 369 H    | EI = 38.68 | L         |
Table 13

SSI for Matt and PRP

<table>
<thead>
<tr>
<th></th>
<th>Expressivity</th>
<th>Sensitivity</th>
<th>Control</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pretest:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>44 M</td>
<td>29 L</td>
<td>78 H</td>
<td>151 M</td>
</tr>
<tr>
<td>Social</td>
<td>35 M</td>
<td>63 H</td>
<td>38 L</td>
<td>136 M</td>
</tr>
<tr>
<td>Total</td>
<td>79 M</td>
<td>92 M</td>
<td>116 H</td>
<td>287 M</td>
</tr>
<tr>
<td>EI</td>
<td>32.82 L</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Expressivity</th>
<th>Sensitivity</th>
<th>Control</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Posttest:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>48 M</td>
<td>31 L</td>
<td>53 M</td>
<td>132 M</td>
</tr>
<tr>
<td>Social</td>
<td>36 M</td>
<td>59 H</td>
<td>44 M</td>
<td>139 M</td>
</tr>
<tr>
<td>Total</td>
<td>84 M</td>
<td>90 M</td>
<td>97 M</td>
<td>271 M</td>
</tr>
<tr>
<td>EI</td>
<td>40.45 M</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

|                  |             |             |         |       |
| **PRP SSI**      |             |             |         |       |
| **Pretest:**     |             |             |         |       |
| Emotional        | HML          | HML         | HML     | HML   |
| Social           | HML          | HML         | HML     | HML   |
| Total            | HML          | HML         | HML     | HML   |
| **Posttest:**    |             |             |         |       |
| Emotional        | 58 H         | 51 M        | 52 M    | 161 H |
| Social           | 49 M         | 47 M        | 67 H    | 163 H |
| Total            | 107 H        | 98 M        | 119 H   | 324 H |
| EI               | 43.27 M      |             |         |       |

*Note: Matt’s PRP did not take the pretest for the SSI, so no scores are not available.*

**Summary response to the research question.**

Overall, there were mixed results for the Social Skills Inventory. Figure 10 compares the results of the average male and female participant with the average results from a larger sample of males and females (Riggio, 2003). The average EI scores for both the male and female participants were below the average for other adult males and females. The males increased their EI scores on average, while the females’ average
decreased from the pre- and posttests. The emotional expressivity (EE) scores for male and female participants were both far from average on the pretest, but posttest results indicate closer scores to the average. All participants demonstrated an improvement in emotional sensitivity (ES) from the pretest to the posttest. The males scored above average, and even though there was improvement, the females remained below average for their gender, but were similar to the male participant’s pretest scores. There was a significant decrease in the all participants’ average emotional control (EC). The social expressivity (SE) for all participants increased, with the male SE above average on the posttest. The social sensitivity (SS) scores for males and females were above average on the pretest and posttest, although the males’ average decreased slightly. The social control (SC) scores for all participants were well below average on the pretest, with a decrease for males and an increase for females on the posttest.

Data Analysis for Research Question Three

What is the effect of participation in the project for the peer-partner? To answer this question, the Peer Response Partners were given a two-question questionnaire at the final session. The questionnaire asked: (1) As a result of the project, do you feel more comfortable working with individuals with Asperger’s Syndrome? and, (2) Do you feel that benefits were gained for you as a result of this project? If so, please articulate. The former question was answered by circling “yes” or “no,” and the latter was answered with short free-response answers (the questionnaire can be found in Appendix E). As a result of the project, all of the PRPs circled the “yes” answer, indicating they feel more comfortable working with individuals with AS. Participation in this study was beneficial for four of the PRPs because three were music therapy master’s students and one was a music education student at a local university. They indicated that they had not worked with the AS population prior to this study. The answers for the free-response question are outlined in Table 14.

Based on the results of the questionnaire and from conversations with the PRPs, it appeared that participation in the study was a positive experience for them. Two of the PRPs had some experience working with individuals with Asperger’s (one had a roommate with AS, and the other had a sibling with AS), but both mentioned how different their partner in the study was from their previous experience with their
roommate or sibling. During the study, one dyad independently met outside of sessions and went to an anime convention in town. This dyad formed a close bond displayed by laughing at “inside jokes” with each other and planning outfits to wear to sessions. Frequently during the study, PRPs would mention “surprises” they experienced during sessions. These surprises typically involved eliminating or upholding preconceived notions about individuals with AS and autism. Listening to their partner perseverate on specific themes, dominate conversations, or answer questions literally are examples of what PRPs mentioned at various moments of the study. On the other hand, witnessing how quickly one participant with AS composed melodies that were “really good” and “captured the mood of the title” helped one PRP understand how his partner experienced emotions. One PRP displayed astonishment at the level of insight his partner with AS expressed when saying, “I don’t quite understand the feeling, but I can see how you might.”

Table 14

PRP Free-response Summary

<table>
<thead>
<tr>
<th>Theme</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>More aware of nonverbal clues</td>
<td>1</td>
</tr>
<tr>
<td>More confident in self</td>
<td>3</td>
</tr>
<tr>
<td>Will help my career</td>
<td>4</td>
</tr>
<tr>
<td>Better understanding of autism/AS</td>
<td>5</td>
</tr>
<tr>
<td>Got to see the definitions of autism/AS first-hand</td>
<td>2</td>
</tr>
<tr>
<td>It was fun/educational/priceless</td>
<td>3</td>
</tr>
<tr>
<td>I got some ideas</td>
<td>1</td>
</tr>
<tr>
<td>I would be glad to be involved in another project</td>
<td>1</td>
</tr>
<tr>
<td>My partner was a blast</td>
<td>1</td>
</tr>
<tr>
<td>Learned skills for myself</td>
<td>3</td>
</tr>
<tr>
<td>I felt I gained a friend</td>
<td>2</td>
</tr>
<tr>
<td>I got practice being a mentor</td>
<td>1</td>
</tr>
<tr>
<td>Showed me that they are very similar to others</td>
<td>2</td>
</tr>
<tr>
<td>We could all use a reminder of that (social skills)</td>
<td>1</td>
</tr>
</tbody>
</table>
Figure 10: SSI Average, Participant Pretest and Posttest Scores by Gender
CHAPTER V
DISCUSSION

The purpose of this study was to examine the effect of using peer models and music therapy interventions on the social skills development of young adults with Asperger’s Syndrome. The different dependent measures administered indicated an increase in the conversational skills of the participants with Asperger’s Syndrome. Observational data revealed high instances of contingent responses (acknowledging peer’s attempts to converse) and securing and maintaining attention (basic on-task skills). The Social Skills Inventory revealed mixed results. While some participants increased their equilibrium index (EI), for others it decreased or altered little. There were also many changes to the six domains within the SSI.

Limitations of the Present Study

Several factors may have influenced the results of the present study. Having a small sample size was one primary limitation. At the onset of the study, there were eight dyads, but during the course of the study, two participants withdrew from the project, leaving six dyads at the end. Scheduling dyads to meet consistently presented considerable difficulties throughout the six weeks. Many sessions were canceled and rescheduled due to unforeseen events (other commitments, car problems, forgetfulness, holidays, and other reasons), but all sessions were eventually held. Meeting for an hour twice a week provided excellent therapeutic opportunities, but was also taxing on all participants. If one partner of the dyad was not able to attend or did not show without calling, it forced the other partner to commitment to another meeting. For some dyads, rescheduling caused sessions to be held once a week or three times a week in order to meet the established schedule before the final group session. This unforeseen circumstance, however, was uncontrollable and understandable with this age group. As young adults, “real life” often has an influence on any long-term therapy. Work, family and relationship problems, personal crises and private time, and other occasions will arise and conflict with scheduled appointments.
The observational assessment also had several limitations. According to the definition of a “contingent response,” any sort of acknowledgement of the AS participant toward his or her PRP was counted as a “contingent response.” Some participants had already acquired the social skill of acknowledging a peer—using such responses as, “yeah,” “uh-huh,” “yes,” or head nodding. The author believes that many of these skills most likely resulted from previous social skills training, and do not necessarily demonstrate true “contingent responses.” Rather, they may be a habit formed from previous education regarding appropriate listening skills. The CSRS questionnaire also had its limitations. The low scores obtained during the initial sessions and the subsequent rise on later administrations could also indicate a form of learning from the questionnaire.

**Relationship to Extant Literature**

Corroborating extant literature, results of this study indicate that using peer-models in intervention can help improve the social skills of individuals with AS. Goldstein and Thiemann (2001) found that using peers without autism within sessions led to an increase in the targeted social communication skills. Goldstein and Thiemann also indicated some observable generalizations of the skills learned within treatment sessions to the classroom. It appears social skills training can also be effective in improving self-perceptions as well as generalization of social-skills outside of the sessions (Fombonne, Meng, Strulovitch, Tagalakis, & Tse 2007).

The definition of Asperger’s Syndrome and autism by the American Psychiatric Association indicates that autism is a spectrum disorder with varying degrees of severity. Diagnostic criteria can make it difficult to diagnose AS; however, diagnosis can also allow diverse interpretations and insure individuals receive valuable treatment. The individuals with AS involved in this study represent the varying degrees of the high end of the autism spectrum. The participants lived alone, with parents and family, with a significant other, or with a roommate at college. Some drove themselves to the sessions, while other participants required transportation. Some participants were happy with their jobs, while other participants were unhappy with their current employment status.

Some researchers have found that selected autistic tendencies are inherited. (Amberly, Morris, Murphy, Perry, & Russell, 2006; Ghaziuddin, 2005; Kids Health, 2008). Throughout this study, the researcher noticed that many of the participants with
AS were left-handed (five out of the original eight). This number was larger than what is reported for the population at-large (approximately 10%). It may be indicative of recent research that has found the gene linked to left-handedness is associated with certain mental illnesses, such as schizophrenia (Ravilious, 2007).

**Discussion**

The study provided many moments of insight for both the participants with AS and the neuro-typical peers. During one session, a memory challenge was set up. Partners attempted to form melodic sequence on a xylophone, alternating turns (much like the “Simon” memory game). One PRP missed the sequence on his second turn (most chains of notes reached approximately 15 notes). This honest mistake provided an excellent opportunity for the partner with AS to witness the fact that everyone makes mistakes. Upon discussion after the game, the participant with AS independently recalled his partner’s mistake and claimed, “I felt embarrassed for him.” This moment provided the individual with AS the opportunity to express empathy in response to his partner’s mishap. A similar situation presented itself within another dyad, where the participant with AS said, “Yeah, I’m nervous too.” This statement possibly indicated an acknowledgement of her own feelings in relationship to her peer, also an indication of empathy skills.

One participant demonstrated mutual interest in others by greeting his peer and the author at every session. When asked, “Hi, how are you today,” he would promptly answer, “I’m great. Thanks for asking. How are you?” This response never varied from session to session, and is likely a response learned from previous education. This participant often said “yes” and “uh-huh” to many statements made by his partner. During one of the lyric analysis sessions, it was suggested that he attempt to elaborate or paraphrase what his partner says to demonstrate that he was really listening, rather than simply saying “yeah.” Within approximately 20 minutes, he independently demonstrated this skill by paraphrasing to his partner what he had just heard. This paraphrasing, and not simply parroting, was a good indication of an understanding of his partner’s opinion and emotion.

*Behavioral Observation Form.* Table 6 documents a relatively high number of appropriate responses. The participants’ appropriate responses ranged from 90-96% of
their total responses. Initially, this percentage is a positive outcome for a young adult with AS, although the high numbers of contingent responses and securing attention should be elaborated on. It is the author’s opinion that scores that are more balanced across all of the appropriate responses would indicate stronger conversation and social skills. For example, if a participant constantly responded with “yes,” “uh-huh,” or “yeah” throughout sessions, he scored high on contingent responses. This type of response is clearly not all that is required for a conversation. Acknowledging your conversation partner cannot be the only interaction. There needs to be other ways of interacting with others such as coming up with new comments or requesting to continue a conversation; otherwise, the conversation is considered one-sided. A balanced score across the appropriate responses (contingent response, securing and maintaining attention, initiating comments, and initiating requests) indicates stronger conversational skills. Additionally, some inappropriate responses such as an occasional topic change might be considered natural or “normal” in everyday conversation, given that there is a return to the original conversation.

**Lyric Analysis and Original Songwriting.** Lyric analysis provided the participants an opportunity to learn and refine skills of interpreting non-literal meanings and turn of phrases. Since many lyrics are subject to multiple meanings and interpretations, it provided a chance for the partners to discuss various options. For example, in the song “Mad World,” sung by Gary Jules, a line reads, “tears are filling up their glasses.” One participant asked for clarification on what the lyricist meant. When asked for his opinion, he said, “I think it could mean that they are crying so it fogs up their glasses that they wear.” When prompted to think about what else it could mean, he thought for a moment, and concluded it could also be glasses that you drink from. With further discussion, he identified that the person could be crying so much that it fills up the glass from which he is drinking. He began to identify with the emotion of intense sorrow. His neuro-typical partner also identified that the lyrics could mean he is drowning his sorrow in alcohol, and the glass represents what he is drinking. The participant continued to identify with the emotion by saying, “There have been times in my life I’ve had depressions… moments in my life and it made me think of those times…I would not have picked up on
that as well as you – in regards to reading deeper into certain lyrics.” Lyrics used in the study can be found in Appendix H.

Creating an original song and lyrics provided many opportunities for the participants to express emotions or to have fun. The songs created by two dyads told stories about fictional characters created by the partners. Consistent with descriptions of individuals with Asperger’s, the participants initially took the lead in creating the story. With prompting that the song was to be written by both members of the dyad, the participants were then open to suggestions made by their partners. This teamwork created a sense of camaraderie and pride in their song. Moments of laughter and imagination helped the dyads create the lyrics and tell their story.

