MUSIC-PLAY AND COMMUNICATION IN CHILDREN WITH AUTISM AND THEIR FAMILIES: AN ETHNOGRAPHIC STUDY

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ABSTRACT

This is an ethnographic research study regarding the nature of commun-, ication, musical behavior, emotional expression, and social relationships in children with autism. Four children completed the study by participating in at least three private music-play sessions attended by the child, his or her mother, and the researcher. All music-play sessions were person-centered and child-led. A local public elementary school hosted the music-play sessions in the music classroom after school hours. In addition, the school supplied all the musical instruments used in the study. The researcher utilized the SCERTS Model assessment tool to examine each child's abilities in socio-musical communication and emotional regulation throughout the study.

The research design is an ethnographic study of the children's reactions to music-play and their use of the music-play sessions to express their emotions, communicate with the researcher and a parent, connect with others in an environment free of neurotypical communication requirements, and engage in social interaction in the form of socio-musical games. Each child led the researcher to conclusions about the functionality of music-play, the use of music in therapeutic programs, the nature of relationships between individuals with autism and their family members, and possible ways to promote open discourse between family members of children with autism and proponents of neurodiversity.

CONTENTS

GLOSSARY

affect. A term for describing an observation of expression of emotion.

Applied Behavioral Analysis (ABA). An educational intervention available to children with autism based on the application of behavioral principles.

Artism Ensemble. A musical ensemble hosted by Florida State University that includes children with autism, their co-participating parents, and professional musicians.

autism spectrum disorders. A series of developmental disorders that impact a child's social interactions, communications, and other developmental tasks.

Board Certified Behavioral Analyst (BCBA). A professional who obtains a graduate-level certification in behavioral analysis.

Discrete Trial Training (DTT). The earliest form of Applied Behavioral Analysis, designed by Dr. Ivar Lovaas in 1987.

disorder-focused approach. An approach to medical research that emphasizes the disease or disorder over and above the personhood of the individual.

echolalia. The repetition of speech produced by an outside source. *Immediate echolalia* happens when this speech immediately follows the modeling source, while *delayed echolalia* occurs when this speech is produced at a later time.

music-play. A child-led approach to music-making in which musicians, parents, and others attempt to engage in musical communication with children.

interactive communication. Any communication that occurs between two or more individuals with the intent to express information, feelings, or thoughts.

joint attention behaviors. Any communication that attempts to share focus on an object.

medical ethnomusicology. An emerging field within ethnomusicology that seeks to explore the role of music in health.

Music-Play Project (MPP). A research project led by Michael Bakan and Benjamin Koen at Florida State University that sought to study autism from an ethnomusicological perspective.

music therapy. The use of music in a clinical setting to achieve health and wellness.

neurodiversity. A perspective on neurological disorders such as autism that perceives such differences not as disorders but as normal variations of human genetics.

neurotypical. A label coined by the autism community for any individual who does not have an atypical neuropathy.

person-centered approach. An approach to medical research that emphasizes the personhood of the individual, including both strengths and weaknesses.

SCERTS. An educational intervention and assessment tool designed to enable educators, therapists, and caregivers to collaborate in designing and implementing optimal care for children with autism.

sensory integration. The neurological system within the body that organizes bodily and environmental stimuli.

social stories. A therapeutic tool used by educators, therapists, and caregivers to teach language, social skills, and alleviate anxiety among children with autism.

stimming. A term used in the autism community to denote behaviors used by individuals with autism. Researchers disagree on the exact cause of stimming behavior.

Verbal Behavior Approach (VBA). An educational intervention based on Applied Behavioral Analysis that intends to enhance language learning in children with autism.

CHAPTER 1

INTRODUCTION

Statement of the Problem

Today, one out of every sixty-eight children is diagnosed with an autism spectrum disorder (Organization for Autism Research), and each of these children will likely utilize a unique combination of therapeutic interventions throughout his or her lifetime. Parents and family members of children with autism long to communicate effectively with their children, but the combination of autism symptoms, including lack of or delay in spoken language and the appearance of a lack of interest in social relationships, makes this extremely difficult. Because of the numerous symptoms of autism that manifest in a variety of ways unique to each individual, autism research crosses disciplinary boundaries (Autism Society of America). Music tends to elicit positive responses from individuals with autism, and therapists and caregivers use it frequently with these individuals to teach, heal, and introduce behavior modifications. While most research on autism is disorder-focused, an ethnomusicological approach to studying autism could provide holistic benefits to individuals with autism and their families. Engaging in music-play with family members may allow children with autism to communicate more clearly. Improved communication between family members and people with autism may foster stronger bonds and better relationships.

Studies on autism and potential autism interventions tend to focus on the symptoms of the disorder. In contrast, this study employs a person-centered

approach. To do so, I shift the focus on children with autism by emphasizing their strengths, individuality, and ability to communicate in unconventional ways.

While much of the past research relating to music and autism comes from the field of music therapy (Brownell 2002; Degmecic and Kaplan 2005; Kern 2006; Walsworth 2007; Kim 2008; Katagiri and Walsworth 2009), a contrasting approach to autism research comes from the field of medical ethnomusicology (Bakan et al. 2008a, Bakan et al. 2008b, Bakan 2009). Observing children in an improvisational music-play setting they dubbed the Music-Play Project (MPP), Michael Bakan and his team of researchers took a person-centered approach in their study and analysis (Bakan 2009, 516). Bakan later expanded his ideas on an ethnomusicological approach to autism in a series of articles from 2014 that examined the epistemology of autism and how cultural relativism can shift the "pathology paradigm" of current views on the condition (Bakan 2014a). The present study examines this ethnomusicological approach to autism by engaging in a person-centered approach with each study participant while also utilizing data gathered from a recognized educational model for autism assessment.

Need for the Study

The value of autism studies from the fields of music therapy and education is undeniable. Outcomes from such studies have resulted in significant advancements in therapeutic treatments for the autistic population. However, these studies tend to focus on the symptoms of autism, and thus highlight the weaknesses of individuals with autism. Across almost all disciplinary boundaries, past research focuses on autism as a disorder of the brain, rather than using a holistic approach

that takes into account the individual's strengths along with his or her weaknesses. Quantitative studies from these fields run the risk of emphasizing the disorder and its potential treatments over and above the personhood of the individual with autism. Disorder-focused research from the field of music therapy includes Brownell 2002; Kim 2008; and Kaplan, Katagiri, and Walsworth 2009. Disorder-focused research from the field of education includes Simpson 2009. Bakan and his research team sought to remedy this in their person-centered approach. Researchers included parents during improvisational music-play sessions and directly solicited parent feedback on the reactions of children with autism to the music-play sessions (Bakan et al. 2008a, 184), but further study is needed to determine reactions to music-play from different samples of children, how these reactions reflect their individuality and person-hood, and how their parents or caregivers perceive these reactions in light of their role as caretakers.

Purpose Statement

Using an ethnographic study, I examined the effects of music-play on interactive communication between children with autism and their families. I utilized the SCERTS autism assessment model to provide a framework for examining the abilities of children with autism and their communicative reactions to music-play. SCERTS stands for social communication, emotional regulation, and transactional support (Prizant et al. 2006, 1). Interviews with family members of the children with autism from the study sample provided insight into the children's personalities, strengths and weaknesses, the impact of music-play, and the lives of families facing an autism diagnosis. Qualitative data provided specific case studies

demonstrating the relationship between music-play and interactive communication through closer examination of each child's musical expressions and interactions with family members and the researcher.

Research Questions and Sub-Questions

To study the children themselves, I explored how children with autism perceive musical communication. Do children with autism choose to communicate through music, and if so what type of musical communication do they use for interaction? How do children with autism convey thoughts through their musical actions and interactions? When exploring the relationships of children with autism and their parents, I discovered a variety of ways that parents of children with autism are able to interact with their child musically both in the music-play environment and in the home setting, how parents use music to communicate with their child, how music-play may contribute to positive parent-child interactions, and how music-play may bring about opportunities for children with autism to improve in their abilities to communicate interactively.

In the study I explored the relationships between a number of variables. How do children with autism react to music-play? How do the parents of children with autism achieve positive communicative interaction? How and how often do families of children with autism choose to engage in music-play at home? What other therapies or treatments did these children receive during the experimental period? The study determined that music-play may create an avenue of communication between family members and children with autism. In addition, other therapies or treatments may influence the effects of music-play on

communicative interactions between family members and children with autism. Using qualitative data in the form of case studies of several children taking part in music-play, I explain how music-play may help to change the nature of positive communicative interactions between these children and their family members.

Delimitations of the Study

I used the research questions as both guides and boundaries during the study. While educators, therapists, and caregivers often use the SCERTS Model educational tool to design intervention programs utilizing customized therapies and therapeutic settings, exploring the multitude of interventions available to children with autism is beyond the scope of this study. In addition, I used this study for the specific purpose of examining the effects of music-play on interactive communications between children with autism and their parents or caregivers. Future studies may scrutinize the effects of music-play on sibling or peer relationships, as well as on academic performance. This study is not intended to evaluate the merits or effects of music therapy, since I am not a music therapist and I approach the study from an ethnomusicological perspective.

Limitations of the Study

The limitations of this study come from the use of a sample of volunteer families. The families that volunteered for the study had an existing interest in their child's response to music and music-play. Using volunteers limited the sample size and prevented the sample from representing a large variety of backgrounds in both the children with autism and their parents. In addition, the sample was limited to

one geographic area. Furthermore, children with autism in the sample also received supplemental and educational therapies outside of this study to improve their interactive communication skills during the time period in which the study took place. The sample was limited to children on the autism spectrum between the ages of three and twelve, along with one participating parent. The study included children and parents from similar ethnic backgrounds, and included both Caucasian and African American participants.

Assumptions

In conducting this study, I assumed that both children with autism and their parents desire interactive communication. Furthermore, I assumed that improvements in interactive communication are achievable through therapeutic interventions. From a musical standpoint, I assumed that improvisation comes about through a certain type of "musical communication," in which fellow musicians creating music together must rely on each other to evoke a desired sound. Musical communication is successful when musicians join together in the co-creation of improvised sound. I also assumed that children with autism had a desire to communicate with people who are neurotypical. I assumed that musical improvisation provides a unique mode of communication that may be more comfortable and accessible to children with autism. Furthermore, I assumed that people with autism should be recognized for both their strengths and weaknesses, and that parents, caregivers, educators, and therapists seek to improve the quality of life for these individuals. I assumed that one way to improve the quality of life for

children with autism and their families is to provide them with a common way to enjoy musical communication and experiences together.

CHAPTER 2

LITERATURE REVIEW

Introduction

Usually appearing before a child is three years old, autism is a developmental condition that affects a child's ability to engage in social interactions with others, communicate with others on a level typical of other children his or her age, and accomplish other developmental tasks and behaviors (Danya International, Inc. 2003, 1). Though these are the most typical characteristics of an individual with an autism condition, characteristics are difficult to define and categorize because of the range of ability levels displayed in different persons with an autism diagnosis. The Autism Society of America presents the earliest symptoms of autism as including a lack of or delay in spoken language, repetitive use of language and/or motor mannerisms, little or no eye contact, a lack of interest in peer relationships, lack of spontaneous or make-believe play, and persistent fixation on parts of objects. Because of the broad nature of these symptoms, research into these conditions has traditionally spanned across various medical and educational disciplines. The cross-disciplinary nature of autism research results in differing theoretical perspectives (Danya International, Inc. 2003, 45).

While autism research is cross disciplinary, a large amount of this research has understandably been disorder-focused, presenting mainly systematic scientific studies of current and proposed treatment methods designed to alleviate symptoms and teach individuals with autism to overcome their weaknesses. Media coverage of autism and the presentations provided to parents and caregivers have flowed from

this model, traditionally seeking to present an optimistic outlook on promising therapeutic treatments and highlighting the skills of people with autism that have remarkable strengths and talents. The traditional disorder-based approach to autism research provides continual access to a growing body of therapeutic treatments and increased understanding of the biological components of autism; however, new approaches from other fields have much to offer as well.

The growing field of medical ethnomusicology recently began to take a cultural and person-based approach to autism research. Benjamin Koen describes this approach as emphasizing the "personhood" of a child with autism (Koen 2008, 467). Borrowing this philosophical model from a work on dementia by Tom Kitwood, Koen states,

> As a starting point, participants in the autism discourse should emphasize the personhood of the child first, and we enthusiastically support a holistic view that includes not only the biopsychosocial domains but the emotional and spiritual domains as well. If we case our study in Kitwood's parlance, we would see not a "person with *autism"* but a "*person* with autism" which shifts the focus to personhood, or beingness, rather than a focus on a pathology, disease, dysfunction, condition, or "disability"(Koen 2008, 467).

Such an approach coincides with modern ethnomusicological premises and the belief that all musics from all cultures are worthy of academic study. In this way, ethnomusicological research offers a new and unique perspective on autism studies utilizing a person-based approach to understanding individuals with autism, including both their strengths and weaknesses.

Music Therapy and Autism

Music therapy is utilized frequently as a treatment option for individuals with autism spectrum conditions because of the typically strong and positive

response it receives. In his study entitled "Musically Adapted Social Stories to Modify Behaviors in Students with Autism: Four Case Studies," Mike D. Brownell highlights three conclusions about the musical responses of people with autism:

1. Many autistic children perform unusually well in musical areas in comparison with most other areas of their behavior, as well as in comparison with many normal children.
2. Many autistic children respond more frequently and appropriately to music than to other auditory stimuli.
3. Little is known about the reasons for the musical responsiveness of autistic children. However, the most promising explanation may lie in the knowledge of brain dysfunction and perceptual processes of autistic children (Brownell 2002, 124).

Dunja Degmecic, Ivan Pozgain, and Pavo Filakovic explore explanations for music's power in therapy and healing in a 2005 article published by the Croatian Musicological Society. They present the idea that music's ability to affect the nervous system directly allows it to connect with individuals across a large range of ability levels. "Music has its effect directly on our autonomic nervous system, causing different kinds of autonomous bodily reactions. At this level, we don't need intelligence to comprehend or understand music. Music touches a severely mentally retarded patient or a highly educated professor of philosophy in the same way" (Degmecic 2005, 289).

Dr. Daniel J. Levitin examines the neurology of music in his book *This is Your Brain on Music: The Science of a Human Obsession.* Levitin is a session musician-turned-neuroscientist who believes that "understanding why we like music and what draws us to it is a window on the essence of human nature" (Levitin 2006, 7). The music-neuroscience connection is confirmed through studies which show that music engages every known area of the brain (Levitin 2006, 9). Levitin makes

frequent comparisons between our cognition of music and our cognition of language. "Our brains learn a kind of musical grammar that is specific to the music of our culture, just as we learn to speak the language of our culture" (Levitin 2006, 108). This connection between music and language cognition may indicate differences in the neurological processing of musical stimuli for people with autism, since language processing is a known obstacle for many of them. Further study on the neurological similarities between language processing and music processing could shed light on the differences between the autistic and neurotypical brains. Examining the creation and composition of music by people with autism could tell us whether or not they absorb the sounds of their musical culture of origin in the same way as neurotypical people. Levitin states,

> We interpret spoken language analogously. There is nothing intrinsically catlike about the word *cat* or even any of the letters in the word. We have learned that this collection of sounds represents the feline house pet. Similarly, we have learned that certain sequences of tones go together, and we expect them to continue to do so. We expect certain pitches, rhythms, timbres, and so on to co-occur based on a statistical analysis our brain has performed of how often they have gone together in the past (Levitin 2006, 113-114).

However, Levitin seems to miss the value of neuroscience and music for disability studies when he makes generalized statements about people with autism:

> A marker of ASD is the inability to empathize with others, to understand emotions or emotional communication, particularly emotions in others. People with ASD can certainly become angry and upset, they are not robots. But their ability to "read" the emotions of others is significantly impaired, and this typically extends to their utter inability to appreciate the aesthetic qualities of art and music…they do not report being emotionally moved by music (Levitin 2006, 259).

Millions of music-loving people with autism and their families would strongly disagree with this idea.

Music therapy can address skill-building in areas like communication and language while simultaneously enhancing psychological functioning and providing a healing influence on individuals (Degmecic 2005, 287). For people with autism, however, music therapy studies generally focus on therapeutic interventions intended to treat neurological symptoms and build skills in areas of weakness. For example, Brownell's article includes four case studies on the use of originally composed music in conjunction with social stories, a commonly used therapeutic tool intended to aid in teaching language and social skills (Brownell 2002, 117). Researchers hypothesized that students who enjoyed music more than verbal interactions would retain information presented in a social story more efficiently if the information was presented in a musical format (Brownell 2002, 125).

In another study conducted in Japan and presented in an article by June Katagiri, twelve students with autism were taught to decode and encode four emotions, with some of the students receiving verbal instructions accompanied by background music and others learning the emotions through newly composed songs (Katagiri 2009, 15). Another study by Petra Kern and David Aldridge attempted to improve peer interactions and meaningful outdoor play among children with autism in a community-based childcare program (Kern 2006, 270). To do this, researchers provided the students with a "music hut" located near other outdoor play areas and incorporated various levels of peer and teacher interaction (Kern 2006, 275). All of

these studies use music therapy techniques to teach communication and social interaction skills.

Music therapy researchers often combine their efforts with other proven or promising therapies or techniques, expanding the usefulness of these methods and allowing music therapists to present generally successful outcomes in measurable quantitative studies. Brownell's study using social stories illustrates this type of work, since social stories were an established teaching method for individuals with autism prior to his research (Brownell 2002, 120). Another example of the incorporation of popular teaching assessments and therapies together with music therapy is Darcy DeLoach Walworth's research article, "The Use of Music Therapy within the SCERTS model for Children with Autism Spectrum Disorder." Designed prior to Walworth's research, the SCERTS model is a comprehensive curriculum intended to assess and identify goals and objectives across disciplines for the treatment of autism (Walworth 2007, 2). Walworth's study emphasizes the need for music therapists to become a part of this multidisciplinary assessment (Walworth 2007, 2). Another article by Ronna S. Kaplan explains the importance of establishing quantifiable records of the positive influence of music therapy interventions (Kaplan 2005, 17) to ensure continued funding and recognition of the significance of music therapy in autism treatment plans.

However, the need to present quantified studies showing successful music therapy interventions in people with autism tends to allow research and therapies based on skill-building to overshadow the healing and psychological benefits of music therapy for these individuals. This contributes to a disorder-focused

approach to autism research in general. Brownell's article in particular presents a disorder-centered perspective on people with autism. In the introductory information provided, statements about autism primarily highlight weaknesses and neglect to mention strengths. Statements about the weaknesses of individuals with autism in this article could be interpreted as derogatory. For example, Brownell states, "Social skill deficits typically encompass all areas of social interaction and are pervasive throughout the lifespan" (Brownell 2002, 119). Because of the wide range of ability levels in people with autism, this statement is not necessarily true for all individuals. In another part of the article Brownell explains, "During childhood, there tends to be a lack of interest in forming [peer or parent] relationships" (Brownell 2002, 118). While it is a possibility that this may be true for some people with autism, parents of children with autism, as well as full time educators who work with these children believe this is untrue (Pamela Woodward, March 2010, personal communication).

Autism and Educational Interventions

Educational interventions are also a major component in the treatment of autism. Symptoms of autism spectrum conditions, such as difficulties with communicative language and sensory integration differences, require unique approaches and methods in educating children with autism, along with curriculums that cover not only academics, but language usage, communication, and social and behavioral skills. While neurotypical, or non-autistic children learn much of their language, communication, and social skills in their natural environment, individuals with autism commonly need formalized instruction to learn how to modify their

behaviors to function in the neurotypical world. Therefore, much educational research in autism studies focuses on developing the necessary effective teaching methods.

As in music therapy, educational autism studies are typically treatment-oriented, utilizing scientific and quantified research to determine new and effective methods. Studies usually focus on teaching toward a child's weaknesses, i.e. their symptoms of autism. Research rarely investigates addressing a child's strengths, and the overwhelming educational needs of individuals with autism leave teachers with few ideas and little opportunity to focus on existing abilities. By necessity and practicality, educational researchers take a disorder-centered approach. For example, in her book *The Verbal Behavior Approach: How to Teach Children with Autism and Related Disorders,* Mary Lynch Barbera indicates that the teaching methods that make children with autism the happiest may not be the same methods that increase the production of appropriate language. "I've also seen non-behaviorally-based programs that are even more detrimental. The child may appear to be more content, but, without an understanding of how to get a child to communicate and what skills need targeting, the chances of developing a willing learner and documenting great improvement in language are bleak" (Barbera 2007, 24). The SCERTS Model, an educational tool for assessing children with autism and designing individualized educational curriculums and interventions, attempts to circumvent some of the pitfalls of a strictly disorder-centered approach by assessing strengths along with weaknesses:

> Children with ASD clearly demonstrate variability in their profile of strengths and needs. In fact, in terms of strengths and needs, one child with ASD may

> be more like a typically developing child or a child with a different developmental disability such as a developmental language disorder than like another child with ASD. Therefore, the results of a comprehensive assessment of a child's strengths and needs is directly linked to educational goals and approaches for that particular child (Prizant et al. 2006, 15).

Because of their many complex needs, children with autism often require different curriculums and teaching methods than neurotypical, or non-autistic, children. Educational research utilizes proven teaching methods and analyzes what skills teachers can present using these methods. One successful treatment method commonly used with people with autism is Applied Behavioral Analysis (ABA). According to the Organization for Autism Research, "ABA is based on the premise that behaviors are learned and can, therefore, be shaped through the systematic application of behavioral principles" (Danya International, Inc. 2004, 6). The earliest form of ABA is a method called Discrete Trial Training (DTT), designed by Dr. Ivar Lovaas in 1987 (Barbera 2007, 17). Another commonly used method of ABA teaching is the Verbal Behavior Approach (VB). VB is designed to "enhance a child's ability to learn functional language" by using B.F. Skinner's findings on verbal behavior in children (Barbera 2007, 19). This is the method promoted and explained by Barbera in her aforementioned book. Barbera explains this system in such a way that educators and parents can easily incorporate the Verbal Behavior Approach into their teaching methods.

Music is frequently included in educational interventions because of the strong response and success seen in music therapy research. Studies using music typically involve incorporating musical interventions into previously successful methods to increase understanding and mastering of skills. For example, an article

by Vickie Kleeberger and Pat Mirenda called "Teaching Generalized Imitation Skills to a Preschooler with Autism Using Video Modeling" explains how useful imitation skills may be enhanced when video modeling is presented in tandem with ABA techniques (Kleeberger 2010, 116). During the study researchers used preschool songs with ABA techniques, and as a result the child learned new imitative behaviors and generalized previously mastered skills into different contexts of usage (Kleeberger 2010, 116).