Two of the original songs contained lyrics about love and relationships. The lyrics of one song expressed how the participant felt about a former coworker and how he “had feelings toward her.” His song indicated that he was aware that it was a “forbidden” love and expressed gratitude that she turned him down respectfully. The lyrics of another song about love expressed frustration with a participant’s girlfriend and how he wished she would pay more attention to him. With suggestions from the partner, metaphors and other figurative language replaced many lyrics.

Another original song expressed the struggles of life and working to reach goals. The lyrics of this song alternated between negative feelings and positive feelings. This song, as well as songwriting in general, was beneficial to all the dyads. It provided opportunities to express feelings or emotions, to work with a partner to communicate thoughts and share expressions, and to practice making compromises throughout the creative process. The songwriting intervention eventually resulted in a recorded version of participants’ songs. The dyads performed the entire instrumental accompaniment and sang their songs. The recording process was set up as professionally as possible, using multi-track recording software to help produce the highest quality product. One dyad made the comment that, “We should be very proud of this song, especially since we went from nothing to a fully recorded song in essentially three hours… three sessions.” All dyads used the guitar in their songs (often played by one of the partners), and also included various other instruments into their recording such as the mandolin, drum set, djembes, maracas, the agogô, a tambourine, a xylophone, MIDI instruments, and even
backup vocals. Some dyads also added special effects to create different sounds by manipulating the recording through the computer software, adding panning and stereo effects, or adjusting the volume of specific tracks at specific times. Throughout the songwriting sessions, it was mentioned that working with a partner happens often, especially at work. Even though collaborating with someone at work is different from writing a song, being able to consider another point of view and not having something performed the way you wanted or expected is something everyone will encounter when working with others.

*Social Skills Inventory.* Even though the scores for the SSI displayed an increase for males and a decrease for females, they seemingly represented the characteristics of each participant and PRP. Ryan, for example, had a high imbalance between his social/emotional sensitivity and his social/emotional control. The SSI manual states that this conflict results in difficulties encoding and decoding many aspects of verbal and nonverbal behaviors. Ryan’s song about “forbidden love” and discussion while writing it hinted that he may have been fired from a previous job because of another individual and how he might have interacted with her. Also, Charlie’s dramatic decrease in his equilibrium index (EI) score might have been from his love of making others laugh and sharing many of details about the TV shows and music he likes. He spent a considerable amount of time with his PRP because they both carpooled with the author to the location where the study was conducted. It is possible that as he became more comfortable in the sessions and his PRP, he talked and expressed more.

The average social sensitivity (SS) score for the participants was above average. The males scored high, indicating that they are aware of their verbal actions. According to Riggio (2003), there is a slight correlation between the social sensitivity and neuroticism—often attributed to individuals on the autism spectrum. According to the SSI manual, a low average in social control (SC) indicates a high self-consciousness that may inhibit participation and appropriateness of social interactions. Additionally, pretest emotional expressivity (EE) indicated participants’ difficulty in communicating emotions and attitudes through nonverbal methods such as facial expressions, body language, and vocal inflection. Scores in the emotional expressivity domain were substantially closer to the average after involvement in the study.
Implications for Practice

Theory of mind skills, emotions, and empathy, continue to be difficult for many individuals with Asperger’s Syndrome. In this study, songwriting and lyric analysis interventions appear to have provided the participants with the opportunity to practice these skills. One participant in the study who said, “I have so much to say sometimes but I don’t know how to say it,” created wonderful lyrics about wishing he could have the courage to approach a girl. Within the lyrics and music, he found the words and the emotions to convey his message that he would struggle with when attempting to tell his PRP within conversation. Some of the participants had not received any services since the end of their high school career, and as functioning members of society, it is important that they not lose the skills gained in their earlier years. Furthermore, having a peer without AS there often provided the participant with someone to talk to who wasn’t family, coworkers, clinical staff, or other individuals with AS, and who was an age-appropriate peer they could safely trust.

Music therapists wondering what to do with clients in this population could use and expand on this curriculum with their clients. More time could be spent on certain areas depending on the therapeutic goals and objectives. Many of the interventions can be easily adapted to other individuals on the autism spectrum or other related populations.

Suggestions for Future Research

Though not included in this research, the physical aspect of playing an instrument requires a certain degree of fine and gross motor skills. One of the characteristics sometimes associated with individuals who have AS is having poor motor coordination (Chou, Lee, Myles, Smith, Swanson, & Tien, 2007). Future research should be conducted to focus on areas of fine and gross motor skills through learning a musical instrument or other interventions. The interventions used in this study required that participants use several instruments that involved a variety of motions to play. The motions required finger dexterity to form basic chords on the guitar, along with playing different parts of the djembe to produce different tones, or striking the correct note with a mallet on a xylophone. These interventions, in conjunction with physical therapy could produce positive results in reducing awkward or uncoordinated movements in individuals with Asperger’s Syndrome.
Utilizing neuro-typical individuals in the study provided valuable insight for the PRPs and the individuals with AS. The participants with AS indicated that they have attended workshops and social functions specifically designed for their population. Individuals with AS rarely have contact with neuro-typical individuals that are not family members or coworkers. Having this contact in a relaxed and social situation provided them with constant examples of how “normal” people behave. In all dyads, the partners formed close bonds with each other. One mother peeked in on her son performing “musical charades” at the final session and later commented that, “I’ve never seen him be the life of a party that wasn’t in an on-line chat room.” Involving neuro-typical peers in research of this length of time also helped them gain insight into a population they may not have been familiar with. Although it is possible they may have had contact with individuals with Asperger’s without knowing it, as all of the participants held jobs within the community. Future researchers could continue to incorporate peer-modeling to provide a continuous reference for “normality” as well as a social contact, or even a friendship, that would not have been formed elsewhere.

Future researchers may adopt other aspects of this study. For example, the sessions should last more than six weeks, yet still meet twice a week if possible. Researchers and participants involved in a longer study could spend more time discussing and practicing individual social skills before moving on to the next skill. A skill, such as “listening to others” could be expanded over more sessions. The session where short videotapes were examined (session 7) proved to be valuable in letting the individuals see themselves and get immediate feedback from multiple individuals. Future researchers may involve regularly videotaping sessions to be reviewed by participants. This researcher suggests including multiple sessions where all dyads meet to socialize and practice their social skills. The larger group therapy sessions can be beneficial because they provide a safe environment for all participants to practice their social skills. Participants’ progress can then be discussed at their next dyad session.

Conclusions

In the weeks following the study, family members and individuals working with the participants made several comments to the researcher about changes and generalizations they had seen in the participant. One participant was deemed “the
difficult one” by the staff member who helped make initial contact between the researcher and participants. This participant initially said, “I’ll consider humoring the study.” She often made remarks about how superior she felt around everyone and said, “Americans are generally stupid” (she herself was American). Throughout the course of the study, her overall mood became more positive. She told jokes, and became amicable. After the study was concluded, the staff member who helped make the initial contact claimed that participant was overall more pleasant to be around and was working well with another individual whom she did not work well with in the past, which she attributed to the individual’s participation in the study. This particular participant has since been accepted into graduate school for “forensic chemistry.” She would often perseverate about wanting to get into graduate school and catastrophize about what would happen if she did not get in.

Another participant was also considered to be “working better” in his clinical sessions after the onset of the study. He was apparently more on-task, more cheerful, and attentive to his actions and how they may be interpreted. The mother who peeked in on the last session also sent a follow-up email saying how difficult it usually is to get her son out of the house, and that he never complained about going to the music therapy sessions.

Participants and PRPs appeared to truly enjoy themselves during the course of the study. Everyone was supportive of each other and the songs they produced and shared. The entire study, and especially the final session was a success as far as everyone getting along, socializing appropriately, laughing, and trying things they might not have normally attempted. This study demonstrates how music and friendship can help to increase the quality of life, self-esteem, and social skills of persons with Asperger’s Syndrome.
APPENDIX A

DETAILED SCHEDULE FOR SESSIONS
**DETAILED SCHEDULE FOR SESSIONS**


<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Session Plan</th>
<th>Materials/Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>Hello (Session without PRP): Learn Hello Song:</td>
<td>-Guitar, Hello Song</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Introduction: Schedule – provide participant with weekly schedule, run through main points</td>
<td>-Consent form, schedule</td>
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<tr>
<td></td>
<td></td>
<td>Rules – -This project is optional, the participant is free to leave and will not be penalized for doing so. Full participation is greatly appreciated. If you need to reschedule one session, please contact me ahead of time -Have fun, attempt all activities -There will be a pizza party at the final session, which will be during a separate time than the normal session. We will work with all the other participants to schedule a time everyone can make it. -Any questions?</td>
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<tr>
<td>40</td>
<td></td>
<td>Pretreatment Assessment:</td>
<td>-SSI Test, Pencils</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Homework: For next session, bring in something that has special meaning for you. We will talk about it with your PRP.</td>
<td>-Homework Assignment</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Goodbye: Learn Goodbye song:</td>
<td>-Guitar, Goodbye Song</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>Hello: First session with PRP: Run through the hello song, this is how we will begin each session</td>
<td>-Guitar, Hello Song</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Social Skill Introduction: Baseline: For establishing baseline, remind that the skills we will be working on are: (1) Self-Control/Impulsiveness, (2) Listening to Others, and (3) Perspective, Finding Hidden Meanings</td>
<td></td>
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<td></td>
<td>20</td>
<td>Musical Activity/Social Skills Practice: Non-musical activity for baseline The PRP and participant will each take turns (5 minutes) talking about the item from home -Discussion: What is it and where did you get it? Is there a story behind this object? Why is it significant? How long have you had it? Etc…</td>
<td>-Item from home</td>
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<tr>
<td></td>
<td>15</td>
<td>Strengths Tour: -Identify signature strengths (6.17*) -Discuss the list of 24 strengths – what does each mean? After discussion, list which five are most applicable to you. -Make a collage: Partners work together to draw each of their 5 strengths. Guess what other draws. Discuss what you are drawing.</td>
<td>-Copy of VIA Classification of Character Strengths (Appendix 1; Martinovich, 2006)</td>
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<tr>
<td></td>
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<td>Homework: Take brief list of strengths home, and throughout the</td>
<td>-Collage paper, pencils, markers, -Shortened list of 24</td>
</tr>
<tr>
<td>Session</td>
<td>Activity</td>
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<tr>
<td>5</td>
<td>Goodbye: Run through goodbye song with PRP:</td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td>Fill out CSRS:</td>
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<td></td>
<td>Author, participant, and PRP will be given separate forms to fill out about the participant. This should take place immediately after session, preferably in another room (or just adjacent to session room).</td>
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<tr>
<td>5~</td>
<td>Hello: Song</td>
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<tr>
<td>5</td>
<td>Social Skill Introduction: Controlling Impulsive Behaviors</td>
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<tr>
<td></td>
<td>What is self-control? What is impulsiveness?</td>
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<td></td>
<td>- Can you control your speaking rate, vocal clarity, volume, unmotivated movements (tapping feet, fingers, etc.), smiling/laughing at appropriate times, when to ask questions, how much do you speak/listen</td>
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<tr>
<td></td>
<td>Musical Activity/Social Skills Practice:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Explore Drums:</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>- Using drums, follow lead through music while playing to songs (&quot;Born to Be Wild&quot; and &quot;Secret Agent Man&quot;)</td>
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<tr>
<td>10</td>
<td>Improvisation:</td>
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<tr>
<td></td>
<td>- Various drum patterns will be explored</td>
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<td></td>
<td>- Call and response &quot;game&quot; between the author and participants. This will include playing the same rhythm back, as well as practice stopping and starting. The &quot;leader&quot; role will be passed around, with others responding.</td>
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<tr>
<td>10</td>
<td>Strengths Drums (homework review)</td>
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<tr>
<td></td>
<td>- After an initial drum beat pattern is established, take turns playing in different styles, and begin expressing your different strengths you chose for yourself</td>
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<tr>
<td></td>
<td>- Discuss what other people said about your strengths. Do you agree?</td>
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<tr>
<td>4</td>
<td>If Extra Time: Name That Tune</td>
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<td></td>
<td>- TV, Movie, and other theme songs are played and participants try to guess before their partners</td>
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<tr>
<td></td>
<td>Homework: None</td>
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<tr>
<td>5</td>
<td>Goodbye: Song</td>
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<tr>
<td>5</td>
<td>Fill out CSRS</td>
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</tbody>
</table>

4

<table>
<thead>
<tr>
<th>Session</th>
<th>Activity</th>
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<tbody>
<tr>
<td>5</td>
<td>Hello: Song</td>
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<tr>
<td></td>
<td>Social Skill Introduction: Controlling Impulsive Behaviors</td>
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<tr>
<td></td>
<td>See Session 3</td>
</tr>
<tr>
<td></td>
<td>Musical Activity/Social Skills Practice:</td>
</tr>
<tr>
<td>5</td>
<td>Explore Drums:</td>
</tr>
<tr>
<td></td>
<td>- Using drums, follow lead through music while playing to a song.</td>
</tr>
<tr>
<td>15</td>
<td>Learn a New Song:</td>
</tr>
<tr>
<td></td>
<td>- Using an unknown song, teach the song. The PRP will have the lyrics, and help partner with the learning process</td>
</tr>
<tr>
<td></td>
<td>- The object is to stay focused, help the peer out if necessary</td>
</tr>
<tr>
<td>20</td>
<td>Group Art and Music:</td>
</tr>
</tbody>
</table>
-Using two contrasting pieces of music (instrumental/without lyrics), and large canvas of paper, draw a picture on the paper as the music progresses–draw about the music and what you hear.