Further development of educational autism research is needed in the area of practical methods for educating children with autism in "special" subjects. Specialist teachers who do not interact as frequently with students with autism as the regular classroom teachers or special education teachers do often teach these subjects, such as visual art, music education, and physical education. Specialist teachers such as these often receive minimal training on the needs of special education students, yet these teachers are expected to lead the way in including these students in activities with neurotypical peers. The National Association for Music Education (NAfME), formerly Music Educators National Conference (MENC), has published a compilation of short articles on the specific needs of special education students involved in an inclusive music curriculum. This book, *Spotlight on Making Music with Special Learners* (2004), addresses both physical and neurological disabilities. Most of these articles contain only anecdotal stories from other music educators on including children with special needs. The articles reveal little knowledge of the specific needs of students with autism or how to address those needs. Special subject teachers need practical ways to educate students with

autism in an inclusive setting so that they can address the needs of these students and offer them the unique opportunities for growth that their subjects provide.

Autism Research

Investigating the many disciplines and theoretical approaches of autism research is beyond the scope of this study; however, how autism research is made both available and accessible to individuals outside the research community is important to address. While most individuals with autism spend considerable time working with professionals trained in biological, psychological, educational, linguistic, or other therapeutic treatments for autism, most will also spend a large portion of their time with untrained individuals who are nevertheless dedicated to their care. For parents and caregivers of children diagnosed with autism, finding and interpreting information on autism treatments, therapies, and other research is essential to creating and maintaining a home environment that enhances the educational and therapeutic opportunities provided by professionals while also building confidence and contentment in their child. From a practical standpoint, parents of children with autism face the overwhelming task of encouraging positive and managing negative behaviors, along with teaching life skills, such as feeding and dressing oneself, that may be overlooked by professionals. Furthermore, many children with autism will be educated at some point in an "inclusion" classroom, where they will receive the same curriculum and instruction as their neurotypical peers and work primarily with a regular classroom teacher.

For these teachers and parents, accessible, practical, and accurate information on autism, its therapeutic treatments, and educational methods is

necessary. Research organizations are paying increased attention to the needs of classroom teachers, parents, and caregivers by providing information on current research, as well as information on how to access and read scientific research in order to make appropriate choices for their child. Founded in December 2002, one of the main objectives of the Organization for Autism Research (OAR) is "to deliver practical information and tools to ease the burden on the front-line caregivers" (Danya International, Inc. 2003, iii). This information is provided in the form of a series of research guides for parents and teachers, an annual research and intervention conference, and a monthly e-newsletter. OAR also provides funding for numerous research studies.

General Information on Autism Spectrum Disorders

The presentation of autism in the general media, as well as in books and guides published specifically for parents plays a key role in determining the attitude and perspective of the culture toward individuals with autism. While books and guides for parents have the additional task of providing useful and practical information, most of these sources also aim to present an optimistic or even endearing picture of the child with autism. Maintaining an optimistic outlook on autism is necessary in autism research for many reasons. Optimism encourages parents facing the mental and emotional strains of an autism diagnosis and creates awareness and interest in the support and funding of more research. Consumers of information on autism should take care to note, however, that individuals with autism have varying ranges of intelligence, talent, and ability, just as neurotypical individuals do. Frequently people with autism who have strong talents and unique

intellectual abilities are highlighted in the media. While such individuals certainly deserve attention for their abilities, such presentations perpetuate the image of the autistic savant, who excels at a specific skill while perhaps having low functioning abilities in language and social skills. In fact, such individuals are as rare in the autism community as they are in the neurotypical community. This is the image that is presented in a 2008 article from *Cincinnati Magazine,* entitled "The Sound of Silence." This article describes the developing musical abilities of Latron Dodd, a student with autism who is learning to play the piano from memory with the help of a music therapist and teacher. Despite being completely nonverbal, Dodd is able to play complex piano pieces well, perform in recitals, and work as an accompanist to other music classes. While Dodd's talents are certainly worthy of recognition, this kind of unusual talent is not the norm among individuals with autism.

In contrast, the 2008 film *Autism: The Musical* succeeds in showing the range of abilities, talents, and skills of people with autism, as well as the varying ways that music can provide opportunities for communication. The film is valuable for its realistic presentation of these students' abilities and their parents' struggles. While being appropriately realistic, the film is also uniquely uplifting. Its most distinctive feature is that unlike most autism research, that is disorder-centered, the film provides a person-centered perspective on autism. This inspirational perspective is attributable to acting coach Elaine Hall, who seeks to empower these children by leading them in the production of a short play.

Whether or not this optimistic perspective on a diagnosis of autism is effective in aiding parents of children with autism in maintaining a level of optimism

toward their child and his or her abilities is unclear. Anecdotal evidence from my study reveals that, for the most part, parents of children with autism are stressed and overwhelmed by the multitude of therapies and interventions available to their children, and perhaps even more overwhelmed by therapies they believe to be necessary that are nevertheless unavailable to them for geographic or financial reasons. Consequently, the person-centered approach offered by modern ethnomusicology may provide some welcome relief to parents who spend a great majority of their time researching, engaging in, and reinforcing therapeutic interventions for their child.

Medical Ethnomusicology and Autism Research

The person-centered approach shown by Hall in *Autism: The Musical* is unfortunately lost in much academic and medical research on autism. The very real need to develop proven treatments and therapies results in a continual focus on symptoms and weaknesses associated with autism spectrum disorders. Such a focus is necessary, but when considering the impact of a lifetime of weakness-centered therapies on a child diagnosed with autism, many individuals with autism understandably also experience symptoms of depression and low self-esteem. While such symptoms may be attributed to many other aspects of the disorder, people with autism also need therapies and treatments that focus on their personhood.

While the field of ethnomusicology is no stranger to scientific methods, the philosophies and theoretical models of modern ethnomusicology often utilize a culture-based approach with an anthropological focus on the individual or culture

group. This focus makes the emerging field of medical ethnomusicology the ideal place for a person-centered approach to autism research. Benjamin Koen defines medical ethnomusicology as "a new field of integrative research and applied practice that explores holistically the roles of music and sound phenomena and related praxes in any cultural and clinical context of health and healing" (Koen 2008, 4). The incorporation of cultural and holistic knowledge from a range of disciplines allows medical ethnomusicology to endow autism research with a unique perspective that is both therapeutic and science-based, while maintaining a focus on the individual and his or her interactions.

Beginning in 2005, Michael Bakan and Benjamin Koen's Music-Play Project (MPP) was a unique and therapeutic opportunity at Florida State University for children with autism. While the program was research-based, children who participated experienced numerous benefits from involvement because of its combination of therapeutic goals and ethnomusicological principles (Bakan et al. 2008a, 167). The MPP sought to overcome the negative connotation of the autism label by proceeding from a belief that individuals with autism desire to interact with others on a social and cultural level (Bakan et al. 2008a, 167). Early case study evidence from the MPP showed the accuracy of this premise, directly contradicting the commonplace belief that individuals with autism lack a desire for interpersonal relationships (Brownell 2002, 118).

While early efforts in the MPP used primarily qualitative ethnographic research methods, in early 2009 researchers began a project to incorporate the popular SCERTS Model of autism spectrum disorder assessment into the previously

designed method (Bakan 2009, 512). Utilizing the SCERTS method allowed MPP researchers to engage in a research protocol of evidence-based scientific study while maintaining the program's ethnomusicological priorities. Researchers noted promising outcomes in the areas of social and emotional growth for children with autism (Bakan 2009, 512).

The Music-Play Project evolved over time and eventually became The Artism Project, an "intergenerational, intercultural, intermusical, and neurodiverse creative music performance collective that features four to five children with autism spectrum conditions, their co-participating parents, and professional musicians of diverse musicultural background performing improvisation-driven music together" (Bakan 2014c). ARTISM is an acronym for "Autism: Responding Together in Sound and Movement" and its philosophy "assumes autistic ability and competence rather than symptomatizing autistic disability and inability; that interprets autistic modes of communicating, socializing, and musicking as inherently in tune rather than out of tune; and that looks at and nurtures what is already present and right rather than seeking to establish what is missing and wrong" (Bakan 2014c). Though Artism received some criticism from the autism community (Bakan 2014c), it and other ensembles that may develop from its example have the capacity to allow people with autism the opportunity to not only create music without fear of judgment or criticism based on their so-called disability, but to find value in the very neurological differences that set them apart from the neurotypical population. Participating or observing family members can then see their loved one with autism coming together with others to communicate in way that is both creative and productive,

and that produces an end product that displays the innate and unique abilities of each collaborator.

Conclusion

The increased prevalence and diagnosis of autism spectrum disorders in children and adults has resulted in increased awareness, research, and at times misconceptions about these disorders. The vast range of symptoms and ability levels of individuals with autism necessitates a cross-disciplinary approach to autism research, with a variety of theoretical perspectives represented (Danya International Inc. 2003, 45).

Music plays an ever-increasing role in the research and development of therapeutic treatments for individuals with autism because it elicits a strong positive response from most people (Brownell 2002, 124). Autism research in the fields of music therapy and education has been disorder-focused by necessity, and therapeutic techniques and teaching methods focus primarily on skill building and seeking to overcome common symptoms and weaknesses associated with autism.

Information on autism research made available to parents, caregivers, and educators outside the autism research community provides practical and accessible strategies for the care of children with autism. However, at times such information fails to present a complete picture of the strengths and abilities of individuals with autism. While media presentations generally seek to offer an optimistic perspective on autism, this goal can lead to misconceptions about the talents and abilities of people with an autism diagnosis. Mass media presentations of autism need to present a realistic portrayal of the hardships endured by individuals with autism

and their families, while still maintaining a focus on the unique strengths of the individual, regardless of his or her diagnosis.

The person-based approach common to anthropology and ethnomusicology can provide a much-needed shift in perspective on individuals with autism. Highlighting the personhood of people on the autism spectrum can lead to greater understanding of the condition and the varying strengths and abilities of these individuals. Medical ethnomusicology's holistic and cross-disciplinary approach offers autism research a person-centered view of autism spectrum conditions. The promising research of the Music-Play Project at Florida State University presents new opportunities in ethnomusicology and autism research by balancing scientific evidence-based research models with modern ethnomusicological principles, and the advent of The Artism Project extends that research into the realm of applied ethnomusicology, allowing this research to have a direct impact not just on the academic community, but on the autism community as well. Person-centered research can only serve to benefit both the field of ethnomusicology and the field of autism studies, but more importantly it will provide therapeutic opportunities while celebrating the strengths and individualities of children and adults with autism.

CHAPTER 3

METHODOLOGY

Because autism research crosses disciplinary boundaries researchers must write study results that can communicate to a variety of fields. Qualitative study lends a person-centered approach that can emphasize both the strengths and weaknesses of children with autism and their parents. Utilizing portions of the SCERTS Model for autism assessment allows me to present information about each child in a comparative, measurable framework that nevertheless remains consistent with a person-centered approach. Collecting both types of data simultaneously enabled me to think critically about how the types of data interact, and to draw conclusions through data comparison.

The chosen methodology also presents challenges. While the SCERTS Model assessment allowed me to see each child's strengths and weaknesses, it also set a standard for a therapeutic approach that put the assessor in a position of desiring to instruct in a way that promotes change in the subjects. I confronted this challenge by utilizing a social constructivist worldview and by permitting music-play to remain child-led. This strategy allowed the qualitative method to guide the project, while the SCERTS assessment data supported the results and enhanced my understanding of each child. I chose to use the SCERTS Model because of its well-known value for professionals in the autism community (Bakan 2009, 513), and its ability to collect measurable data while maintaining a person-centered approach.

As explained in "Measuring Happiness in the Twenty-First Century: Ethnomusicology, Evidence-Based Research, and the New Science of Autism,"

Michael Bakan and his researchers from the Music-Play Project incorporated the SCERTS Model into their study without any need to alter their original person-centered, ethnographic approach (Bakan 2009, 514). To do so, researchers chose to focus on the first two SCERTS domains, social communication (SC) and emotional regulation (ER) (Bakan 2009, 514). Though at the time of the article's publication researchers continued to analyze the data, Bakan claims the study provided "measurable (quantified) social-emotional growth outcomes data for each participating child" (Bakan 2009, 515).

Bakan points out that the edition of the SCERTS Model to the data collected from the Music-Play Project served to enhance and enrich the ethnographic data collected previously, and that incorporating this type of data opens avenues of cross-disciplinary communication through publication in scientific or medical journals (Bakan 2009, 515). However, Bakan is careful to make clear that the inclusion of a quantitative dimension of study was not considered an improvement on the original ethnographic approach (Bakan 2009, 515). Similarly, my utilization of the SCERTS Model does not imply that ethnographic methods alone do not elicit an appropriate level of understanding in the analysis and research of music-play and autism. Instead, the portions of the SCERTS Model assessment tool used in this study provide a framework for one possible perspective on each child and his or her strengths and weaknesses, personality, and use of music as a form of communication or a glimpse into an inner world.

The SCERTS Model is an "innovative educational model…based on an integration of research and clinical practice" published by its authors since the mid-

1970s (Prizant et al. 2006, 1). The authors explain, "It is recognized that most learning in childhood occurs in the social context of daily activities and experiences. Therefore, efforts to support a child's development within the model occur with caregivers and familiar partners in everyday routines in a variety of social situations, not primarily through work with a child in isolation" (Prizant et al. 2006, 1). By including this domain of transactional support, researchers, evaluators, and educators can examine not just the child with autism, but the nature of his or her relationships and interactions with the most important people in his or her life, including parents, teachers, and child care providers. Additionally, a number of the model's core values and guiding principles make this tool especially applicable to the context of a person-centered approach to autism studies. For example, "All behavior is viewed as purposeful. Functions of behavior may include communication, emotional regulation, and engagement in adaptive skills" (Prizant et al. 2006, 18). In relation to problematic or atypical behaviors, evaluators are encouraged to seek and address the function of these behaviors (Prizant et al. 2006, 18), as opposed to simply replacing atypical behaviors with those that most people consider more socially acceptable. Other person-centered values of the SCERTS Model include the creation of a unique profile including each child's strengths and weaknesses and the belief that family members are the experts on each child (Prizant et al. 2006, 18). In these values, the SCERTS Model is not only a natural fit as a tool in ethnographic study, but person-centered music-play also fits naturally into a SCERTS-based educational approach.

The SCERTS Model breaks down assessment and later goal-setting and educational programming into the three domains of social communication, emotional regulation, and transactional support (Prizant et al. 2006, 1). Within each of these elements reside two sets of developmental objectives, each with several groups of further objectives that in turn have a list of goals necessary to their achievement. In the domain of social communication these objectives are joint attention, which includes sharing attention, emotion, and intentions; and symbolic behavior, which includes conventional use of nonverbal communication, the use of words, and the appropriate use of objects (Prizant et al. 2006, 21). The domain of emotional regulation encompasses the development of "mutual regulatory capacities" and "self-regulatory capacities" (Prizant et al. 2006, 53). The authors explain, "Mutual regulatory capacities occur in the context of social interaction and involve a child's ability to request and/or respond to assistance from others in helping to maintain a state of optimal arousal, whereas self-regulatory strategies are self-initiated and self-directed" (Prizant et al. 2006, 53).

The domain of transactional support differs from the others in that it deals with the adults in the child's life, including family members, educators, and therapists. Transactional support is divided into interpersonal supports and learning supports. In this way the SCERTS Model addresses the child's needs within the context of family and social relationship (Prizant et al. 2006, 71).

In addition to the three domains of social communication, emotional regulation, and transactional support, the SCERTS Model delineates three different stages of social communication development as a framework for the evaluation of a

child's abilities and strengths. These include the Social Partner stage, the Language Partner stage, and the Conversational Partner stage (Prizant et al. 2006, 20). Each of these developmental stages encompasses two significant transitions in a child's communicative abilities. Transitions in the Social Partner stage allow a child to become an active partner in communication (Prizant et al. 2006, 21). These transitions include "communicating with purpose or intent" and "the acquisition and use of conventional gestures and vocalizations," developments that usually occur between the ages of six months and twelve months in neurotypcial children (Prizant et al. 2006, 21). The second developmental stage, that of the Language Partner, encompasses the transition to first words and word combinations, which often occurs in neurotypical children between the twelfth and twenty-fourth months of life (Prizant et al. 2006, 22). The third developmental stage delineated by the SCERTS Model is the Conversational Partner stage, during which a child begins to use sentence grammar and conversational discourse, aspects of development that begin in the preschool years for neurotypical children (Prizant et al. 2006, 22). I interviewed the mothers of all four children who completed the present study prior to the first music-play session using the SCERTS Model Worksheet for Determining Communication Stage. These interviews determined that all four of these children were in the developmental stage of the Language Partner.

In addition to the Worksheet for Determining Communication Stage, I also utilized the SCERTS Assessment Process Report (SAP-R) form by distributing a copy of this form to each participating mother and asking her to complete it between

music-play sessions. This form provides background information on each child's communicative abilities, strengths, weaknesses, and other data that may not otherwise be apparent in music-play sessions. I also used the SCERTS Assessment Process Observation (SAP-O) form to collect data from each child after every music-play session. To complete this form I indicated which of the listed goals each child achieved in the session, and then recorded a one in the appropriate column for that numbered music-play session (labeled as "quarters" on the SAP-O). As indicated in the scoring key at the bottom of each page, a score of one indicates that a child met a criterion "inconsistently or with assistance." I was not able to provide a score of two for any goals achieved in a music-play session because a score of two indicates that a child met a criterion "consistently (across three partners in two contexts)." Music-play could only serve as one context, and the only available partners during music-play for three of the four children who completed the study were his or her mother and myself. The fourth child in the study had a brother and sister present in addition to his mother and me, but did not actively interact with them. At the end of the nine weeks of music-play sessions I completed a SCERTS Assessment Process Summary Form (SAP Summary Form) for each child. The SAP Summary Form documents the child's strengths and weaknesses as determined by the assessment in a visual format (Prizant et al. 2006, 161). The form provides a set of boxes representing the total number of points a child can earn under each objective within each of the three domains, along with eight Social-Emotional Growth Indicators. The examiner completes the form by shading the boxes to show the number of points the child earned. The SAP Summary Form also contains sections for

completing a summary of a family's perceptions and priorities for future goal setting, prioritizing weekly SCERTS objectives for goal setting, further assessment and recommendations, activity planning, a family support plan, and a support plan for professionals and service providers. However, since these sections of the form pertained to the design of educational interventions and therapies, I did not use them in this study. The Worksheet for Determining Communication Stage, the SAP-R, the SAP-O, and the SAP Summary Form are provided here. A copy of the completed SAP-O and SAP Summary Form for each child in the study is included in the appendixes.

Worksheet for Determining Communication Stage

Child's name: _____ Date: _____

1. Does the child use **ALL** of the following?

   1a. Does the child use **at least 3 different words or phrases** (spoken, signed, pictures, written words, or other symbolic system)? ❑

   1b. Does the child use at least 3 words or phrases **referentially** (i.e., to refer to specific objects, people, or activities)? ❑

   1c. Does the child used at least 3 words or phrases **with communicative intent** (i.e., by coordinating the words or phrases with gestures or gaze for a communicative purpose)? ❑

   1d. Does the child use at least 3 words or phrases **regularly** (i.e., often, not just on a rare occasion)? ❑

   ❑ **No:**
   Use Social Partner stage forms.

   ❑ **Yes:** Go to Question 2.

2. Does the child use **ALL** of the following?

   2a. Does the child use **at least 100 different words or phrases** (spoken, signed, pictures, written words, or other symbolic system)? ❑

   2b. Does the child use at least 100 words or phrases **referentially** (i.e., to refer to specific objects, people, or activities)? ❑

   2c. Does the child use at least 100 words or phrases **with communicative intent** (i.e., by coordinating the words or phrases with gestures or gaze for a communicative purpose)? ❑

   2d. Does the child use at least 100 words or phrases **regularly** (i.e., often)? ❑

   2e. Does the child use **at least 20 different word combinations that are creative** (i.e., not just exact imitations of phrases)? ❑

   ❑ **No:**
   Use Language Partner stage forms.

   ❑ **Yes:**
   Use Conversational Partner stage forms.

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SAP-REPORT FORM: Language Partner Stage

Child's name: _____ Age: _____ Date filled out: _____

Filled out by: _____ Relationship to child: _____

This questionnaire is designed to be completed by a parent, teacher, or other person who interacts with this child on a daily or regular basis. Please answer the following questions about this child's ***social communication*** (understanding and use of nonverbal and verbal communication in social interaction), ***emotional regulation*** (capacity to regulate attention, arousal, and emotional state), and ***transactional support*** (ways that partners and learning activities support development). We would like you to complete this when you can observe the child, or immediately after you observe the child, and notice the behaviors listed. Please provide examples.

SOCIAL COMMUNICATION

1. Describe how the child interacts with others. For example, does the child respond to bids for interaction? Initiate interaction? Take a few turns? Take many turns that follow a shared attentional focus?

2. Describe the child's use of eye gaze during interactions. For example, does the child look at people rarely or often? When playing with toys, does the child look up to see if you are watching and then look back at the object?

3. Which of the following gestures does the child use regularly to communicate? Check all that apply.

   ___ Show objects ___ Wave ___ Point at a distance ___ Clap

   ___ Head shake (for rejecting or refusing) ___ Head nod (for accepting or indicating yes)

4. Which of the following types of words (spoken, signed, pictures, written words, or other symbolic system) does the child use regularly to communicate? Check all that apply and give examples.

   ___ Names of things (e.g., toys, food items, body parts) _____

   ___ Names of people or pets _____

   ___ Way to indicate "more" or "another" _____

   ___ Way to indicate "no" or "gone" _____

   ___ Greeting words (e.g., "hi," "bye," "see you later") _____

   ___ Action words (e.g., "eat," "run," "go") _____

   ___ Modifiers or words that describe things (e.g., "hot," "big," "stuck") _____

   ___ Spontaneous word combinations (e.g., "go outside," "cookie gone") _____

5. Which of the following reasons does the child communicate for? Check all that apply and give examples.

   ___ To request a desired object or help _____

   ___ To protest something he or she does not like _____

   ___ To greet _____

   ___ To request permission _____

   ___ To draw your attention to something that he or she wants you to notice _____

   ___ To request information about things of interest _____

6. How often does the child initiate communication when interacting . . .

	seldom or not at all	*sometimes*	*often*
. . . with a familiar person?	_____	_____	_____
. . . with an unfamiliar person?	_____	_____	_____
. . . in small groups?	_____	_____	_____

7. What happens if you can't figure out what the child is asking for? What does the child do?

8. What are the child's favorite toys? How does he or she play with them?

9. How does the child respond if a familiar adult joins in play? If a familiar peer or sibling joins?

10. How does the child respond to actions and sounds modeled by others?

	seldom or not at all	*sometimes*	*often*
Does the child imitate familiar actions or sounds?	_____	_____	_____
Does the child imitate new actions or sounds?	_____	_____	_____
Does the child imitate behaviors in new situations?	_____	_____	_____

11. Which of the following instructions or cues does the child understand? Check all that apply.

___ Gestures other than pointing ___ Pointing ___ Photographs or pictures ___ Written words

___ Facial expressions ___ Intonation ___ Child's name

___ Words or phrases in familiar contexts; give examples: _____

___ Names of people and objects, without contextual cues; give examples: _____

___ Action word or modifiers, without contextual cues; give examples: _____

___ Phrases or sentences without contextual cues; give examples: _____

EMOTIONAL REGULATION

1. How does the child respond to people and things in his or her environment? For example, does the child show interest in a variety of situations, show intense interest in a few things, express different emotions, keep to him- or herself, respond to bids for interaction, and/or seek interaction?