-Take turns drawing every 25 seconds. The goal is to continue drawing the music without being able to tell when one person stopped and the other begins. The partners are not allowed to talk during the process, but can use other forms of nonverbal communication. After the first song/picture is finished, stop and discuss the process (i.e. What is the picture about? Are there any differences with what each person thought the picture was about? Were you paying attention while the other person was drawing?) Repeat process with new canvas and second song. Discuss.

1 Homework: Remember three instances between sessions when you had to get along with someone else, even if they weren’t doing exactly what you were doing

Goodbye: Song

5 Fill out CSRS

5 Hello: Song

5 Social Skill Introduction: Controlling Impulsive Behaviors

See Session 3:

What is self-regulation? What is delayed gratification?

Practicing delayed gratification is a cognitive skill that can be supported with logic. You can practice it every day. Many choices can be made now or made later. What are consequences of each?

Musical Activity/Social Skills Practice:

5 Discuss homework: When did you have to get along with someone?

20 The Waiting Game:

-Participant and PRP share a single drum, placed between them. They take turns to earn “Wait Points.” Points are earned by which person is closer to waiting the specified amount of time before playing the drum. Each partner randomly chooses an amount of time (5, 10, 15, 20, or 30 seconds) they must wait before being allowed to play the drum. No timing device is provided and they must estimate the appropriate amount of time (instructor will keep time and score points to whoever is closest each round). The winner is dubbed the “Best Waiter” or something similar.

-Songs of various speeds will be used to distract the person waiting. The “waiting” will begin when the music starts and will be chosen at random.

20 Reading Lyrics:

-The object is to listen to the other person and be “in tune with them” (7.9)

-Participant and PRP read lyrics together. Try to match inflection, pitch, and rhythm. A drum may be played softly to help establish a rhythm.

-Participant and PRP alternate reading lines of the song. The goal is to make the reading sound as if it was one person reading. This will require patience and listening to how the other person is reading in order to match the voice.

Homework: None
### Goodbye: Song
5
*Fill out CSRS*

---

### Hello: Song
5
*Fill out CSRS*

---

### Social Skill Introduction: Listening to Others

**How do you listen? Demonstrate:**
- Body posture, eye contact, smiling/laughing, does your face indicate you are listening, do you nod your head in response to partner statements, do you encourage your partner, do you talk about only your own topic of conversation or can you talk about what your partner wants to talk about, do you interrupt, are you always right?

### Musical Activity/Social Skills Practice:

#### Reading Lyrics:
- See Session 5 (use different lyrics, try to make it sound more smooth and more accurate). Record reading last page, discuss what it sounds like.

#### Play and Sing:
- Have two extra guitars, each person learns a chord or two (depending on ability) to play at certain moments — could use tone chimes. Using listening skills and impulse control to play at correct times. Each person plays a specific chord and must listen to song and each other for when to play.

#### Lyric Analysis:
- Using the selected song (or songs), hand out lyric sheets, read over lyrics once (have PRP or Participant read aloud).
  - Listen to the song
  - Fill out Lyric Analysis Questions (Appendix E) and discuss

#### Homework: Write a story (5.15)
- At home, write about one of two things below. The story should have a timeline, follow one event after another, and relates links to each other. Discard extraneous (unimportant) information.
  - **1:** Tell about a concert you attended. When was it, who was with you, what was the concert, what happened during the concert, how did you like it?
  - **2:** Bring in your favorite song. Can you type up the lyrics? Write about why it is your favorite song (is there a memory associated with it? Do you like the instruments? Other reasons why you like it) 1-2 paragraphs (not too short, and not too long)

---

### Homework Review:
- Each partner takes turn reading what he or she wrote at home. The partner will be listening politely. If the partner is getting bored or is lost, he should politely indicate it. The partner will retell the story after listening to it (what were the main aspects of

---

### Goodbye: Song
5
*Fill out CSRS*

---

### Hello: Song
5
*Fill out CSRS*

---

### Social Skill Introduction: Listening to Others

See Session 6

### Musical Activity/Social Skills Practice:

#### Reading Lyrics:
- See session 5 (use different lyrics, try to make it sound more smooth and more accurate)

#### Homework Review:
- Each partner takes turn reading what he or she wrote at home. The partner will be listening politely. If the partner is getting bored or is lost, he should politely indicate it. The partner will retell the story after listening to it (what were the main aspects of
the story?)
Pictures or video will be taken of the partner listening and reviewed afterwards with positive and critical feedback.

20 Lyric Analysis:
- Using the selected song (or songs), hand out lyric sheets, read over lyrics once (have PRP or Participant read aloud)
- Listen to the song
- Fill out Lyric Analysis Questions (Appendix E) and discuss

Homework: None
Goodbye: Song

5 Fill out CSRS

8 5 Hello: Song
5 Social Skill Introduction: Listening to Others
See Session 6

Musical Activity/Social Skills Practice:
5 Reading Lyrics:
- See session 5 (use different lyrics, try to make it sound more smooth and more accurate). This time, record the final time reading it and play it back for partners. Discuss what it sounds and why.

15 Simon/Memory Challenge:
- Participant and PRP take turns adding a note to a xylophone to make along chain of notes. The object is to work together to form the longest chain. I will keep track of which group has the longest chain and they will win a prize. I will also keep track of the notes played (for accuracy)
- Problem solving: Two challenges- how long can you make it with talking to your partner (verbal) and how long a chain can you make without being allowed to help your partner (nonverbal).

20 Being a Troubadour
- The partners will decide on a topic for a story
- Taking turns, working together to come up with improvised text that tells a story. Partners can also use instruments to tell story.

Homework: Notice any time anyone (friends, family, or from a movie or TV show).
Goodbye: Song

5 Fill out CSRS

9 5 Hello: Song
5 Social Skill Introduction: Perceiving Other’s Emotions and Intentions:
What is Perspective? What are hidden meanings?
- Do you laugh at everything, nothing, or somewhere in the middle? Do you as for clarification if you are confused? Do you always need to initiate new topics or can you sustain a conversation? What happens if someone is talking about something that is not interesting to you?

Musical Activity/Social Skills Practice:
10 Song Titles and Symbols:
- Insert various ways to describe the songs on the list, without actually saying the song titles (figurative language)
### Write a song (Antecedent, Beliefs, and Consequence; 7.19, 6.25):
- Procedure: Song title, song style (quick brainstorm with guitar), general form (verse-chorus-verse-chorus), general story, write chorus, write verses
- Both PRP and Participant should contribute evenly
- Song should be about an action, outcome, why it happened. Almost telling a story. Lyrics should contain analogies and metaphors – as lyrics are being written, discuss why certain images are used, and what other images could also be substituted

### Record song (if time, or continue next session)
- Paper, pencils, guitar, instruments

### Homework: None

### Goodbye: Song

### Fill out CSRS

### Hello: Song

### Social Skill Introduction: Perceiving Other’s Emotions and Intentions:
- See Session 9

### Musical Activity/Social Skills Practice:
- Continue on song from previous session
  - OR:
- Symbols and Rituals (5.22):
  - “Musical Mad-Libs:” Using a “Mad-Libs” game (game with pre-assigned blanks for filling in words), each partner fill out all blanks with word choices. Take turns reading through your answers, but instead of saying the words, fill them in by playing an instrument of choice in the style of the word.

### Songwriting:
- Choose topic to write a song about (6.26)
- Record song

### Homework: None

### Goodbye: Song

### Fill out CSRS

### Hello: Song

### Social Skill Introduction: Using all skills
- What has happened within the last 10 sessions? What do you remember? Discuss how all the skills can be combined.

### Musical Activity/Social Skills Practice:
- Continue on song from previous session
  - OR:
- Symbols and Rituals (5.22):
  - “Musical Mad-Libs:” Using a “Mad-Libs” game (game with pre-assigned blanks for filling in words), each partner fill out all blanks with word choices. Take turns reading through your answers, but instead of saying the words, fill them in by playing an instrument of choice in the style of the word.

### Songwriting:
- Choose topic to write a song about (6.26)
- Record song

### Homework: None
<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Goodbye: Song</td>
<td>-Guitar</td>
</tr>
<tr>
<td></td>
<td>Fill out CSRS</td>
<td>-CSRS Test, Pencils</td>
</tr>
<tr>
<td>12</td>
<td>Hello: Hello song with all participants</td>
<td>-Guitar</td>
</tr>
<tr>
<td></td>
<td>Posttest:</td>
<td>-SSI Test, Pencils</td>
</tr>
<tr>
<td>5</td>
<td>PRP Evaluations:</td>
<td>-PRP Evaluation, Pencils</td>
</tr>
<tr>
<td>10</td>
<td>PRPs should arrive approximately 30 minutes after session with participants</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PRPs fill out <em>Post-Session Questionnaire for Peer Response Partners</em></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>Pizza Party: 30-45 minutes</td>
<td>-Pizza, music, speakers, guitar,</td>
</tr>
<tr>
<td></td>
<td>Activities:</td>
<td>instruments, copies of lyrics</td>
</tr>
<tr>
<td></td>
<td>Sharing songs written</td>
<td></td>
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<tr>
<td></td>
<td>Group instrument playing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Socializing</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Goodbye Song</td>
<td></td>
</tr>
</tbody>
</table>

*Various numbers (i.e. 7.9 or 6.17) are references throughout the schedule. These numbers indicate from which creative exercise they are adapted (Martinovich, 2006).

~5 minutes total will be used for both the Hello and Goodbye song.
APPENDIX B

INSTITUTIONAL REVIEW BOARD APPROVAL AND CONSENT FORMS
From: Human Subjects <humansubjects@magnet.fsu.edu>
Subject: Use of Human Subjects in Research - Approval Memorandum
Date: February 17, 2009 11:40:09 AM EST
To: jmaxson1@mac.com
Cc: aadarrow@fsu.edu

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 2/17/2009

To: James Maxson

Address: 3915 Paces Place
Dept.: MUSIC SCHOOL

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research
THE EFFECT OF A MUSIC THERAPY INTERVENTION EMPLOYING PEER MODELS ON THE SOCIAL SKILLS DEVELOPMENT OF YOUNG ADULTS WITH ASPERGER'S SYNDROME

The application that you submitted to this office in regard to the use of human subjects in the research proposal referenced above has been reviewed by the Human Subjects Committee at its meeting on 02/11/2009. Your project was approved by the Committee.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 2/10/2010 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to ensure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc: Alice-Ann Darrow, Advisor
HSC No. 2009.2116
From: Human Subjects <humansubjects@magnet.fsu.edu>
Subject: Use of Human Subjects in Research - Approval Memorandum
Date: May 8, 2009 3:56:39 PM EDT
To: jmaxson1@mac.com

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM (for change in research protocol)

Date: 5/8/2009

To: James Maxson

Address: 3915 Paces Place
Dept.: MUSIC SCHOOL

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research (Approval for Change in Protocol)
Project entitled: THE EFFECT OF A MUSIC THERAPY INTERVENTION EMPLOYING PEER MODELS ON THE SOCIAL SKILLS DEVELOPMENT OF YOUNG ADULTS WITH ASPERGER'S SYNDROME

The form that you submitted to this office in regard to the requested change/amendment to your research protocol for the above-referenced project has been reviewed and approved.

Please be reminded that if the project has not been completed by 2/10/2010, you must request renewed approval for continuation of the project.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc:
HSC No. 2009.2749
ADULT PARTICIPANT CONSENT FORM

I would like your help in a study that I am conducting. We will be meeting twice a week to carry out a music project. You will be asked to meet a new individual you gender and approximately your age to participate in various music activities. These music activities will include listening to and talking about songs, playing instruments, and songwriting. You do not need to have any previous music experience.

Your commitment will be for a period of 50 minutes twice a week for 6 weeks, with a pizza party at the final session. Your participation is completely voluntary and you may stop participating at any time. Your consent also allows me to videotape the sessions. These videos will be confidential, used only for data collection, and will be viewed only by my advisor and myself during the project. Any song lyrics, audio or video recordings, and questionnaires that I may collect from you will be strictly confidential with no identifying information. All data will be kept in a locked filing cabinet at my house or in a password-protected file on my computer during the course of the project and all identifying information will be destroyed at the end of the project (on or by 02/01/2010). Any recordings, drawings, or songs written during sessions can be provided to you upon completion of the project. The pizza party will take place upon completion of the project.

The project will be held in a friendly environment and there are minimal to no risks involved. Every effort will be made to decrease any nervousness, anxiety, or other social discomfort and you may take a break during sessions if you need to.

The potential benefits for your involvement include learning a music skill (such as some guitar, piano, or drums!) free of charge, increasing social skills, discussing current popular songs, possibly create a recording of your own original song, and interacting with a peer your age.

Please know that you can withdraw your consent at any time without any penalty or punishment. You may also ask any questions you have about the project and I will be happy to answer them to your satisfaction. I will also be pleased to share the results of this project with you at its conclusion. You or your parent/guardian may also contact me at (716) 907-3435 or by email at jmaxson2@mac.com later with any questions. My major professor, Dr. Darrow can also be contacted at 850.645.1438 or aadarrow@mailer.fsu.edu. If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Chair of the Human Subjects Committee, Institutional Review Board, through the Office of the Vice President for Research, at (850) 644-8633.

Sincerely,

James Maxson

I have read and understand this consent form, and agree to participate in this program.

<table>
<thead>
<tr>
<th>Print Name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

FSU Human Subjects Committee Approved on 2/16/09 Void After 2/10/10 HSC# 2009.2116
PEER RESPONSE PARTNER CONSENT FORM

I would like your help in a study that I am conducting. We will be meeting twice a week to carry out a music project. You will be asked to meet a new individual with Asperger’s syndrome your gender approximately your age to participate in various music activities. These music activities will include listening to and talking about songs, playing instruments, and songwriting. You do not need to have any previous music experience.

Your commitment will be for a period of 50 minutes twice a week for 6 weeks, with a pizza party at the final session. Your participation is completely voluntary and you may stop participating at any time. Your consent also allows me to videotape the sessions during the project. These videos will be confidential, used only for data collection, and will be viewed only by my advisor and myself during the project. Any song lyrics, audio or video recordings, and questionnaires that I may collect from you will be strictly confidential with no identifying information. All data will be kept in a locked filing cabinet at my house or in a password-protected file on my computer during the course of the project and all identifying information will be destroyed at the end of the project (on or by 02/01/2010). Any recordings, drawings, or songs written during sessions can be provided to you upon completion of the project. The pizza party will take place upon completion of the project.

The project will be held in a friendly environment and there are minimal to no risks involved. Every effort will be made to decrease any nervousness, anxiety, or other social discomfort and you may take a break during sessions if you need to.

The potential benefits for your involvement include learning a music skill (such as some guitar, piano, or drums!) free of charge, being a role model for social skills, discussing current popular songs, possibly create a recording of your own original song, and learning something about the population with Asperger’s syndrome.

Please know that you can withdraw your consent at any time without any penalty or punishment. You may also ask any questions you have about the project or Asperger’s Syndrome and I will be happy to answer them to your satisfaction. I will also be pleased to share the results of this project with you at its conclusion. You may also contact me at (716) 907-3435 or by email at jmaxson2@mac.com later with any questions. My major professor, Dr. Darrow can also be contacted at 850.645.1438 or aadarrow@mail.ius.edu. If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Chair of the Human Subjects Committee, Institutional Review Board, through the Office of the Vice President for Research, at (850) 644-8633.

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<tr>
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</thead>
</table>

FSU Human Subjects Committee Approved on 2/16/09 Void After 2/10/10 HSC# 2009.2116
PARTICIPANT CONSENT FORM

I would like your help in a study that I am conducting. We will be meeting twice a week to carry out a music project. You will be asked to meet a new individual you gender and approximately your age to participate in various music activities. These music activities will include listening to and talking about songs, playing instruments, and songwriting. You do not need to have any previous music experience.

Your commitment will be for a period of 50 minutes twice a week for 6 weeks, with a pizza party at the final session. Your participation is completely voluntary and you may stop participating at any time. Your consent also allows me to videotape the sessions. These videos will be confidential, used only for data collection, and will be viewed only by my advisor and myself during the project. Any song lyrics, audio or video recordings, and questionnaires that I may collect from you will be strictly confidential with no identifying information. All data will be kept in a locked filing cabinet at my house or in a password-protected file on my computer during the course of the project and all identifying information will be destroyed at the end of the project (on or by 02/01/2010). Any recordings, drawings, or songs written during sessions can be provided to you upon completion of the project. Your consent also will allow me to include any lyrics and artwork created within the sessions in my thesis (with all identifying information removed). The pizza party will take place upon completion of the project.

The project will be held in a friendly environment and there are minimal to no risks involved. Every effort will be made to decrease any nervousness, anxiety, or other social discomfort and you may take a break during sessions if you need to.

The potential benefits for your involvement include learning a music skill (such as some guitar, piano, or drums!) free of charge, increasing social skills, discussing current popular songs, possibly create a recording of your own original song, and interacting with a peer your age.

Please know that you can withdraw your consent at any time without any penalty or punishment. You may also ask any questions you have about the project and I will be happy to answer them to your satisfaction. I will also be pleased to share the results of this project with you at its conclusion. You or your parent/guardian may also contact me at (716) 907-3435 or by email at musictherapist@mac.com later with any questions. My major professor, Dr. Darrow can also be contacted at 850.645.1438 or aadarrow@mailer.fsu.edu. If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Chair of the Human Subjects Committee, Institutional Review Board, through the Office of the Vice President for Research, at (850) 644-8633.

Sincerely,

James Maxson

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<table>
<thead>
<tr>
<th>Print Name</th>
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<th>Date</th>
</tr>
</thead>
</table>

FSU Human Subjects Committee Approved on 5/8/09 VOID After 2/10/10 HSC# 2009.2749
To: Mrs. Martha Stubbs

Stubbs’ Music Center, Inc.
1260 Timberlane Rd
Tallahassee, FL 32312

Date:

Dear Mrs. Stubbs,

I am looking for a place to conduct research for a project for my thesis. I am looking for a small room that could accommodate 3 people at a time and possibly a few instruments (guitar, small drums, etc). I will be working with clients who have Asperger’s Syndrome and peers without Asperger’s Syndrome. I am expecting to have 6-8 groups, with each group containing an individual with Asperger’s, a peer without Asperger’s, and myself. We will meet twice a week for 50 minutes session, for a total of six weeks. If there is any availability for some or all of my sessions, I would appreciate it very much.

At the moment, I do not know specific times and dates of the study, because I have not chosen individuals yet to participate, but the project can be flexible to work around lessons you will offer at Stubbs’ Music Center.

If it is permissible, please sign the bottom of the form and return this letter to me. I can provide you with a copy if you wish. We can also work together to assess what times will be available if you are able to help me with my project.

Thank you for your time!

Sincerely,

James Maxson

I will allow James Maxson to use available rooms at Stubbs’ Music Center

[Signature]

(2/10/09)
ADULT PARTICIPANT CONSENT FORM

I would like your help in a study that I am conducting. We will be meeting twice a week to carry out a music project. You will be asked to meet a new individual of your gender and approximately your age to participate in various music activities. These music activities will include listening to and talking about songs, playing instruments, and songwriting. You do not need to have any previous music experience.

Your commitment will be for a period of 50 minutes twice a week for 6 weeks, with a pizza party at the final session. Your participation is completely voluntary and you may stop participating at any time. Your consent also allows me to videotape the sessions. These videos will be confidential, used only for data collection, and will be viewed only by my advisor and myself during the project. Any song lyrics, audio or video recordings, and questionnaires that I may collect from you will be strictly confidential with no identifying information. All data will be kept in a locked filing cabinet at my house or in a password-protected file on my computer during the course of the project and all identifying information will be destroyed at the end of the project (on or by 02/01/2010). Any recordings, drawings, or songs written during sessions can be provided to you upon completion of the project. The pizza party will take place upon completion of the project.

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Please know that you can withdraw your consent at any time without any penalty or punishment. You may also ask any questions you have about the project and I will be happy to answer them to your satisfaction. I will also be pleased to share the results of this project with you at its conclusion. You or your parent/guardian may also contact me at (716) 907-3435 or by email at musictherapizerjames@me.com later with any questions. My major professor, Dr. Darrow can also be contacted at 850.645.1438 or aadarrow@mailer.fsu.edu. If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Chair of the Human Subjects Committee, Institutional Review Board, through the Office of the Vice President for Research, at (850) 644-8633.

Sincerely,

James Maxson

I have read and understand this consent form, and agree to participate in this program.

Print Name __________________________ Signature __________________________ Date __________________________
I would like your help in a study that I am conducting. We will be meeting twice a week to carry out a music project. You will be asked to meet a new individual with Asperger’s Syndrome your gender approximately your age to participate in various music activities. These music activities will include listening to and talking about songs, playing instruments, and songwriting. You do not need to have any previous music experience.

Your commitment will be for a period of 50 minutes twice a week for 6 weeks, with a pizza party at the final session. Your participation is completely voluntary and you may stop participating at any time. Your consent also allows me to videotape the sessions during the project. These videos will be confidential, used only for data collection, and will be viewed only by my advisor and myself during the project. Any song lyrics, audio or video recordings, and questionnaires that I may collect from you will be strictly confidential with no identifying information. All data will be kept in a locked filing cabinet at my house or in a password-protected file on my computer during the course of the project and all identifying information will be destroyed at the end of the project (on or by 02/01/2010). Any recordings, drawings, or songs written during sessions can be provided to you upon completion of the project. The pizza party will take place upon completion of the project.

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Please know that you can withdraw your consent at any time without any penalty or punishment. You may also ask any questions you have about the project or Asperger’s Syndrome and I will be happy to answer them to your satisfaction. I will also be pleased to share the results of this project with you at its conclusion. You may also contact me at (716) 907-3435 or by email at musictherapizerjames@me.com later with any questions. My major professor, Dr. Darrow can also be contacted at 850.645.1438 or aadarrow@mailer.fsu.edu. If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Chair of the Human Subjects Committee, Institutional Review Board, through the Office of the Vice President for Research, at (850) 644-8633.

Sincerely,

James Maxson

I have read and understand this consent form, and agree to participate in this program.

Print Name | Signature | Date
APPENDIX C

ADVERTISEMENT FOR SUBJECTS
The Effect of Music Therapy and Peer Modeled Social Interaction Training for Adults with Asperger’s Syndrome

Request for Participants

If you are, or if someone you know is a young adult (18-28 years old), diagnosed with Asperger’s Syndrome (AS), have a love of music, and want to share experiences with someone else, then this is an excellent opportunity for you.

I am looking for 8 participants to contribute to a research study to develop social skills for young adults with AS through peer modeling and music therapy techniques. *Music skills are not necessary, but a love for music is!* The research is designed to see if the use of lyric analysis, songwriting, improvisation, and other music activities with the participant and a peer can effectively increase social skills that can be used in his or her daily life.

The program will last six weeks, and will include two 50-minute sessions a week with the researcher and a peer. The schedule for sessions can be flexible and designed to work around your schedule.

If you are interested, have questions, or for more information, please feel free to contact James by email (MusicTherapizerJames@me.com) or by phone (716.907.3435).
APPENDIX D

ADVERTISEMENT FOR PEER SUBJECTS
Do you like music?

Have you considered participating in a Music Therapy research study?

I am conducting a master’s research project designed to test the effect of music therapy techniques and peer modeled social skills training for young adults with Asperger’s Syndrome.

Asperger’s Syndrome is a high-functioning form of autism that is characterized by difficulties in social interaction and stereotyped patterns of behavior and interests, but has developed great language skills.

I am looking for young adults (18-28 years old) to participate with peers with Asperger’s Syndrome. The study will include two sessions a week for six weeks with the researcher and a peer with Asperger’s Syndrome. Sessions (which will last about 50 minutes each) can be scheduled around your availability and will include lyric analysis, songwriting, improvisation, and other music activities. No music skills are necessary, but a LOVE and desire for music is!
APPENDIX E

QUESTIONNAIRES
Post-Session Questionnaire for Peer Response Partners

Please respond to the following questions regarding your experience in the research study:

1) As a result of the project, do you feel more comfortable working with individuals with Asperger’s Syndrome?
   Yes / No  (Please circle)

Do you feel that benefits were gained for you as a result of this project? If so, please articulate:
LYRIC ANALYSIS QUESTIONS

Song Title:  
Artist:  
Genre:  

DIRECTIONS: Please take 5 minutes to think about the following questions. Feel free to write down brief answers to them in the space provided. Then you will spend a few minutes on each question with your partner talking about what the song meant to you, and listening to what the song meant to your partner.

2. What does the song say about life?

3. What feelings does the song bring to mind?
4. What did the song make you think about?

5. Did you like the song? Why or why not?

6. Select two lyric lines from the song that are most meaningful to you. Place a checkmark next to the lines. Why did you choose them?
## Social Skills Observation Form
(Verbal Responses)

<table>
<thead>
<tr>
<th>Time</th>
<th>Intervention</th>
<th>1</th>
<th>2- Record</th>
<th>3</th>
<th>4- Record</th>
<th>5</th>
<th>6- Record</th>
<th>Comments</th>
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<td>CR</td>
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<td>IR</td>
<td>CR</td>
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<td>13</td>
<td></td>
<td>CR</td>
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<td>IC</td>
<td>IR</td>
<td>CR</td>
<td>SA</td>
<td>IC</td>
</tr>
</tbody>
</table>

### Totals:
- CR =
- SA =
- IC =
- IR =
- TC =
- UN =
- O =
- NR =

### Positive Responses
- CR = Appropriate Contingent response
- SA = Securing Attention
- IC = Initiating Comments
- IR = Initiating Requests

### Negative Responses
- TC = Topic Change
- UN = Unintelligible
- O = Other
- NR = No Response

Adapted from Goldstein and Thiemann (2001) and Chung, Drewry, Matthews, Mosconi, Reavis, & Tasse (2007)
APPENDIX G

DEFINITIONS FOR APPROPRIATE AND INAPPROPRIATE SOCIAL LANGUAGE MEASURE
<table>
<thead>
<tr>
<th>Social skills</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate Contingent response (CR)</td>
<td>Coded if the participant’s response is contingent on a peer’s immediate prior communication, within a 2-s interval following the peer speaking, through (a) acknowledging (e.g., “hmm”) or direct or partial repetition of the utterance, (b) agreeing (e.g., head nod, “yeah”), (c) answering peer’s question, (d) responding with a related comment about observable objects or events within the ongoing activity, (e) confirming or clarifying a question or comment from the peer (e.g., “What did you say?”).</td>
</tr>
<tr>
<td>Securing and maintaining attention (SA)</td>
<td>Coded if the participant (a) requests attention or acknowledgment from peers (e.g., “Hey!” “Look!” “See this?”), (b) uses the peer’s name to gain attention, (c) uses gestures or vocalizations to establish joint attention with the peer (e.g., taps on shoulder, hold an object up to show peers), or (d) continues activity in an appropriate fashion.</td>
</tr>
<tr>
<td>Initiating comments (IC)</td>
<td>Descriptive comments that are related to the ongoing topic or event, but not contingent on a peer’s prior utterance and not used to request information, and the focus child (a) provides a comment following a 3-s interval after a peer’s last utterance, (b) initiates a new idea or topic that relates to the ongoing joint activity or topic but is not a request, (c) compliments the peer (e.g., “You did it!”) or himself, or (d) expresses enjoyment to the peer regarding their interaction together (e.g., “This is fun!”). The participant’s communication was coded as IC if it met the criteria of (b) to (d) within the 3-s interval.</td>
</tr>
<tr>
<td>Initiating requests (IR)</td>
<td>Coded if participant’s communication is related to the ongoing topic or event, but not contingent on a peer’s prior utterance and not used to clarify something the peer said (would be CR), and the focus child requests information or actions following a 3-s interval after a peer’s last utterance.</td>
</tr>
<tr>
<td>Inappropriate Topic change (TC)</td>
<td>Coded with or without a change in materials or games if the participant (a) interrupts (definite overlap of words) a peer to introduce a new topic that has not been discussed previously or to reintroduce a previous topic, (b) changes the topic to something unrelated to and noncontingent on the peer’s prior comments, (c) comments tangential to some aspect of the peer’s previous utterance but there is an ambiguous semantic referent not immediately recognizable. Verbal turns that follow a TC are coded as CR, IC, IR or SA if the conversation follows the changed or shifted topic.</td>
</tr>
<tr>
<td>Unintelligible (UN)</td>
<td>Utterances that are not interpretable or are unintelligible to the coder after listening to the audiotape a minimum of three times.</td>
</tr>
<tr>
<td>Other (OT)</td>
<td>Any (a) animal noises or other vocalizations, (b) stereotypic or perseverative utterances (considered perseverative on the third utterance; if another person speaks or the participant continues the</td>
</tr>
</tbody>
</table>
perseveration at a later time, start over and code the first two utterances as they are defined, (c) delayed echolalia that is noninteractive, or (d) other off-task behaviors.