2. What activities or situations are the most fun or interesting to the child?

3. What activities or situations create the most distress or are boring to the child?

4. Does the child use strategies to stay focused, interested, calm, or engaged during familiar activities (e.g., squeezing hands; rubbing a blanket; rocking; saying, "Finish work, then go outside")? If so, please describe.

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5. Does the child use strategies to stay focused, interested, calm, or engaged during new and changing situations or situations that are otherwise challenging (e.g., singing a familiar song when changing activities; saying, "Don't worry," when scared)? If so, please describe.

6. Does the child express positive and negative emotions? If so, how?

Positive emotions	*Negative emotions*
Happiness _____	Sadness _____
Contentment _____	Anger or frustration _____
Silliness _____	Fear _____

7. Does the child respond to comfort when offered by others? If so, how?

8. Does the child respond to choices offered by others? If so, how?

9. What strategies do you use to help the child stay focused, interested, calm, and engaged?

10. How do you know when the child is overwhelmed or upset? What signs does the child show?

11. How do you know when the child is bored or uninterested? What signals does the child show?

12. When the child is extremely upset or distressed,

    . . . how does the child recover by him- or herself? How long does this usually take?

    . . . how does the child recover with support from partners? How long does this usually take?

TRANSACTIONAL SUPPORT

1. What people does the child interact with or see on a regular basis (i.e., daily or weekly)?

2. What places does the child go to on a regular basis (i.e., daily or weekly)?

3. Which of the following are easy for you to read, follow, and respond to? Rate all that apply using the following key: 0, *can read or respond rarely or not at all;* 1, *can read and respond some of the time;* 2, *can read and respond most of the time.*

___ The child's focus of attention	___ What the child is trying to communicate
___ How the child is feeling	___ The child's preferred pace (fast or slow)
___ When the child needs a break	___ Whether the child is interested
___ Whether the child is frustrated	___ Whether the child is overwhelmed

4. What strategies are the most helpful to encourage the child to initiate communication and take turns in interaction (e.g., offering choices, waiting and looking at the child, taking a turn and then waiting)?

5. How do you usually react if the child uses problem behaviors, such as hitting, screaming, or biting? Is this reaction effective?

6. What strategies are the most helpful to secure the child's attention (e.g., getting down on the child's level, moving closer to or farther from the child, matching the child's emotion, waiting and following the child)?

7. What strategies are the most helpful to keep interactions going with the child (e.g., allowing the child to initiate interactions, allowing the child to take breaks and move about, following the child's interest)?

8. How do you usually communicate to the child to ensure that your message is understood?

9. Do you use visual supports to help the child communicate, understand language, express emotion, and/or flow with the day better? If so, which supports do you use (e.g., defining steps of a task with pictures, transition objects, picture choices, and/or signs)?

10. What features of the physical or social environment help the child stay engaged (e.g., limiting the number people the child interacts with, limiting the amount of background noise and/or visual clutter, adding more opportunities for movement and rhythm, using specific places consistently for specific activities)?

11. What features of the physical or social environment help the child communicate better (e.g., using motivating toys or activities that the child prefers, placing enticing or desired objects slightly out of reach)?

ADDITIONAL COMMENTS

1. List the top strengths or assets you observe in the child.

2. List your major concerns about the child's development.

3. What information would be most useful to you in planning or updating the child's program?

4. Is there anything else about the child that you think is important to share with us?

5. Do you have any questions for us?

6. What is the best time and way to contact you?

SAP-OBSERVATION FORM: Language Partner Stage (page 1)

Child's name: _____ **Date of birth:** _____

Background information:	**Team members:**

Documentation of assessment context

Group size: ❑ One to one ❑ Small group ❑ Large group

Partner: ❑ Familiar adults ❑ Familiar peers/siblings ❑ Unfamiliar adults ❑ Unfamiliar peers

Natural contexts: ❑ Home ❑ Learning center/school ❑ Community

Activity variables:

1. Structured/Unstructured
2. Must do/Fun
3. Adult directed/Child directed
4. Motor based/Sedentary
5. Familiar/Unfamiliar
6. Preferred/Nonpreferred
7. Easy/Difficult
8. Language based/ Non–language based
9. Social/Solitary
10. Busy/Calm

Transitions: 1: 2: 3:

Date of observation	
Qtr 1 start date:	Length of total observation:
Qtr 2 start date:	Length of total observation:
Qtr 3 start date:	Length of total observation:
Qtr 4 start date:	Length of total observation:

SCERTS Profile Summary	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Social Communication				
Joint Attention	/62	/62	/62	/62
Symbol Use	/50	/50	/50	/50
Emotional Regulation				
Mutual Regulation	/46	/46	/46	/46
Self-Regulation	/56	/56	/56	/56
Transactional Support				
Interpersonal Support	/66	/66	/66	/66
Learning Support	/50	/50	/50	/50

Social-Emotional Growth Indicators Profile	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Happiness	/10	/10	/10	/10
Sense of Self	/10	/10	/10	/10
Sense of Other	/10	/10	/10	/10
Active Learning and Organization	/10	/10	/10	/10
Flexibility and Resilience	/10	/10	/10	/10
Cooperation and Appropriateness of Behavior	/10	/10	/10	/10
Independence	/10	/10	/10	/10
Social Membership and Friendships	/10	/10	/10	/10

SCORING KEY:

2 = criterion met consistently with at least three partners in at least two contexts

1 = criterion met inconsistently, in one activity, or with assistance

0 = criterion not met based on observed or reported information or would not be expected

SAP-OBSERVATION FORM: Language Partner Stage (page 2)
Social Communication

Child's name: _____

Qtr 1	Qtr 2	Qtr 3	Qtr 4	JOINT ATTENTION
				1 Engages in reciprocal interaction
				JA1.1 Initiates bids for interaction (= SR1.1)
				JA1.2 Engages in brief reciprocal interaction (= SR1.2)
				JA1.3 Engages in extended reciprocal interaction (= SR1.3)
				2 Shares attention
				JA2.1 Shifts gaze between people and objects
				JA2.2 Follows contact and distal point (= SU2.2)
				JA2.3 Monitors attentional focus of a social partner
				JA2.4 Secures attention to oneself prior to expressing intentions (≈ JA5.5)
				3 Shares emotion
				JA3.1 Shares negative and positive emotion (= MR1.1; ≈ MR3.1, MR3.2)
				JA3.2 Understands and uses symbols to express a range of emotions (≈ MR1.2, SR3.5)
				JA3.3 Attunes to changes in partners' expression of emotion (≈ SU2.4; = MR2.5)
				JA3.4 Describes the emotional state of another person (↔ SU5.6)
				4 Shares intentions to regulate the behavior of others (↔ JA7.2, JA8.2, SU4–SU5, MR3.7)
				JA4.1 Requests desired food or objects (≈ MR2.6)
				JA4.2 Protests/refuses undesired food or objects (≈ MR3.4)
				JA4.3 Requests help or other actions (≈ MR3.3)
				JA4.4 Protests undesired actions or activities (≈ MR3.4)
				5 Shares intentions for social interaction (↔ JA7.2, JA8.2, SU4–SU5)
				JA5.1 Requests comfort (≈ MR3.1)
				JA5.2 Requests social game
				JA5.3 Takes turns
				JA5.4 Greets
				JA5.5 Calls (≈ JA2.4)
				JA5.6 Shows off
				JA5.7 Requests permission
				6 Shares intentions for joint attention (↔ JA7.2, JA8.2, SU4–SU5)
				JA6.1 Comments on object
				JA6.2 Comments on action or event
				JA6.3 Requests information about things of interest
				7 Persists and repairs communication breakdowns
				JA7.1 Uses appropriate rate of communication for context
				JA7.2 Repeats and/or modifies communication to repair (↔ JA4–JA6)
				JA7.3 Recognizes breakdowns in communication
				8 Shares experiences in reciprocal interaction
				JA8.1 Coordinates attention, emotion, and intentions to share experiences
				JA8.2 Shows reciprocity in speaker and listener roles to share experiences (↔ JA4–JA6)
				JA8.3 Initiates interaction and shares experiences with a friend

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

SAP-OBSERVATION FORM: Language Partner Stage (page 3)
Social Communication

Child's name: _____

Qtr 1	Qtr 2	Qtr 3	Qtr 4	SYMBOL USE
				1 Learns by observation and imitation of familiar and unfamiliar actions and words
				SU1.1 Spontaneously imitates familiar actions or words immediately after a model
				SU1.2 Spontaneously imitates unfamiliar actions or words immediately after a model
				SU1.3 Spontaneously imitates actions or words and adds a different behavior
				SU1.4 Spontaneously imitates a variety of behaviors later in a different context
				2 Understands nonverbal cues in familiar and unfamiliar activities
				SU2.1 Follows situational and gestural cues in familiar and unfamiliar activities (= SR4.2)
				SU2.2 Follows contact and distal point (= JA2.2)
				SU2.3 Follows instructions with visual cues (photographs or pictures)
				SU2.4 Responds to facial expression and intonation cues (≈ JA3.3)
				3 Uses familiar objects conventionally in play
				SU3.1 Uses a variety of objects in constructive play
				SU3.2 Uses a variety of familiar objects conventionally toward self
				SU3.3 Uses a variety of familiar objects conventionally toward other
				SU3.4 Combines a variety of actions with objects in play
				4 Uses gestures and nonverbal means to share intentions (↔ JA4–JA6, MR3.3, MR3.4)
				SU4.1 Uses a variety of conventional and symbolic gestures ☐ a. show ☐ d. clap ☐ f. head nod ☐ b. wave ☐ e. head shake ☐ g. other _____ ☐ c. distal reach/point
				SU4.2 Uses sequence of gestures or nonverbal means in coordination with gaze
				5 Uses words and word combinations to express meanings (↔ JA4–JA6, MR3.3, MR3.4)
				SU5.1 Coordinates sounds/words with gaze and gestures
				SU5.2 Uses at least 5–10 words or echolalic phrases as symbols
				SU5.3 Uses early relational words ☐ a. existence ☐ b. nonexistence/disappearance ☐ c. recurrence ☐ d. rejection
				SU5.4 Uses variety of names for objects, body parts, and agents
				SU5.5 Uses variety of advanced relational words ☐ a. personal-social ☐ b. action ☐ c. modifier ☐ d. *wh-* word
				SU5.6 Uses variety of relational meanings in word combinations (↔ JA3.4) ☐ a. modifier + object ☐ b. negation + object ☐ c. agent + action + object
				6 Understands a variety of words and word combinations without contextual cues
				SU6.1 Responds to own name
				SU6.2 Responds to a variety of familiar words and phrases (= SR1.6)
				SU6.3 Understands a variety of names without contextual cues
				SU6.4 Understands a variety of relational words without contextual cues ☐ a. action ☐ b. modifier ☐ c. *wh-* word
				SU6.5 Understands a variety of relational meanings in word combinations without contextual cues ☐ a. modifier + object ☐ b. negation + object ☐ c. agent + action + object