No response (NR)  Participant does not respond verbally or nonverbally within 3-s to (a) a peer’s request for information, requests for actions, or protests; (b) if the participant is performing an action requested by the peer that takes longer than 3-s, wait to see if he completes the task and give him credit if he does, or (c) if the peer asks the same question again within the 3-s interval, the utterance is not coded, and the time frame starts at 0 after the peer’s second question. If the child does not respond after the peer repeats himself two or more times, code as NR.

(Adapted from Goldstein and Themann (2001) and Chung, Drewry, Matthews, Mosconi, Reavis, & Tasse (2007))
APPENDIX H

LYRICS FOR LYRIC ANALYSIS
**Mad World** – Gary Jules

1. All around me are familiar faces
2. Worn out places, worn out faces
3. Bright and early for their daily races
4. Going nowhere, going nowhere
5. Their tears are filling up their glasses
6. No expression, no expression
7. Hide my head I want to drown my sorrow
8. No tomorrow, no tomorrow

9. And I find it kinda funny
10. I find it kinda sad
11. The dreams in which I'm dying
12. Are the best I've ever had
13. I find it hard to tell you
14. I find it hard to take
15. When people run in circles
16. It's a very, very mad world mad world

17. Children waiting for the day they feel good
18. Happy Birthday, Happy Birthday
19. Made to feel the way that every child should
20. Sit and listen, sit and listen
21. Went to school and I was very nervous
22. No one knew me, no one knew me
23. Hello teacher tell me what's my lesson
24. Look right through me, look right through me

25. And I find it kinda funny
26. I find it kinda sad
27. The dreams in which I'm dying
28. Are the best I've ever had
29. I find it hard to tell you
30. I find it hard to take
31. When people run in circles
32. It's a very, very mad world ... mad world
33. Enlarging your world
34. Mad world
All Neon Like - Bjork

1. Not 'til you halo all over me
2. I'll come over
3. Not 'til it shimmers 'round your skull
4. I'll be yours

5. I weave for you
6. The marvelous web

7. Glow in the dark threads
8. All neon like

9. The cocoon surrounds you
10. Embraces all
11. So you can sleep
12. Fetus-style

13. And they will assist us
14. 'Cause we're asking for help
15. And the luminous beam
16. It feeds you,
17. Henh-yeah!, henh-yeah

18. The soft distortion
19. Fills you up
20. Nourish nourish
21. Your turtleheart

22. And they will assist us
23. 'Cause we're asking for help
24. And the luminous beam
25. It feeds you
26. Henh-yeah!, yeah!

27. Don't get angry with yourself
28. Don't, don't get angry with yourself
29. I'll heal you

30. With a razorblade
31. I'll cut a slit open
32. And the luminous beam
33. Feeds you honey, heals you
34. Don't get angry with yourself
35. I'll heal you, I’ll heal you
36. Luminous, I’ll heal you
In the Air Tonight – Phil Collins

1. I can feel it coming in the air tonight, oh lord
2. I’ve been waiting for this moment, all my life, oh lord

3. Can you feel it coming in the air tonight, oh lord, oh lord

4. Well, if you told me you were drowning
5. I would not lend a hand
6. I’ve seen your face before my friend
7. But I don’t know if you know who I am
8. Well, I was there and I saw what you did
9. I saw it with my own two eyes
10. So you can wipe off the grin, I know where you’ve been
11. Its all been a pack of lies

12. And I can feel it coming in the air tonight, oh lord
13. I’ve been waiting for this moment for all my life, oh lord
14. I can feel it in the air tonight, oh lord, oh lord
15. And I’ve been waiting for this moment all my life, oh lord, oh lord

16. Well I remember, I remember don’t worry
17. How could I ever forget, its the first time, the last time we ever met
18. But I know the reason why you keep your silence up, no you don’t fool me
19. The hurt doesn’t show; but the pain still grows
20. It’s no stranger to you or me
Enid – Barenaked Ladies

Chorus
1. Enid we never really knew each other anyway.
2. Enid we never really knew each other anyway.
3. It took me a year to believe it was over,
4. And it took me two more to get over the loss.
5. I took a beating when you wrote me those letters,
6. And every time I remembered the taste of your lipgloss.

Chorus
7. Maybe we always saw right through each other anyway
8. But Enid we never really knew each other anyway.
9. There were times when I wanted to hurt you,
10. And there were times when I know that I did.
11. There were times when I thought I would kill you,
12. But can you blame me I was only a kid.
13. Tell me why we never (really) respected each other.
14. And tell me why I never believed that you were a person too.
15. I always thought that you fancied my brother.
16. I may not have liked it, oh but memory is a strange thing, oh, and Enid?
17. Enid I remember you.

Chorus
18. Maybe we always saw right through each other anyway,
19. But Enid we never really knew each other anyway.
20. It took me a year to believe it was over,
21. And it took me two more to get over the loss.
22. I took a beating when you wrote me those letters,
23. And every time you told me to get lost.
Now it's not fair to say that it's 'cause I was three inches shorter then, and it's not fair to say that it's 'cause I was only fifteen years old. But maybe it's fair to say it was a lack of communication, I took a phone message, oh and speaking of communication, Oh, and Enid, Enid you caught a cold.

I can get a job I can pay the phone bills I can cut the lawn, cut my hair, cut out my cholesterol I can work overtime I can work in a mine I can do it all for you, But I don't want to.

Enid we never really knew each other anyway. Enid we never really knew each other anyway. Maybe we always saw right through each other anyway, But Enid we really never knew each other anyway

I can teach you how to dance, how to sing, how to knit, How to make things that you never ever made before Enid, I can teach you how to use cookie cutters To make crazy things out of Play-Doh.

Little houses, little farms, little accessories for your mom, For your Barbie set, for your friends and your family Enid, I can teach you how to snowmobile, cross-country ski, snowshoe, But I don't want to!

Enid we never really knew each other anyway Enid we never really knew each other anyway Enid we really never knew each other anyway
Fell In Love – Moxy Fruvous

1. Something I never would have known
2. Not knowing knowledge never enobles
3. All her ideas were like smoke rings, I had to know things
4. She was a tangle of questions

5. How many eggs make up a pound?
6. How many ears of corn in the niblets?
7. I was a person who would censor "Pee Wee's adventures"
8. She was exceedingly liberal

9. And we fell in love
10. And the sunshine shone from the sunshine above
11. Fell in love, whole loaf love

12. Try not to think while your inside
13. Just keep your wide eyes wide wide open
14. I made a meal of the lighting, this was exciting
15. We had a real urban drama

16. She always said it again
17. Just when she'd said it, that's when she'd say it
18. She said my pasta was delicious, but repetitious
19. That kind of thing made me crazy

20. And we fell in love
21. And the sunshine shone from the sunshine above
22. Fell in love, whole loaf love

23. Take a look around, the sun has gone down
24. And I've had a good time, have you had a good time?
25. I've loved without loss, I've put down my cross
26. You know what I know, an' I'm goin' go

27. She set my schoolhouse on fire
28. Down in the fire the angels were singing
29. Notice a beautiful fire heavenly choir
King of Spain

Once I was the King of Spain (now I eat humble pie)
Oh... my unspeakable wife, Queen Lisa (now I eat humble pie)
I'm telling you I was the King of Spain (now I eat humble pie)
And now I work at the Pizza Pizza

Royalty, lord it looked good on me
Buried in silk in the royal boudoir or going nuclear free
Or playing Crokinole with the Princess of Monaco
Telling my jokes to the OPEC leaders, getting it all on video
Once I was the King of Spain (now I eat humble pie)
A palatial palace, that was my home (now I eat humble pie)
I'm telling you I was the King of Spain (now I eat humble pie)
And now I vacuum the turf at SkyDome (once he was the King of Spain)

I can't wait, I'm lowering interest rates, my people say:
"King, how are you such a genius?
There's a roof overhead and food on our plates!"
It's laiszez-faire, I don't even give a care
Let's make Friday part of the weekend
And give every new baby a chocolate eclair
Once I was the King of Spain (now I eat humble pie)
Hey Clinton! Hey Yeltsin! Got problems? You phone me (now I eat humble pie)
I'm telling you I was the King of Spain (now I eat humble pie)
Now the Leafs call me up to drive the Zamboni (once he was the King of Spain)

Now some of you are probably wondering how I cam to be living in Canada
After being royalty in Spain. Should I tell them, guys? Tell us, King!
You see late one night when the palace was asleep
Out of my royal chambers and into the garden I creep
And I wait till the appointed time, when the moon is lighting the pitch
At which point my peasant friend, who looks just like me
Arrives and we make a switch

Prince and pauper, junior and whopper
World made up of silver and copper
Out of my own volition, I took a change of position
So next time you drool in the pizza line
Remember, slower pizza's more luscious
The King of Spain never rushes!
Once I was the King of Spain (now I eat humble)
I was looking for off-handed ways to improve us (now I eat humble pie)
I'm telling you I was the King of Spain (now I eat humble pie)
And now I'm jamming with Moxy Fruvous! (Once he was the King of Spain)
APPENDIX I

SSI AND CSRS
CONVERSATIONAL SKILLS RATING SCALE (Rating of Self Form)

Rate how skillfully YOU used, or didn’t use, the following communicative behaviors in the conversation, where:

1 = INADEQUATE  (use is awkward, disruptive, or results in a negative impression of communicative skills)
2 = FAIR        (occasionally awkward or disruptive, occasionally adequate)
3 = ADEQUATE    (sufficient but neither noticeable nor excellent. Produces neither strong positive nor negative impression)
4 = GOOD        (use was better than adequate but not outstanding)
5 = EXCELLENT   (use is smooth, controlled, results in positive impression of communicative skills)

Circle the single most accurate response for each behavior:

1  2  3  4  5  =  (1) Speaking rate (neither too slow nor too fast)
1  2  3  4  5  =  (2) Speaking fluency (pauses, silences, "uh", etc.)
1  2  3  4  5  =  (3) Vocal confidence (neither too tense/nervous nor overly confident sounding)
1  2  3  4  5  =  (4) Articulation (clarity of pronunciation and linguistic expression)
1  2  3  4  5  =  (5) Vocal variety (neither overly monotone nor dramatic voice)
1  2  3  4  5  =  (6) Volume (neither too loud nor too soft)
1  2  3  4  5  =  (7) Posture (neither too closed/formal nor too open/informal)
1  2  3  4  5  =  (8) Lean toward partner (neither too forward nor too far back)
1  2  3  4  5  =  (9) Shaking or nervous twitches (aren’t noticeable or distracting)
1  2  3  4  5  =  (10) Unmotivated movements (tapping feet, fingers, hair-twirling, etc.)
1  2  3  4  5  =  (11) Facial expressiveness (neither blank nor exaggerated)
1  2  3  4  5  =  (12) Nodding of head in response to partner statements
1  2  3  4  5  =  (13) Use of gestures to emphasize what is being said
1  2  3  4  5  =  (14) Use of humor and/or stories
1  2  3  4  5  =  (15) Smiling and/or laughing
1  2  3  4  5  =  (16) Use of eye contact
1  2  3  4  5  =  (17) Asking of questions
1  2  3  4  5  =  (18) Speaking about partner (involvement of partner as a topic of conversation)
1  2  3  4  5  =  (19) Speaking about self (neither too much nor too little)
1  2  3  4  5  =  (20) Encouragements or agreements (encouragement of partner to talk)
1  2  3  4  5  =  (21) Personal opinion expression (neither too passive nor aggressive)
1  2  3  4  5  =  (22) Initiation of new topics
1  2  3  4  5  =  (23) Maintenance of topics and follow-up comments
1  2  3  4  5  =  (24) Interruption of partner speaking turns
1  2  3  4  5  =  (25) Use of time speaking relative to partner

For the next five items, rate your overall performance. I was a(n)...

POOR CONVERSATIONALIST: 1 2 3 4 5 6 7 : GOOD CONVERSATIONALIST
SOCIALLY UNSKILLED: 1 2 3 4 5 6 7 : SOCIALLY SKILLED
INCOMPETENT COMMUNICATOR: 1 2 3 4 5 6 7 : COMPETENT COMMUNICATOR
INAPPROPRIATE COMMUNICATOR: 1 2 3 4 5 6 7 : APPROPRIATE COMMUNICATOR
INEFFECTIVE COMMUNICATOR: 1 2 3 4 5 6 7 : EFFECTIVE COMMUNICATOR

Comments:
**CONVERSATIONAL SKILLS RATING SCALE (Rating of Partner Form)**

<table>
<thead>
<tr>
<th>Your Name:</th>
<th>Partner Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your ID:</td>
<td>Partner ID:</td>
</tr>
<tr>
<td>Date:</td>
<td>Class:</td>
</tr>
<tr>
<td>Activity:</td>
<td></td>
</tr>
</tbody>
</table>

Rate how skillfully YOUR PARTNER used, or didn't use, the following communicative behaviors in the conversation, where:

1 = INADEQUATE
(use is awkward, disruptive, or results in a negative impression of communicative skills)

2 = FAIR
(occasionally awkward or disruptive, occasionally adequate)

3 = ADEQUATE
(sufficient but neither noticeable nor excellent. Produces neither strong positive nor negative impression)

4 = GOOD
(use was better than adequate but not outstanding)

5 = EXCELLENT
(use is smooth, controlled, results in positive impression of communicative skills)

Circle the single most accurate response for each behavior:

| 1 | 2 | 3 | 4 | 5 |   | (1) Speaking rate (neither too slow nor too fast) |
| 2 | 3 | 4 | 5 |   |   | (2) Speaking fluency (pauses, silences, “uh”, etc.) |
| 3 | 4 | 5 |   |   |   | (3) Vocal confidence (neither too tense/nervous nor overly confident sounding) |
| 4 | 5 |   |   |   |   | (4) Articulation (clarity of pronunciation and linguistic expression) |
| 5 |   |   |   |   |   | (5) Vocal variety (neither overly monotone nor dramatic voice) |
| 6 |   |   |   |   |   | (6) Volume (neither too loud nor too soft) |
| 7 |   |   |   |   |   | (7) Posture (neither too closed/formal nor too open/informal) |
| 8 |   |   |   |   |   | (8) Lean toward partner (neither too forward nor too far back) |
| 9 |   |   |   |   |   | (9) Shaking or nervous twitches (aren’t noticeable or distracting) |
| 10 |   |   |   |   |   | (10) Unmotivated movements (tapping feet, fingers, hair-twirling, etc.) |
| 11 |   |   |   |   |   | (11) Facial expressiveness (neither blank nor exaggerated) |
| 12 |   |   |   |   |   | (12) Nodding of head in response to partner statements |
| 13 |   |   |   |   |   | (13) Use of gestures to emphasize what is being said |
| 14 |   |   |   |   |   | (14) Use of humor and/or stories |
| 15 |   |   |   |   |   | (15) Smiling and/or laughing |
| 16 |   |   |   |   |   | (16) Use of eye contact |
| 17 |   |   |   |   |   | (17) Asking of questions |
| 18 |   |   |   |   |   | (18) Speaking about partner (involvement of partner as a topic of conversation) |
| 19 |   |   |   |   |   | (19) Speaking about self (neither too much nor too little) |
| 20 |   |   |   |   |   | (20) Encouragements or agreements (encouragement of partner to talk) |
| 21 |   |   |   |   |   | (21) Personal opinion expression (neither too passive nor aggressive) |
| 22 |   |   |   |   |   | (22) Initiation of new topics |
| 23 |   |   |   |   |   | (23) Maintenance of topics and follow-up comments |
| 24 |   |   |   |   |   | (24) Interruption of partner speaking turns |
| 25 |   |   |   |   |   | (25) Use of time speaking relative to partner |

For the next five items, rate your partner’s overall performance. My partner was a(n)...

<table>
<thead>
<tr>
<th>POOR CONVERSATIONALIST</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>GOOD CONVERSATIONALIST</th>
</tr>
</thead>
<tbody>
<tr>
<td>sociaLy UNskilled</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>SOCIALY SKILLED</td>
</tr>
<tr>
<td>INCOMPETENT COMMUNICATOR</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>COMPETENT COMMUNICATOR</td>
</tr>
<tr>
<td>INAPPROPRIATE COMMUNICATOR</td>
<td>1</td>
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<td>3</td>
<td>4</td>
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<td>7</td>
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<tr>
<td>INEFFECTIVE COMMUNICATOR</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>EFFECTIVE COMMUNICATOR</td>
</tr>
</tbody>
</table>

Comments:
**CONVERSATIONAL SKILLS RATING SCALE (Observer Rating of Conversant Form)**

<table>
<thead>
<tr>
<th>Your Name:</th>
<th>Partner Name:</th>
</tr>
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<tbody>
<tr>
<td>Your ID:</td>
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<tr>
<td>Date:</td>
<td>Class:</td>
</tr>
<tr>
<td>Activity:</td>
<td></td>
</tr>
</tbody>
</table>

Rate how skillfully THIS INTERACTANT used, or didn't use, the following communicative behaviors in the conversation, where:

1. **INADEQUATE** (use is awkward, disruptive, or results in a negative impression of communicative skills)
2. **FAIR** (occasionally awkward or disruptive, occasionally adequate)
3. **ADEQUATE** (sufficient but neither noticeable nor excellent. Produces neither strong positive nor negative impression)
4. **GOOD** (use was better than adequate but not outstanding)
5. **EXEMPLARY** (use is smooth, controlled, results in positive impression of communicative skills)

Circle the single most accurate response for each behavior:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Speaking rate (neither too slow nor too fast)</td>
<td>(1)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Speaking fluency (pauses, silences, &quot;uh&quot;, etc.)</td>
<td>(2)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Vocal confidence (neither too tense/nervous nor overly confident sounding)</td>
<td>(3)</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>4</td>
<td>Articulation (clarity of pronunciation and linguistic expression)</td>
<td>(4)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Vocal variety (neither overly monotone nor dramatic voice)</td>
<td>(5)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Volume (neither too loud nor too soft)</td>
<td>(6)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Posture (neither too closed/formal nor too open/informal)</td>
<td>(7)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>Lean toward partner (neither too forward nor too far back)</td>
<td>(8)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>Shaking or nervous twitches (aren't noticeable or distracting)</td>
<td>(9)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Unmotivated movements (tapping feet, fingers, hair-tweaking, etc.)</td>
<td>(10)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>Facial expressiveness (neither blank nor exaggerated)</td>
<td>(11)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>Nodding of head in response to partner statements</td>
<td>(12)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>Use of gestures to emphasize what is being said</td>
<td>(13)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>Use of humor and/or stones</td>
<td>(14)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>Smiling and/or laughing</td>
<td>(15)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16</td>
<td>Use of eye contact</td>
<td>(16)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17</td>
<td>Asking of questions</td>
<td>(17)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18</td>
<td>Speaking about partner (involvement of partner as a topic of conversation)</td>
<td>(18)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19</td>
<td>Speaking about self (neither too much nor too little)</td>
<td>(19)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20</td>
<td>Encouragements or agreements (encouragement of partner to talk)</td>
<td>(20)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21</td>
<td>Personal opinion expression (neither too passive nor aggressive)</td>
<td>(21)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>22</td>
<td>Initiation of new topics</td>
<td>(22)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23</td>
<td>Maintenance of topics and follow-up comments</td>
<td>(23)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>24</td>
<td>Interruption of partner speaking turns</td>
<td>(24)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>25</td>
<td>Use of time speaking relative to partner</td>
<td>(25)</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

For the next five items, rate this person's overall performance:

- **POOR CONVERSATIONALIST:** 1 2 3 4 5 6 7
- **GOOD CONVERSATIONALIST:**
- **SOCIALLY UNSKILLED:** 1 2 3 4 5 6 7
- **SOCIALLY SKILLED:**
- **INCOMPETENT COMMUNICATOR:** 1 2 3 4 5 6 7
- **COMPETENT COMMUNICATOR:**
- **INAPPROPRIATE COMMUNICATOR:** 1 2 3 4 5 6 7
- **APPROPRIATE COMMUNICATOR:**
- **INEFFECTIVE COMMUNICATOR:** 1 2 3 4 5 6 7
- **EFFECTIVE COMMUNICATOR:**

Comments:
Please ensure that you work from left to right on the answer sheet.

1. It is difficult for others to know when I am sad or depressed.
2. When people are speaking, I spend as much time watching their movements as I do listening to them.
3. People can always tell when I dislike them, no matter how hard I try to hide my feelings.
4. I enjoy giving parties.
5. Criticism or scolding rarely makes me feel uncomfortable.
6. I can be comfortable with all types of people -- young and old, rich and poor.
7. I talk faster than most people.
8. Few people are as sensitive and understanding as I am.
9. It is often hard for me to keep a "straight face" when telling a joke or humorous story.
10. It takes people quite a while to get to know me well.
11. My greatest source of pleasure and pain is other people.
12. When I'm with a group of friends, I am often the spokesperson for the group.
13. When depressed, I tend to make those around me depressed also.
14. At parties, I can immediately tell when someone is interested in me.
15. People can always tell when I am embarrassed by the expression on my face.
16. I love to socialize.
17. I would much rather take part in a political discussion than to observe and analyze what the participants are saying.
18. Sometimes I find it difficult to look at others when I am talking about something personal.
19. I have been told that I have expressive eyes.
20. I am interested in knowing what makes people tick.
21. I am not very skilled in controlling my emotions.
22. I prefer jobs that require working with a large number of people.
23. I am greatly influenced by the moods of those around me.
24. I am not good at making prepared speeches.
25. I usually feel uncomfortable touching other people.
26. I can easily tell what a person's character is by watching his or her interactions with others.
27. I am able to conceal my true feelings from just about anyone.
28. I always mingle at parties.
29. There are certain situations in which I find myself worrying about whether I am doing or saying the right things.
30. I find it very difficult to speak in front of a large group of people.
<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
<th>Number</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>I often laugh out loud.</td>
<td>46</td>
<td>When telling a story, I usually use a lot of gestures to help get the point across.</td>
</tr>
<tr>
<td>32</td>
<td>I always seem to know what peoples' true feelings are no matter how hard they try to conceal them.</td>
<td>47</td>
<td>I often worry that people will misinterpret something I have said to them.</td>
</tr>
<tr>
<td>33</td>
<td>I can keep a straight face even when friends try to make me laugh or smile.</td>
<td>48</td>
<td>I am often uncomfortable around people whose social class is different from mine.</td>
</tr>
<tr>
<td>34</td>
<td>I usually take the initiative to introduce myself to strangers.</td>
<td>49</td>
<td>I rarely show my anger.</td>
</tr>
<tr>
<td>35</td>
<td>Sometimes I think that I take things other people say to me too personally.</td>
<td>50</td>
<td>I can instantly spot a &quot;phony&quot; the minute I meet him or her.</td>
</tr>
<tr>
<td>36</td>
<td>When in a group or people, I have trouble thinking of the right things to talk about.</td>
<td>51</td>
<td>I usually adapt my ideas and behavior to the group I happen to be with at the time.</td>
</tr>
<tr>
<td>37</td>
<td>Sometimes I have trouble making my friends and family realize just how angry or upset I am with them.</td>
<td>52</td>
<td>When in discussions, I find myself doing a large share of the talking.</td>
</tr>
<tr>
<td>38</td>
<td>I can accurately tell what a person's character is just by meeting him or her.</td>
<td>53</td>
<td>While growing up, my parents were always stressing the importance of good manners.</td>
</tr>
<tr>
<td>39</td>
<td>It is very hard for me to control my emotions.</td>
<td>54</td>
<td>I am not very good at mixing at parties.</td>
</tr>
<tr>
<td>40</td>
<td>I am usually the one to initiate conversations.</td>
<td>55</td>
<td>I often touch my friends when talking to them.</td>
</tr>
<tr>
<td>41</td>
<td>What others think about my actions is of little or no consequence to me.</td>
<td>56</td>
<td>I dislike it when other people tell me their problems.</td>
</tr>
<tr>
<td>42</td>
<td>I am usually very good at leading group discussions.</td>
<td>57</td>
<td>While I may be nervous on the inside, I can disguise it very well from others.</td>
</tr>
<tr>
<td>43</td>
<td>My facial expression is generally neutral.</td>
<td>58</td>
<td>At parties I enjoy talking to a lot of different people.</td>
</tr>
<tr>
<td>44</td>
<td>One of my greatest pleasures in life is being with other people.</td>
<td>59</td>
<td>I can be strongly affected by someone smiling or frowning at me.</td>
</tr>
<tr>
<td>45</td>
<td>I am very good at maintaining a calm exterior even if I am upset.</td>
<td>60</td>
<td>I would feel out of place at a party attended by a lot of very important people.</td>
</tr>
</tbody>
</table>
1 = Not at all like me
2 = A little like me
3 = Like me
4 = Very much like me
5 = Exactly like me

Please ensure that you are working from left to right on the answer sheet.

61. I am able to liven up a dull party.  
76. I am unlikely to speak to strangers until they speak to me.

62. I sometimes cry at sad movies.  
77. I get nervous if I think someone is watching me.

63. I can make myself look as if I'm having a good time at a social function even if I'm not really enjoying myself at all.

64. I consider myself a loner.  
79. Friends have sometimes told me that I talk too much.

65. I am very sensitive of criticism  
80. I am often told that I am a sensitive, understanding person.

66. Occasionally I've noticed that people from different backgrounds seem to feel uncomfortable around me.  
81. People can always "read" my feelings even when I'm trying to hide them.

67. I dislike being the center of attention.  
82. I tend to be the "life of the party."

68. I am easily able to give a comforting hug or touch someone who is distressed.  
83. I'm generally concerned about the impression I'm making on others.