SCORING KEY: 2, *criterion met consistently (across three partners in two contexts);*
1, criterion met inconsistently or with assistance; **0**, criterion not met

SAP-OBSERVATION FORM: Language Partner Stage **(page 4)**
Emotional Regulation

Child's name: _____

Qtr 1	Qtr 2	Qtr 3	Qtr 4	MUTUAL REGULATION
				1 Expresses range of emotions (↔ SU4–SU5)
				MR1.1 Shares negative and positive emotion (≈ JA3.1)
				MR1.2 Understands and uses symbols to express a range of emotions (≈ JA3.2; = SR3.5)
				MR1.3 Changes emotional expression in familiar activities based on partners' feedback
				2 Responds to assistance offered by partners
				MR2.1 Soothes when comforted by partners
				MR2.2 Engages when alerted by partners
				MR2.3 Responds to bids for interaction
				MR2.4 Responds to changes in partners' expression of emotion
				MR2.5 Attunes to changes in partners' expression of emotion (= JA3.3)
				MR2.6 Makes choices when offered by partners
				MR2.7 Changes regulatory strategies based on partners' feedback in familiar activities
				3 Requests partners' assistance to regulate state
				MR3.1 Shares negative emotion to seek comfort (≈ JA3.1; ↔ JA5.1)
				MR3.2 Shares positive emotion to seek interaction (≈ JA3.1)
				MR3.3 Requests help when frustrated (≈ JA4.3; ↔ SU4–SU5)
				MR3.4 Protests when distressed (≈ JA4.2, JA4.4; ↔ SU4–SU5)
				MR3.5 Uses language strategies to request a break
				MR3.6 Uses language strategies to request regulating activity or input
				MR3.7 Uses language strategies to exert social control (↔ JA4)
				4 Recovers from extreme dysregulation with support from partners
				MR4.1 Responds to partners' efforts to assist with recovery by moving away from activity
				MR4.2 Responds to partners' use of behavioral strategies
				MR4.3 Responds to partners' use of language strategies
				MR4.4 Responds to partners' attempts to reengage in interaction or activity
				MR4.5 Decreases amount of time to recover from extreme dysregulation due to support from partners
				MR4.6 Decreases intensity of dysregulated state due to support from partners

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

SAP-OBSERVATION FORM: Language Partner Stage (page 5)
Emotional Regulation

Child's name: _____

Qtr 1	Qtr 2	Qtr 3	Qtr 4	SELF-REGULATION
				1 Demonstrates availability for learning and interacting
				SR1.1 Initiates bids for interaction (= JA1.1)
				SR1.2 Engages in brief reciprocal interaction (= JA1.2)
				SR1.3 Engages in extended reciprocal interaction (= JA1.3)
				SR1.4 Responds to sensory and social experiences with differentiated emotions
				SR1.5 Demonstrates ability to inhibit actions and behaviors
				SR1.6 Responds to a variety of familiar words and phrases (= SU6.2)
				SR1.7 Persists during tasks with reasonable demands
				SR1.8 Demonstrates emotional expression appropriate to context
				2 Uses behavioral strategies to regulate arousal level during familiar activities
				SR2.1 Uses behavioral strategies to regulate arousal level during solitary and social activities
				SR2.2 Uses behavioral strategies modeled by partners to regulate arousal level
				SR2.3 Uses behavioral strategies to engage productively in an extended activity
				3 Uses language strategies to regulate arousal level during familiar activities
				SR3.1 Uses language strategies to regulate arousal level during solitary activities
				SR3.2 Uses language strategies to regulate arousal level during social interactions
				SR3.3 Uses language strategies modeled by partners to regulate arousal level
				SR3.4 Uses language strategies to engage productively in an extended activity
				SR3.5 Uses symbols to express a range of emotions (≈ JA3.2; = MR1.2)
				4 Regulates emotion during new and changing situations
				SR4.1 Participates in new and changing situations
				SR4.2 Follows situational and gestural cues in unfamiliar activities (= SU2.1)
				SR4.3 Uses behavioral strategies to regulate arousal level in new and changing situations
				SR4.4 Uses language strategies to regulate arousal level in new and changing situations
				SR4.5 Uses behavioral strategies to regulate arousal level during transitions
				SR4.6 Uses language strategies to regulate arousal level during transitions
				5 Recovers from extreme dysregulation by self
				SR5.1 Removes self from overstimulating or undesired activity
				SR5.2 Uses behavioral strategies to recover from extreme dysregulation
				SR5.3 Uses language strategies to recover from extreme dysregulation
				SR5.4 Reengages in interaction or activity after recovery from extreme dysregulation
				SR5.5 Decreases amount of time to recover from extreme dysregulation
				SR5.6 Decreases intensity of dysregulated state

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

SCERTS®

SAP-OBSERVATION FORM: Language Partner Stage (page 6)
Transactional Support

Child's name: _____

Qtr 1	Qtr 2	Qtr 3	Qtr 4	INTERPERSONAL SUPPORT
				1 Partner is responsive to child
				IS1.1 Follows child's focus of attention
				IS1.2 Attunes to child's emotion and pace
				IS1.3 Responds appropriately to child's signals to foster a sense of communicative competence
				IS1.4 Recognizes and supports child's behavioral and language strategies to regulate arousal level
				IS1.5 Recognizes signs of dysregulation and offers support
				IS1.6 Imitates child
				IS1.7 Offers breaks from interaction or activity as needed
				IS1.8 Facilitates reengagement in interactions and activities following breaks
				2 Partner fosters initiation
				IS2.1 Offers choices nonverbally or verbally
				IS2.2 Waits for and encourages initiations
				IS2.3 Provides a balance of initiated and respondent turns
				IS2.4 Allows child to initiate and terminate activities
				3 Partner respects child's independence
				IS3.1 Allows child to take breaks to move about as needed
				IS3.2 Provides time for child to solve problems or complete activities at own pace
				IS3.3 Interprets problem behavior as communicative and/or regulatory
				IS3.4 Honors protests, rejections, or refusals when appropriate
				4 Partner sets stage for engagement
				IS4.1 Gets down on child's level when communicating
				IS4.2 Secures child's attention before communicating
				IS4.3 Uses appropriate proximity and nonverbal behavior to encourage interaction
				IS4.4 Uses appropriate words and intonation to support optimal arousal level and engagement
				5 Partner provides developmental support
				IS5.1 Encourages imitation
				IS5.2 Encourages interaction with peers
				IS5.3 Attempts to repair breakdowns verbally or nonverbally
				IS5.4 Provides guidance and feedback as needed for success in activities
				IS5.5 Provides guidance on expressing emotions and understanding the cause of emotions
				6 Partner adjusts language input
				IS6.1 Uses nonverbal cues to support understanding
				IS6.2 Adjusts complexity of language input to child's developmental level
				IS6.3 Adjusts quality of language input to child's arousal level
				7 Partner models appropriate behaviors
				IS7.1 Models appropriate nonverbal communication and emotional expressions
				IS7.2 Models a range of communicative functions ☐ a. behavior regulation ☐ b. social interaction ☐ c. joint attention
				IS7.3 Models appropriate constructive and symbolic play
				IS7.4 Models appropriate behavior when child uses inappropriate behavior
				IS7.5 Models "child-perspective" language

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

SAP-OBSERVATION FORM: Language Partner Stage (page 7)
Transactional Support

Child's name: _____

Qtr 1	Qtr 2	Qtr 3	Qtr 4	LEARNING SUPPORT
				1 Partner structures activity for active participation
				LS1.1 Defines clear beginning and ending to activity
				LS1.2 Creates turn-taking opportunities and leaves spaces for child to fill in
				LS1.3 Provides predictable sequence to activity
				LS1.4 Offers repeated learning opportunities
				LS1.5 Offers varied learning opportunities
				2 Partner uses augmentative communication support to foster development
				LS2.1 Uses augmentative communication support to enhance child's communication and expressive language
				LS2.2 Uses augmentative communication support to enhance child's understanding of language and behavior
				LS2.3 Uses augmentative communication support to enhance child's expression and understanding of emotion
				LS2.4 Uses augmentative communication support to enhance child's emotional regulation
				3 Partner uses visual and organizational support
				LS3.1 Uses support to define steps within a task
				LS3.2 Uses support to define steps and time for completion of activities
				LS3.3 Uses visual support to enhance smooth transitions between activities
				LS3.4 Uses support to organize segments of time across the day
				LS3.5 Uses visual support to enhance attention in group activities
				LS3.6 Uses visual support to foster active involvement in group activities
				4 Partner modifies goals, activities, and learning environment
				LS4.1 Adjusts social complexity to support organization and interaction
				LS4.2 Adjusts task difficulty for child success
				LS4.3 Modifies sensory properties of learning environment
				LS4.4 Arranges learning environment to enhance attention
				LS4.5 Arranges learning environment to promote child initiation
				LS4.6 Designs and modifies activities to be developmentally appropriate
				LS4.7 Infuses motivating materials and topics in activities
				LS4.8 Provides activities to promote initiation and extended interaction
				LS4.9 Alternates between movement and sedentary activities as needed
				LS4.10 "Ups the ante" or increases expectations appropriately

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

SAP Summary Form
Language Partner Stage

Child's name: _____

Quarterly start date of observation: _____ Child's age: _____

SCERTS Profile

SOCIAL COMMUNICATION

Joint Attention

- JA1 Engages in reciprocal interaction
- JA2 Shares attention
- JA3 Shares emotion
- JA4 Shares intentions to regulate the behavior of others
- JA5 Shares intentions for social interaction
- JA6 Shares intentions for joint attention
- JA7 Persists and repairs communication breakdowns
- JA8 Shares experiences in reciprocal interaction

Symbol Use

- SU1 Learns by observation and imitation of actions and words
- SU2 Understands nonverbal cues in familiar and unfamiliar activities
- SU3 Uses familiar objects conventionally in play
- SU4 Uses gestures and nonverbal means to share intentions
- SU5 Uses words and word combinations to express meanings
- SU6 Understands a variety of words and word combinations without contextual cues

EMOTIONAL REGULATION

Mutual Regulation

- MR1 Expresses range of emotions
- MR2 Responds to assistance offered by partners
- MR3 Requests partners' assistance to regulate state
- MR4 Recovers from extreme dysregulation with support from partners

Self-Regulation

- SR1 Demonstrates availability for learning and interacting
- SR2 Uses behavioral strategies to regulate arousal level during familiar activities
- SR3 Uses language strategies to regulate arousal level during familiar activities
- SR4 Regulates emotion during new and changing situations
- SR5 Recovers from extreme dysregulation by self

SCERTS Profile (continued)

TRANSACTIONAL SUPPORT

Interpersonal Support

- IS1 Partner is responsive to child
- IS2 Partner fosters initiation
- IS3 Partner respects child's independence
- IS4 Partner sets stage for engagement
- IS5 Partner provides developmental support
- IS6 Partner adjusts language input
- IS7 Partner models appropriate behaviors

Learning Support

- LS1 Partner structures activity for active participation
- LS2 Partner uses augmentative communication support to foster development
- LS3 Partner uses visual and organizational support
- LS4 Partner modifies goals, activities, and learning environment

Social-Emotional Growth Indicators Profile

1. Happiness
2. Sense of Self
3. Sense of Other
4. Active Learning and Organization
5. Flexibility and Resilience
6. Cooperation and Appropriateness of Behavior
7. Independence
8. Social Membership and Friendships

Family Perception and Priorities

Is this profile an accurate picture of your child? If not, explain.

Is there any additional information that is needed to develop your child's educational plan?

If you were to focus your energies on one thing for your child, what would that be?

What skills would you like your child to learn in the next 3 months?

Prioritize Weekly SCERTS Objectives

Child Social Communication and Emotional Regulation objectives	Partner Transactional Support objectives
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.

Further Assessment—Key Results or Additional Recommendations

SAP Activity Planning

Identify key activities using the SAP Activity Planning Form for

❑ Morning schedule ❑ Afternoon schedule

SCERTS Family Support Plan

Educational Support		Emotional Support	
Activity	How often	Activity	How often

SCERTS Support Plan for Professionals and Service Providers

Educational Support		Emotional Support	
Activity	How often	Activity	How often

The SCERTS Model, then, provides a foundation from which evaluators can assess a child's needs and also get a view of his or her strengths, interests, and unique abilities. This information can in turn be used to develop an educational program tailored to the individual child that makes use of strengths to overcome weaknesses.

It is the value of the child's full profile and the focus on developing an educational method that is both individualized and family-based that led me to believe that the SCERTS Model reflected a person-centered ethnographic approach. In addition, the assessment portion of the SCERTS Model gave me the opportunity to develop a profile of each child's reactions to music-play in regards to social communication and emotional regulation. However, complications to the model prevented me from completing a full assessment. By nature the SCERTS Model assessment is designed for use across several contexts and settings, with different individuals involved in the child's care each working as part of the assessment team. Therefore, only portions of the assessment were applicable to the singular context of music-play. This scenario falsely lowered each child's assessment scores, since the framework put in place demanded that the child be assessed for each goal in at least two contextual scenarios. Transactional support was particularly difficult to evaluate since the goals for assessment focused on how the parent, educator, or therapist may design a therapeutic exercise or setting. Another study complication presented by my choice to utilize the SCERTS Model was maintaining a person-centered approach while also assessing each child's abilities. Experience with the model's assessment forms led me to unwittingly begin coaxing the children to fulfill

assessment goals, thus compromising my commitment to a child-led and person-centered approach. I found it difficult not to shape the music-play sessions around the goals listed in the assessment, and this in turn led to my own reassessment of my research goals. I maintained a child-led study, however, by allowing each child to initiate each moment of music-play and each social interaction. I paid careful attention to each child's bids for interaction, being cautious to only initiate interaction myself when I received what I believed to be a favorable response. Though this was difficult, I believe that the development of each child's individual approach to music-play occurred because of the child-led and person-centered approach I enforced.

I collected a sample of research participants by recruiting volunteer families from a local online support page for families with children with autism. The first recruiting efforts for the study occurred within the study's host location, a local public elementary school, but limitations on the dissemination of study information led to few results. After that I extended recruiting efforts to a local support group for individuals and families affected by autism spectrum conditions. Music-play sessions began with volunteers from this effort, including five children with autism and several adult family members, along with one neurotypical sibling. However, only one parent and child returned for the second music-play session, and no other parents indicated a desire to continue their participation. Research continued with one child and parent participant for several weeks, at which point the participating parent recruited several other families via the online support page mentioned previously. In all I studied and observed a total of eight children with autism, nine

adult family members, and three participating siblings, with a total of four children with autism, four parents, and two participating siblings completing the study.

I utilized a local elementary school to host the study and administrators agreed to provide me with time and space in the music classroom after school hours. This included full access to the school's musical instrument collection. The school music director aided me in choosing musical instruments from the collection that would provide optimal opportunity for children to experience music-play as a positive environment. I chose instruments based on the auditory and tactile feedback they provided, paying special attention to volume and timbre in order to ensure that the resulting sound created by the children would be satisfying but not jarring. By evaluating the instruments for volume considerations I took into account the strong tendency toward sensory challenges in children with autism, including sensitivity to loud volumes (Bakan 2014c). In addition, we chose instruments that were sturdy and not easily broken, both for the safety of the children and the instruments themselves. Instruments that made regular appearances in the music-play sessions included Orff-style xylophones, shakers, jingle bells, various types of hand and finger drums, tambourines, guiros, gourd shakers, an ocean drum, and a large buffalo drum.

The research design changed during the study period in order to increase participation. Though the original design included eight weekly music-play sessions with all the children and family members participating as a group, I changed this design to better suit the needs of participating parents. The last four weeks of the study period instead consisted of a series of private music-play sessions for each

child with his or her participating parent and myself. These families, who were newly recruited by another participating parent, each completed at least three private music-play sessions. All music-play sessions were videotaped to facilitate data collection. After the completion of the nine-week study period I conducted a private interview with each parent.

I collected data during the nine-week study period by viewing the videotaped music-play sessions and collecting my observations in an ethnographic journal. I utilized the SCERTS Model by asking each participating parent to complete a SCERTS Assessment Process Report (SAP-R). The SAP-R is a four-page worksheet designed by the authors of the SCERTS Model to collect information on a child with autism from a family member, caregiver, or other familiar adult prior to assessment. Information from the SAP-R's provided data on each child's communicative abilities, his or her emotions as communication and in response to his or her environment, and how the child's environment and relationships affect his or her behavior and communication. After viewing the videotape and recording a journal entry for each music-play session I completed a SCERTS Assessment Process Observation (SAP-O) for each child. This form allowed me to gather SCERTS-related data into a measurable framework. With the SAP-O data I could see changes in each child's behavior from one music-play session to the next and observe their differing personalities and characteristics more objectively. The SCERTS Model authors provide further SCERTS forms for specific areas of data observation and for the design of complete intervention programs for individual children. However, this

part of the SCERTS program is beyond the scope of this study and departs from the ethnographic approach leading this research.

CHAPTER 4

RESEARCH FINDINGS

In his classic text *The Study of Ethnomusicology: Thirty-One Issues and Concepts,* Bruno Nettl attempts to define the term "ethnography" despite its changing nature throughout the history of the field. Describing the thought process of the ethnomusicologist in the field, Nettl states,

> My guess is that you are working on two tracks. One is the solution of the particular problem you have set yourself – maybe the life history of a famous singer, or the way a particular genre of song has changed in a village, or how people teach a traditional instrument, or how members of a folk dance club in Chicago construct their conception of their own ethnicity. But you are also (and maybe I should have put this first) trying to get a picture, as much of a panoramic picture as you can, of the culture of the society in which you're a guest, and about the way music interacts with the rest of that culture. That's what I'd call "doing" musical ethnography (Nettl 2005, 232).

By taking on the role of "ethnomusicologist of autism" first described by Michael Bakan (Bakan 2014c), I stepped into the same ethnographic space Nettl describes. However, my focus shifted throughout the study from the first "track" Nettl mentions – that of "the solution of the particular problem" – to the second, as my goal became a panoramic view of autism culture and music's role within it. As the photographer of that view I found it necessary to shift focus, taking in the panorama of autism and music as a culture for both children with autism and their parents but then zooming in to see the particular image of each child as an individual. After all, a culture is merely the composite of its individuals, so a truly person-centered approach to autism and ethnography requires telling the tales of the people within a culture and staying away from broad generalizations. Autism itself eludes stereotypes. The prevalence of autism in today's society and the

broadening of the diagnosis in recent decades have removed the *Rain Man* image and replaced it with a personal one. Whether they realize it or not, virtually everyone knows someone affected by autism.

Therefore, to examine music in autism culture through the case studies of four children, each of whom are completely unique in terms of their strengths, weaknesses, communication styles, reactions, and choices in music-play makes sense. Case studies provide the opportunity to celebrate each child's uniqueness and evade the tendency to generalize about a culture whose range of ability and viewpoint is as wide as that of mankind itself. I began the study with the intention of facilitating group music-play sessions with as many as ten children and their parents, but when participation became a challenge, I had to reexamine the needs of the individual families instead of running the operation in the style most familiar and convenient to me. The change was fortuitous. By shifting the research design from group to private music-play sessions I now had the opportunity to get to know the children and their mothers in a way that would have been impossible in the large group setting. This gave me the chance to see each child as more than just a calculated list of scores on the SCERTS assessment. By focusing my attention on person-centered and child-led music-play, I also focused my attention on the child, and in turn, the children, each on their own terms, began to let me into their world. The shift in my attentional focus from SCERTS scores to developing relationships is evident in my research journal as I moved from describing each child's progress toward meeting SCERTS assessment goals to describing how each child interacted with the music, with his or her mother, and with me. This shift in my thinking did

more than signify a shift in the focus of the study. It also signified and reflected a shift in my views on autism itself, one that began to take root in me years earlier through my experiences with my own two children with autism.

Johnathan: Music as an Emotional Escape

I met Johnathan and his mother, Anna, for the first time on the Tuesday before Thanksgiving 2015. Johnathan, who is seven years old, entered the school building in a somewhat agitated state, making loud noises from his throat. Anna explained that Johnathan recognized the building as a school, and based on that explanation I gathered that being at a school did not make him happy. His attitude changed, however, when he saw the instruments. At first he repeatedly requested a trumpet, which I did not have available, but he took interest in the xylophones after my brief demonstration. The xylophones would remain his instruments of choice throughout the music-play sessions we enjoyed together. I noticed from the first moment he played that music was an intense activity for him. Johnathan played the xylophones with such intensity that I feared for the safety of the instruments and felt thankful that the school music director was not present that first day. I watched him as he entered a state of high-level concentration, creating his own unique rhythms, and Anna commented that he had a drum set at home that he played in a similar fashion. Johnathan did not indicate, verbally or otherwise, any desire for interaction with his mother or me. However, when I sat down at an adjacent xylophone and began to play he did not object. At first he showed no acknowledgement of my presence, but eventually he began shifting his gaze between his xylophone and mine. I noted this because it was a goal on the SCERTS

assessment, but it also showed me that despite his intensity and initial apprehension, Johnathan welcomed musical interaction. Even in this first session Johnathan allowed the musical interaction he had to become the precursor to further, more social interactions. As I walked him and Anna to the front door of the school he chose to hold my hand.

I noted throughout my sessions with Johnathan and Anna that Anna was less involved in Johnathan's music-play than the other mothers involved in the study. However, conversations with Anna indicated that she is very involved in his care therapeutically. Anna spoke in several sessions about her continued advocacy for Johnathan to have one-on-one assistance from a trained professional during his school day. Later I also learned that Anna recently completed training to become a Board Certified Behavioral Analyst (BCBA). A BCBA is someone who obtains a graduate-level certification in behavioral analysis (Behavior Analyst Certification Board). I observed that Anna takes a very different approach to her involvement with Johnathan than the other mothers. While she is extremely involved with his care in relation to his therapeutic interventions and his school accommodations, she did not take any long-term direct involvement in his musical explorations. I questioned this choice at first, but as I got to know Johnathan I saw that this was consistent with his use of music for emotional expression and escape. Though initially I saw Johnathan as the least interested in musical interaction of the four children who completed the study, I came to the realization that he did desire musical interaction, but involvement in music is so intense that his moments of opening up to interaction are less than obvious. In my research journal I wrote, "In

my experiences with my children I never met a child with autism who did not desire social interaction, only children who did not know how to achieve it. I feel like I must get to know Johnathan's signals more, since perhaps they are subtler." Unfortunately I never had the chance. Due to illness and changes in Anna's work schedule I did not have any further opportunities to meet with Johnathan.