69. I am rarely able to hide a strong emotion.  
84. I often find myself in awkward social situations.

70. I enjoy going to large parties and meeting new people.  
85. I never shout or scream when angry.

71. It is very important that other people like me.  
86. When my friends are angry or upset, they seek me out to help calm them down.

72. I sometimes say the wrong thing when starting a conversation with a stranger.  
87. I am easily able to make myself look happy one minute and sad the next.

73. I rarely show my feelings or emotions.  
88. I could talk for hours on just about any subject.

74. I can spend hours just watching other people.  
89. I am often concerned with what others are thinking of me.

75. I can easily pretend to be mad even when I am really feeling happy.  
90. I can easily adjust to being in just about any social situation.
Self-Description Inventory

Answer Sheet

1. Name: ________________________________ 2. Gender: Male Female
   (Last) __________________ (First) (Circle one)

3. Marital status: Single Married Widowed Divorced
   (Circle one)

4. Age: ______

5. Education: (Circle highest level)
   Elementary
   High School Grad
   College Grad
   Graduate Degree

Please use the following scale to respond to question 6:
1 = Very Satisfied
2 = Somewhat Satisfied
3 = Somewhat Dissatisfied
4 = Very Dissatisfied

6. How satisfied are you with: (Circle a response)
   Your present marriage (or intimate relationship): 1 2 3 4
   Relationships with family members (parents, siblings): 1 2 3 4
   Friendships: 1 2 3 4
   Kind of work you do: 1 2 3 4
   The place where you work: 1 2 3 4
   Future work opportunities: 1 2 3 4

Questions 3 through 6 are optional, and are used for research purposes only.

Please proceed to the next page

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<table>
<thead>
<tr>
<th>WORK ACROSS</th>
<th>WORK ACROSS</th>
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<tr>
<td>1</td>
<td>Not at all like me</td>
</tr>
<tr>
<td>2</td>
<td>A little like me</td>
</tr>
<tr>
<td>3</td>
<td>Like me</td>
</tr>
<tr>
<td>4</td>
<td>Very much like me</td>
</tr>
<tr>
<td>5</td>
<td>Exactly like me</td>
</tr>
</tbody>
</table>

Note that, unlike the test booklet, the items on this answer sheet run from left to right.

Make sure to match the item number in the test booklet with the same item number on this answer sheet.

Directions:

Be sure to read all of the instructions on the test booklet before proceeding. Please read each statement in the test booklet carefully.

Please read each statement in the test booklet carefully.
### Self-Description Inventory/SSI Adult Sample Cutoff Scores by Gender

#### Males: N=264

<table>
<thead>
<tr>
<th>Scale</th>
<th>M</th>
<th>SD</th>
<th>Low &lt;</th>
<th>Medium</th>
<th>High &gt;</th>
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<td>Total E</td>
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<td>69.97-103.57</td>
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<td>240.97</td>
<td>240.97-304.75</td>
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#### Females: N=285

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<tr>
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<td>Total Co</td>
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<td>67.35</td>
<td>67.35-111.54</td>
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<td>Overall SSI</td>
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<td>32.89</td>
<td>254.09</td>
<td>254.09-319.87</td>
<td>319.87</td>
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</table>
APPENDIX J

LYRICS FOR LYRIC READING
I am thinking it's a sign that the freckles
In our eyes are mirror images and when
We kiss they're perfectly aligned
And I have to speculate that God himself
Did make us into corresponding shapes like
Puzzle pieces from the clay
True, it may seem like a stretch, but
Its thoughts like this that catch my troubled
Head when you're away when I am missing you to death
When you are out there on the road for
Several weeks of shows and when you scan
The radio, I hope this song will guide you home

They will see us waving from such great
Heights, 'come down now,' they'll say
But everything looks perfect from far away,
'come down now,' but we'll stay...

I tried my best to leave this all on your
Machine but the persistent beat it sounded
Thin upon listening
That frankly will not fly. You will hear
The shrillest highs and lowest lows with
The windows down when this is guiding you home
Such Great Heights – Postal Service
Person 1 = Plain text, Person 2 = Bold & Underlined

I am thinking it's a sign that the freckles
**In our eyes are mirror images and when**
We kiss they're perfectly aligned
**And I have to speculate that God himself**
Did make us into corresponding shapes like
**Puzzle pieces from the clay**
True, it may seem like a stretch, but
**Its thoughts like this that catch my troubled**
Head when you're away when I am missing you to death
**When you are out there on the road for**
Several weeks of shows and when you scan
**The radio, I hope this song will guide you home**

They will see us waving from such great
**Heights, 'come down now,' they'll say**
But everything looks perfect from far away,
*'come down now,' but we'll stay...'*

I tried my best to leave this all on your
**Machine but the persistent beat it sounded**
Thin upon listening
**That frankly will not fly. You will hear**
The shrillest highs and lowest lows with
**The windows down when this is guiding you home**
Such Great Heights – Postal Service

Person 1 = Plain text, Person 2 = Bold & Underlined

I am **thinking** it's a sign **that** the **freckles**
In **our** eyes **are** mirror **images** and **when**
We **kiss** they're **perfectly** aligned
**And** I have to **speculate** that **God** himself
**Did** make **us** into **corresponding** shapes **like**
Puzzle **pieces** from **the** clay
**True**, it **may** seem **like** a **stretch**, but
**Its** thoughts **like** this **that** catch **my** troubled
**Head** when **you're** away **when** I am missing **you** to **death**
When **you** are **out** there **on** the **road** for
**Several** weeks **of** shows and **when** **you** scan
**The** radio, I hope **this** song **will** guide **you** home

**They** will **see** us **waving** from **such** great
**Heights**, 'come **down** now,' **they'll** say
**But** everything **looks** perfect from **far** **away**,
'come **down** now,' **but** we'll **stay**...

I **tried** my **best** to **leave** this **all** on **your**
Machine **but** the **persistent** beat **it** sounded
**Thin** upon **listening**
That **frankly** will not **fly**. **You** will **hear**
The **shri llest** highs and lowest **lows** with
**The** windows **down** when **this** is **guiding** you **home**
Kids – MGMT

You were a child
Crawling on your knees toward it
Making momma so proud,
But your voice is too loud

We like to watch you laughing,
You pick the insects off plants
No time to think of consequences

[Chorus:]
Control yourself
Take only what you need from it
A family of trees wanted
To be haunted

[Repeat chorus]

The water is warm
But it’s sending me shivers
A baby is born
Crying out for attention

The memories fade
Like looking through a fogged mirror
Decision to decisions are made
And not bought,
But I thought this wouldn’t hurt a lot.
I guess not
Kids – MGMT

You were a child
Crawling on your knees toward it
Making momma so proud,
But your voice is too loud

We like to watch you laughing,
You pick the insects off plants
No time to think of consequences

[Chorus:]
Control yourself
Take only what you need from it
A family of trees wanted
To be haunted

[Repeat chorus]

The water is warm
But it’s sending me shivers
A baby is born
Crying out for attention

The memories fade
Like looking through a fogged mirror
Decision to decisions are made
And not bought,
But I thought this wouldn’t hurt a lot.
I guess not
[Chorus x2]
Kids – MGMT

You were a child
Crawling on your knees toward it
Making momma so proud,
But your voice is too loud

We like to watch you laughing,
You pick the insects off plants
No time to think of consequences

[Chorus:]
Control yourself
Take only what you need from it
A family of trees wanted
To be haunted

[Repeat chorus]

The water is warm
But it’s sending me shivers
A baby is born
Crying out for attention

The memories fade
Like looking through a fogged mirror
Decision to decisions are made
And not bought,
But I thought this wouldn’t hurt a lot.
I guess not
You Will Go to the Moon – Moxy Fruvous

You will go to the moon
You'll probably be heading there soon
Someday flowers will grow there
But first you've got to go there
Oh, You will go to the moon

You will live in the stars
Your backyard will probably be Mars
You will ride a crater scooter
And eat off your computer
Oh you will live in the stars

Your stellar smile will always beam
Knowing you're home and home to stay
And you'll look down upon the earth
And say, "I can't believe we ever lived that way!"

You will go to the moon
There's plans for a hotel and a lagoon
You'll be savoring a star fruit
And kicking off your moonboot
Oh you will go to the moon.

Hey, you will go to the moon
A paradise to rival Cancun
And one side's always sunny
You'll be raking in the money
Oh you get paid on the moon

It's been our most abiding dream
And a dream is an easy sell
And when the tourists come in droves
You'll be the big cheese on that orbiting rondelle

You will go to the moon
Daring pioneers will call the tune ...

(vocal solo)

Ah someday flowers will grow there
But first you got to go there
Oh you will go to the moon
I'm gonna tell ya, you will go to the moon
One more! You will go to the moon!

::KEY::

Normal Text = Person 1
Bold and Underlined = Person 2
Italicized = Both
**King Dork**
This time it will switch around throughout the lyrics between reading together and reading back and forth. And then we will try to make up a song to go with it.

I don't have much to offer
**Or anything at all**
I look like death warmed over
**You're like a living doll**
Okay, I may be the worst that you have seen
But I'm King **Dork** and I want you to be my Queen
**I'm King Dork and I want you to be my Queen**

**You're too dear to put a price on**
And when I talk to you
You're more than **Monty Python Star Trek or Dr. Who**
You're **much more than MST3K or D&D**

I'm King Dork and I want you to be with me
I'm King Dork and **I want you to be with me.**

Once you get **used to it**
Maybe you can love me just a little bit
Would that be, such a catastrophe?
**So don't start screaming yet**
Just lower your standards and get set
Whatever it takes, however it has to be

Those other girls can't stand me
**There's none as fair as you**
But if they see you and me
It might **embarrass you**
So we'll go where they will **never see you**

I'm King Dork and I want you to be with me
I'm King Dork and I want you to be my
**I'm King Dork and I want you to be my Queen**

::KEY::

*Normal Text = Person 1*
**Bold and Underlined** = Person 2
*Italicized* = Both
APPENDIX K

OTHER DOCUMENTS FOR SESSIONS
**Session 5** – Self-Control: Progressive Muscle Relaxation

*Objective:* Learn systematic and physical relaxing skills

*Implementation:* (Quiet setting, chairs with backs)

1. *(Start playing quiet, slow, and tonal music on guitar)* Stand up and give your body a gentle shake. Shake your arms, shake one leg at a time, roll your head. Now sit down comfortably on your chair, close your eyes and follow my instructions. Feel your body, feel your breathing. I’m going to ask you to tighten the muscles in different parts of your body but I don’t want you to squeeze hard – just enough to tighten the muscles under the skin before they relax again.

2. Let’s start with your right foot and leg muscles. [Clench the muscles a couple of times. Now give them a firm squeeze, not too tightly, and clench them while I count to five. One, two, three, four, five. Now slowly relax the muscles in your foot and leg. Totally relax them. Stay relaxed, breathe deeply, and feel the pleasure of the relaxation for a few seconds.]

3. Now move to your left foot and leg muscles (repeat)

4. Now move to your right hand and arm. Open and lose your right hand a couple of times. Now squeeze it into a fist, not too tightly, and hold it while I count to five. [One, two, three, four, five. Now slowly relax the muscles in that hand so that the hand falls open again, totally relaxed, like a rag doll. Stay relaxed, breathe deeply, and feel the pleasure of the relaxation for a few more seconds. (Wait ten seconds and proceed).]

5. Now squeeze your left arm, feeling the muscles in your left arm tighten, while I count to five. (Continue as in previous step).

6. *Stomach – chest – shoulders* (separately) – squeeze your _____ and hold while I count to five. One, two, three, four, five. Now slowly relax the muscles in your _____ and keep it totally relaxed. Stay relaxed, breathe deeply, and feel the pleasure of the relaxation for a few more seconds. (Repeat for stomach, chest, shoulders).

7. Finally your face: Tighten your face: jaw, eyebrows, and scalp; clenching and stretching all the muscles, before releasing them, relaxed. Each part of your body is systematically relaxed.

8. Now feel the feelings of your whole body. Breathe in and then squeeze every part of your body, scanning quickly from the top of your body to the bottom of your body as you tighten the muscles and feel the sensations. Now, hold the tight muscles while I count to five and then release them again. (Count, and relax) Feel the pleasure as the feelings of relaxation wash over you. When you feel totally relaxed, open your eyes.
**At home, write about one of two things below. What you write should follow a timeline, having one event follow after another, and everything you write about should relate to the story. Please do not include extraneous (unimportant) information**

Option 1) Write about a concert you attended. When was it? Who was with you? Where was it and who performed? How did you like it? What happened during the concert?

-- OR --

Option 2) Bring in your favorite song (or a song you really like) on CD, your mp3 player, etc. Can you type up the lyrics (or find them online)? Write about why it is your favorite song (is there a memory associated with it? Do you like the instruments? What other reasons are there why you like it?)

---- Please write 1-2 paragraphs for either option. Try not to make it too short or two long.
Session 9: Song Titles and Symbols

In the following song titles, try to get your partner to guess one of the following song titles. When reading song title, DO NOT read the words that are bold. Instead insert another word or words to represent

Song Title, Artist

99 Red Balloons, Nena
Against All Odds, Phil Collins
Alive and Kicking, Simple Minds
All Through the Night, Cyndi Lauper
Always Something There to Remind Me, Naked Eyes
Another Day in Paradise, Phil Collins
Another one bites the Dust, Queen
Another one rides the bus, "Weird Al" Yankovic
Any Way You Want it, Journey
Ashes to Ashes, David Bowie

Back On The Chain Gang, The Pretenders
Back to paradise, .38 Special
Beat it, Michael Jackson
Be good to yourself, Journey
Beds are burning, Midnight Oil
Big in Japan, Alphaville
Big Time, Peter Gabriel
Billie Jean, Michael Jackson
Black Coffee in bed, Squeeze
Blinded by the Light, Manfred Mann (1976)
Born in the USA, Bruce Springsteen
Brass Monkey, Beastie Boys
Breakdance, Irene Cara
Breaking the Chains, Dokken
The Break-up song (they don't write em'..), Greg Kihn Band
Burning Down the House, Talking Heads

Catch Me I'm Falling, Real Life
Chains of Love, Erasure
Chance, Big Country
Come On Eileen, Dexy's Midnight Runners
Crazy for you, Madonna
Crazy little thing called **Love**, Queen  
*Cruel Summer*, Bananarama  
Cruel To Be **Kind**, Nick Lowe  
Cult of **Personality**, Living Colour  
**Cuts** like a **knife**, Bryan Adams

**Dancing** in the **Dark**, Bruce Springsteen  
Dancing with **tears** in my **eyes**, Ultravox  
**Dancing** with myself, Billy Idol  
Dare to be **stupid**, "Weird Al" Yankovic  
**Dead Man's Party**, Oingo Boingo  
Don't Be **Cruel**, Cheap Trick  
Don't **Dream** It's Over, Crowded House  
Don't **Stand** So **Close** To Me, The Police  
Don't **Pay** the **Ferryman**, Chris DeBurgh  
Don't **Worry** Be **Happy**, Bobby McFerrin  
Do You Really Want to **Hurt Me**, Culture Club  
**Down Under**, Men at Work  
**Dude** (Looks like a **lady**), Aerosmith

Endless **Summer Nights**, Richard Marx  
**Englishman** in **New York**, Sting  
Enjoy the **Silence**, Depeche Mode  
Eternal **Flame**, The Bangles  
Every **Breath** You **Take**, The Police  
Every Time You **Go Away**, Paul Young  
Everybody Wants to **Rule the World**, Tears for Fears  
**Eye** of the **Tiger**, Survivor

**Feels so good**, Van Halen  
Fields of **Fire**, Big Country  
Foolish **Beat**, Debbie Gibson  
**Forever Young**, Alphaville  
**Fortress** around your **heart**, Sting

**Girls** Just Want to **Have Fun**, Cyndi Lauper  
**Girls** on **Film**, Duran Duran  
Greatest **love** of all, Whitney Houston
In the following song titles, try to get your partner to guess one of the following song titles. When reading song title, DO NOT read the words that are bold. Instead insert another word or words to represent:

**Song Title, Artist**

Hangin' **Tough**, New Kids on the Block
Heart and **Soul**, Huey Lewis & the news
The Heart of **Rock n' Roll**, Huey Lewis and the News
Heaven is a place on **earth**, Belinda Carlisle
Hit Me With Your **Best Shot**, Pat Benatar
**Hungry** like the **Wolf**, Duran Duran

(I Just) **Died** in your **arms tonight**, Cutting Crew
I'll Be **There** For **You**, Bon Jovi
In The **Air Tonight**, Phil Collins
It's The **End** of the **World** as We **Know** it, REM

**Jack** and **Diane**, John Cougar
**Janie's** got a **gun**, Aerosmith
**Jessie's Girl**, Rick Springfield

**Karma Chameleon**, Culture Club
King of **Pain**, The Police

The **Lady** in **Red**, Chris DeBurgh
Like a **Prayer**, Madonna
The **Longest** Time, Billy Joel

**Man** in the **Mirror**, Michael Jackson
Message in a **Bottle**, The Police

One in a **million**, The Romantics
**Open Arms**, Journey
**Orange Crush**, R.E.M
Owner of a **Lonely Heart**, Yes

**People** are **People**, Depeche Mode
The **Power** of **Love**, Huey Lewis and the News

**Psycho** Killer, Talking Heads

**Relax**, Frankie Goes To Hollywood
Rock the **Casbah**, The Clash
**Rock** you like a **hurricane**, Scorpions

**Safety Dance**, Men Without Hats
She **Blinded** Me With **Science**, Thomas Dolby
Something happened on the way to **heaven**, Phil Collins
**Summer** of '69, Bryan Adams
**Sweet** Child O' **Mine**, Guns n' Roses
**Sweet Dreams** (are made of this), Eurythmics

**Tainted Love**, Soft Cell [Back to Top]
Take **On Me**, a-ha
**Thriller**, Michael Jackson
Total **Eclipse** of the **Heart**, Bonnie Tyler

**Walk** Like An **Egyptian**, The Bangles
When **Doves Cry**, Prince
**Whip** it, Devo
Who Can It **Be Now**?, Men At Work
With or **Without You**, U2

You give **love** a **bad** name, Bon Jovi
You **Spin Me Round** (Like a Record), Dead Or Alive
### Session 5: Songlist for “The Waiting Game”

<table>
<thead>
<tr>
<th>Tempo</th>
<th>Title</th>
<th>Artist</th>
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<tbody>
<tr>
<td>VERY FAST</td>
<td>Countdown</td>
<td>John Coltrane</td>
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<tr>
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<td>Mr. P.C.</td>
<td>John Coltrane John Coltrane</td>
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<td>VERY FAST</td>
<td>Petrushka</td>
<td>Stravinski</td>
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<td>Salt Peanuts</td>
<td>Charlie Parker and Dizzy Gillespie</td>
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<td>VERY FAST</td>
<td>El Paso de Encarnacion</td>
<td>Cubanismo</td>
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<td>FAST</td>
<td>Egg and You</td>
<td>Yoko Kanno/Seatbelts</td>
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<tr>
<td>FAST</td>
<td>Piano Black</td>
<td>Yoko Kanno/Seatbelts</td>
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<tr>
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<td>Michigan Militia</td>
<td>Moxy Fruvous</td>
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<td>Odd Ones</td>
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<td>Bye Bye Blackbird</td>
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<td>FAST</td>
<td>Peter Gunn</td>
<td>Blues Brothers</td>
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<td>Too Good Too Bad</td>
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<td>MEDIUM</td>
<td>Beneath the Balcony</td>
<td>Iron &amp; Wine</td>
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<td>The Dodger</td>
<td>Aaron Copland</td>
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<td>MEDIUM</td>
<td>Flying Teapot</td>
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<td>MEDIUM</td>
<td>Oceanside</td>
<td>The Decemberists</td>
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<td>MEDIUM</td>
<td>A Road Is Just A Road</td>
<td>Mary Chapin Carpenter</td>
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<td>On Green Dolphin Street</td>
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<td>Shiny</td>
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<td>Prelude To A Kiss</td>
<td>Keith Jarrett</td>
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<tr>
<td>SLOW</td>
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<tr>
<td>SLOW</td>
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<td>Mary Chapin Carpenter</td>
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<td>SLOW</td>
<td>Don't Laugh at Me</td>
<td>Keane</td>
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<td>Johan de Meij</td>
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<td>Ashokan Farewell</td>
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<td>MEMORY</td>
<td>Yoko Kanno/Seatbelts</td>
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</table>
APPENDIX L

ORIGINAL SONG LYRICS
“Unnamed Song”

Jane was born on the 13th, a Friday
And her mom died on a Saturday
So her father, still dealing with the pain,
Always tried to push her away

But when it all comes down to it
She’s alright
Taking it one day at a time
As it comes

Always forced to be alone
for fear of detriment
Dad’s a work-aholic
and he’s hardly ever there

But when it all comes down to it
She’s alright
Taking it one day at a time
As it comes

Wilting like a flower
from lack of nourishment
Hollow eyes, looking glass,
vacant stare

But when it all comes down to it
She’s alright
Taking it one day at a time
As it comes

Now that she’s getting’ older
She’s lookin’ forward to bein’ bolder
Having her own place
Getting her own space

But when it all comes down to it
She’s alright
Taking it one day at a time
As it comes
“Sparkle, Sparkle”

Kira Kira hoshi ga
I'm counting on you, diamond in the sky
To grant my wishes
And you better not fail me

It's like taking steps up a stairway
It's a long and tiresome climb to that open door
A heavenly glow radiating off your prize
Is your fate in the hands of others?

Kira Kira hoshi ga
Inner soul help me
To make my dream come true
And you better not fail me

It's like taking steps up a stairway
It's a long and tiresome climb to that open door
A heavenly glow radiating off your prize
Is my fate in my hands?

Alien ghosts!
Conformity, it's not what we’re about
Don’t fall into the shadows
Alien ghosts!

EPIC Solo

It's like taking steps up a stairway
It's a long and tiresome climb to that open door
A heavenly glow radiating off your prize
We are in control of our own destiny!

Don't let others decide your fate
Don't give up on yourself/dream
“The Irish Explorer”

Like a dove in the night sky
I fly through the darkness, The black ocean,
I lower my hand and skim the waves
And the spray shines like falling stars

I fall, splash, swallowed by the sea
I swim to the beach
And fight the mountain lions on the sandy shore
Mountains I’ve never seen before
Call my name
Through caves and valleys I travel on
Always seeking home
Where I can finally rest

I’ve seen dolphins playing
White furry mountains
Scarves of light
And endless shades of ocean
Always seeking home
Where I can finally rest

In a village
The people sing a song
About the wind and the sea
And a king who found something precious
A mystery; I bet he found a warm heart
“I’ve Been Trying to Help”

Verse 1:
I’ve opened doors for you
You slam them in my face
You’ll have to get off your ass
I can’t just pull you out of this place
Because,

Chorus:
Your turn to speak
Your move to make
Your chance to roll
Your shot to take
Your mess you’ve made
Our future at stake
You’ll live the ending
Cuz this story ain’t fake

Solo

Verse 2:
You’re life with me packed, marked
fragile in pen
Fragile as the stilts in your fantasyland
You don’t have to go down that road again
Put down the needle and grab my hand
Because,

Chorus:
Your turn to speak
Your move to make
Your chance to roll
Your shot to take
Your mess you’ve made
Our future at stake
You’ll live the ending
Cuz this story ain’t fake

Solo

Bonus Chorus

Your life imploding
You’ll live the ending
When this song’s blasting on the radio
I hope you’re awake
And you take it to heart
For both of our sake
“Dante, King of the Hobos”

Once there was a man named Dante
Who was rightful heir to a throne
His name is unfamiliar
And his kingdom most likely unknown

His story starts with his parents
Who were the king and queen
Baby Dante was washed away by a storm,
One of the few times he was ever clean

He ended up in a sewer
Where he was greeted by some unlikely creatures
Exiled from their own land
They became Dante’s teachers

These gentle giants had a weakness
Or a blessing in disguise
They were elephants with anosmia
Who couldn’t smell to save their lives

Dante’s parents were overthrown
By a tyrant, named Johosephat
He was ugly, evil, and obese
Hence, the nickname, King-so-fat

King-so-fat came into office
He raised residential taxes first
Even though his subjects were very homeless
That just made it even worse

With his band of wretched knaves
He ruled with an iron fist
Trying to enact pima nochta
And acts too vile to list

He was so widely hated
That the people tried revolting
But they failed because they fell ill
For his smell was so …revolting

Years later when Dante came of age
He set out to find his true home
And found his people were enslaved
Building a statue of trash, not of stone

King-so-Fat had them build an idol
For he was so full of greed
Dante went to confront him
On his trusty Elephant Steed

He trampled the king’s minions
Prepared assault on the king
However, Johosephat wasn’t worried
For his stench has such a sting

Now, what the king didn’t know
What Dante learned from his strife
Immunity to terrible smells
A chance to end the king’s life

Dante sneaks up with his elephant
And gave the king a mighty shove
Johosephat rolled right off the throne
And Dante then ruled from above

Dante’s subjects were very elated
As he reversed all the laws
To celebrate his new kingship
A statue was to be built?

Hmm… eh …whatever. Party!
“The Untouchables”

Verse 1:
Knew you were beautiful
From the first moment I saw you
And now my feet can’t touch the ground
Cause the thought of you wells up inside me
And shoots me through the air…
Round and round

Chorus:
Like a love rocket
Soaring through the air
Being up with you
Without a single care
Like a love rocket
Soaring through my heart
It’s a shame we were forbidden from the start…

Verse 2:
I’d like to meet you once
Would you like to see me again?
I think there’s a chance that I could be
More than just your friend
We could do anything you want
How does that sound?

Like a love rocket
Soaring through the air
Being up with you
Without a single care
Like a love rocket
Soaring through my heart
It’s a shame we were forbidden from the start…

Verse 3:
I thought it was worth mentioning
That although it may hurt
If we’re destined to be friends
Than I guess that’ll work
If we can’t go further
I’d still like to flirt

Chorus:
Like a love rocket
Soaring through the air
Being up with you
Without a single care
Like a love rocket
Soaring through my heart
It’s a shame we were forbidden from the start…

…And now we have to part…
…But still be sweet as a tart…

Like a love rocket
Soaring through my heart
It’s a shame we were forbidden from the start…

Like a love rocket
Soaring through my heart
It’s a shame we were forbidden from the start…

Like a love rocket
Soaring through my heart
It’s a shame we were forbidden from the start…
REFERENCES


BIOGRAPHICAL SKETCH

James R. Maxson

EDUCATION

• Bachelor of Music in Music Composition – August 2000 –
  Cum Laude, Ithaca College, Ithaca, NY
  May 2004

PROFESSIONAL EXPERIENCE

• Good Samaritan Church – Tallahassee, FL August 2008 –
  o Music instructor, Kindermusik

• Stubbs’ Music Center – Tallahassee, FL August 2005 –
  o Private and Group Music Instructor

• Institute or Therapy through the Arts – Chicago, IL January 2008 –
  o Music Therapy Intern
  July 2008

• Southeast Works, Inc. – Buffalo, NY January 2005 –
  o Day Habilitation
  July 2005

  o Social Therapist, Nursing Assistant
  January 2005

CERTIFICATION AND TRAINING

• Certified NICU-MT – Specialized music therapy August 2007
  training in a neonatal intensive care unit