Since I was only able to meet with Johnathan for two music-play sessions, the data from my SCERTS assessment observation offers only a small snapshot of his character. He performed consistently on goals such as "initiates bids for interaction," "responds to bids for interaction," and "uses behavioral strategies to engage productively in an extended activity" (Prizant et al. 2006). In addition, Anna's parenting style and educational background as a BCBA came through in consistency in goals such as "responds appropriately to child's signals to foster a sense of communicative competence," and "adjusts complexity of language input to child's developmental level" (Prizant et al. 2006). Along with the sets of goals under each of the three domains, the SAP-O form also includes a separate set of scores that allows evaluators to calculate more generalized qualities about a child. Evaluators tabulate this list of "Social-Emotional Growth Indicators" by viewing achievements in goals across the three domains that put together may contribute to these "more generic aspects of a child's development" (Prizant et al. 2006, 154). Notably, of the eight "growth indicators," Johnathan consistently scored highest on "social membership and friendship." The SCERTS authors define this as "the capacity to view oneself as a participant and identify with a social group with two or more other members and then engage in behavior that illustrates identification with the group"

(Prizant et al. 2006, 156). Gauging this ability based on music-play sessions attended only by his mother and myself seems impossible, but Johnathan's abilities to initiate bids for interaction, monitor the attentional focus of a social partner, and respond to bids for interaction all bode well for his ability to make friends. Johnathan's love of music has the potential to blossom into social relationships if he continues to grow in this direction.

I was able to meet with Anna one evening in early January 2016 after her workday ended to discuss Johnathan, his communicative abilities, his therapeutic interventions, his personality, and his interactions with music. In addition, I wanted to hear about each mother's beliefs about autism, her experiences with having a child with autism, and what support she received from others. Anna indicated that while Johnathan is generally able to express his needs and wants, he frequently uses echolalia and has "no conversational skills." The SCERTS Model authors define echolalia as "a child's repetition of speech made by others" (Prizant et al. 2006, 312). Echolalia may be viewed as a component of gestalt language forms, defined as "multiword utterances that are memorized and produced as single units or chunks, with little analysis of their internal linguistic structure and with little or no comprehension of the utterances themselves" (Prizant et al. 2006, 79). This is the most common style of language acquisition for children with autism (Prizant et al. 2006, 79-80). Anna did indicate that Johnathan's language abilities improved recently, including more success in following one and two-step directions. She felt that the music-play sessions would be "very beneficial" if they were ongoing, and used her knowledge as a BCBA to give suggestions such as adding communicative

goals and including music-play as a supplemental or collaborative therapy program for children with autism. While these suggestions speak very well for the significance of music-play and its validity for children with autism, such goals would be better applied under the guidance of trained music therapists, as their role carries therapeutic intent not inherent to an ethnomusicological approach. Anna explained that Johnathan requested "music class" throughout the weeks I met with him and that she believes he did gain some knowledge from our interactions that he retained. As I surmised, Johnathan expresses himself musically at home by drumming, dancing, or spinning in a rotating chair.

My interview with Anna took on a different tone when I asked about her feelings about Johnathan's autism diagnosis. She feels guilt about working with other children during the day and coming home to Johnathan feeling tired and burnt out. Trusting others to help care for him is a struggle for her, and her sister drives a long distance to help Johnathan after school most days of the week. Other medical issues, including a rare lung disease and a special diet for gastrointestinal issues, compound Johnathan's diagnosis. She fears that he may "elope," or wander away unexpectedly, and stated that autism affects his activities in transitions, sleep, and eating. I was left feeling that Johnathan's use of music for emotional escape is not surprising. Anna mentioned briefly that her mother used to help with Johnathan prior to her death in May 2015. For a short moment Anna looked away and, with tears in her eyes, added, "Mom, I needed you. Why did you die?"

Despite Johnathan's intensity and seemingly self-focused playing during music-play sessions, as a researcher I was still able to glean valuable information on

how he uses music in his life. For Johnathan music is a doorway to self-expression and a freedom from constraints. When he entered music-play he emoted a sense of liberty that seemed to make it difficult for him to allow others to enter without having to engage in neurotypical language communication. When I did play with him, however, without imposing any limitations or requirements, his exchange of glances and eye contact, along with just a slight smile, let me know that I was welcome. Anna's tendency to back off and give Johnathan freedom to truly enjoy the *play* of music-play is, from this perspective, in perfect alignment with his need to express himself in this way. From Johnathan I learned that music can serve as a place of release from responsibility and a way to overcome our own position in the world.

Amia: Music as Communication

I met Amia for the first time on a cold evening in early December 2015, and the first thing that struck me about her was what seemed to be a need to take in a new situation prior to emoting any sort of reaction to it. She had very low affect upon entering the school and this continued as we entered the music room. Affect is a term for describing an observation of expression of emotion or "the communicative component of emotional regulation that involves observable expression of internal feeling states" (Prizant et al. 2006, 313). By saying that Amia had low affect I mean that her face and body posture appeared vacant of emotional expression. Unlike the other children I observed, Amia took no immediate interest in the instruments; instead she simply scanned the room. Interestingly, her mother, Kay, was also very quiet. Feeling the need to get things moving, I picked up a

xylophone mallet and began to play quietly. Amia picked up another mallet, but tapped it on the xylophone vertically, which made very little sound. Just as I was wondering if Amia might need some instruction to do much of anything with the instruments, she picked up a unique idiophone that did not interest any of the other children. I moved in to demonstrate how to play it, since it wasn't obvious what created its sound, but before I could Amia played it perfectly without any instruction at all. This peaked my interest. Then she put the instrument down and picked up a gourd shaker strung with beads. She touched it gently and appeared to examine in closely. Amia sat down cross-legged on the floor and Kay and I joined her. Kay watched Amia with the shaker and said simply, "Shake it." Amia didn't respond, but when her mother picked up another similar instrument and shook it, Amia shook hers as well. I picked up another shaker, and quickly Kay and I settled into a groove, keeping a steady beat on the shakers, with Amia leading us.

For the next twenty minutes Amia led Kay and I through the first truly improvised musical experience I've ever had. It was an intense, concentrated game of musical follow-the-leader, using only three shakers and our own bodies. However Amia played, Kay and I followed. She shook the gourd sometimes with one hand, and sometimes with both hands. She shook it vertically and horizontally. She moved it above her head, looking up at it with her arm fully extended, then brought it down quickly into her lap, allowing the beads to rattle as she hit it against her thigh. She moved it from one knee to the other, tapping it vertically to make the sound. Several minutes into this she began to sing quietly on syllables, making up a syncopated song to go with our rhythms. I was amazed and noticed that even the

music director, who usually worked intently on paperwork at his desk, now stopped to watch. When the time came to end the session it felt tragic. Realizing that an abrupt stop would be inappropriate to the intensity and intimacy of the musical communication Amia achieved with us, I instead quietly put down my shaker. When I did so, Amia turned and looked at me for the first time. She said nothing, but she picked up my shaker and put it back in my hand. I knew then that for Amia, this was not only serious business, but also an opportunity to experience a brand new kind of communication, and on her own terms.

When Kay and I finally ended the interaction Amia quickly threw herself down on her stomach on the floor, lying on top of the shaker. Eventually Kay had to pick her up and pry the shaker from her hands. Amia hung like a rag doll for about a minute, then suddenly stood and made her way to the door. Throughout the entire event, Amia never uttered a word.

During my second session with Amia and Kay I chose to pay special attention to their relationship and how they communicated with each other. I recognized from my first experience with them that their relationship seemed to transcend the need for verbal communication. They seemed to understand each other well without words, and when they began playing music together, the intensity of the unspoken communication between them was almost palpable. In contrast to the previous session, Amia entered the music room and played enthusiastically with a higher level of arousal. This attitude came forth in her playing. She again played the shaker with Kay and I following her lead, but this time she changed the beat sporadically. She was noticeably more animated, at points standing to jump and

dance with her music. Kay again followed Amia's lead with care, playing steadily with Amia's beat when she played and stopping when she stopped. It wasn't until the end of the session that I noticed that Kay carried a stuffed animal, Abby Cadabby from *Sesame Street.* Amia did not touch it or acknowledge it in any way, and I only saw it when Kay picked it up. When I again carefully ended the music-play session Amia picked up the three shakers excitedly and attempted to leave with them. Kay did not chase her, but instead calmly called Amia's name, and after a few tries Amia responded by looking her mother in the eye. Kay calmly asked, "Do you want Abby?" She repeated this in the same even tone several times, and then Amia willingly turned over the shakers in exchange for her toy. I realized then that this was a well thought out plan on Kay's part. Kay brought Abby Cadabby along as an intentional reward for Amia for leaving the room at the end of the session without becoming upset.

Kay's ability to combine wisdom learned from years of parenting Amia with a fine-tuned intuition about her needs and communication was also evident in the next session, but in a very different way. In our third and final session together Amia appeared agitated and uninterested in the instruments. Instead of playing with the shakers she wandered around the room and made several attempts to run away from the music-play area and gain access to an instrument closet that contained instruments the music director and I deemed unsuitable for music-play. Though Kay made several valiant attempts to redirect, Amia continued to try to get into the closet. Finally Kay physically moved Amia's body back to the music-play area and sat Amia down in her lap. Amia is seven years old and tall, and her

agitation made her difficult for her mother to control. Kay was visibly stressed, and I did not want to ask her to continue controlling Amia in this way. Eventually I asked Kay if there was anything we could do to help Amia refocus. To my amazement, even in this moment of stress, Kay chose to give Amia the control over the situation. She guided Amia to a standing position, looked her in the eye, and asked her, "Do you want to play music?" Amia said, "No," calmly and clearly. I told them they were free to leave.

The transactional support portion of the SAP-O clearly reflected Kay's ability to understand and communicate with her daughter. She demonstrated significant strengths in goals related to her responsiveness to Amia, fostering Amia's own initiations, respecting her independence, and "setting the stage for [Amia's] engagement" (Prizant et al. 2006). The final session, during which Amia showed signs of "emotional dysregulation," was not wasted. Instead it brought out Kay's resilience and perseverance with Amia, reflected in goals like "interprets problem behavior as communicative and/or regulatory," "recognizes signs of dysregulation and offers support," and "models appropriate behavior when child uses inappropriate behavior" (Prizant et al. 2006). Even when Amia's behavior caused frustration, Kay interpreted this behavior as a form of communication and responded to that communication.

Amia's scores on the SAP-O show that verbal communication is not required for social interaction. Though she said only a handful of words in the entirety of the time I had with her, she showed a consistent ability to "initiate bids for interaction," "monitor the attentional focus of a social partner," and "protest undesired actions or

activities" (Prizant et al. 2006). Her lack of language usage during the music-play sessions was likely a choice. Kay reported on the SAP-R that Amia can name things, people, or pets, indicate "no" or "gone," greet people, and use spontaneous word combinations. Additionally, in the post-research interview Kay explained that Amia "talks when she wants something." Amia's ability to communicate symbolically was not well represented in her SCERTS scores. I believe this is due to her overwhelming strengths in quickly grasping the nature of musical communication, something not readily reflected in the SAP-O.

In the post-research interview Kay remained a person of few words. She indicated that Amia had had prior improvisational music experiences, specifically singing and making up songs with family members at her grandmother's house. At home they play with a keyboard, dance, and sing together. This showed me that Amia came into music-play recognizing it as a setting for nonverbal communication, and implied that other family members may share Kay's remarkable ability to wordlessly bond with Amia. However, the latter half of the interview revealed that Kay's emotional connection with Amia was not always joyful. When I asked questions like, "What are your goals for Amia?" and "How do you feel about Amia's autism?" Kay became wistful. She explained that she wants to have a conversation with Amia, but that Amia's speech therapist said this was unlikely to ever happen. She went on to say, "I know some people who say that they wouldn't change the autism or get rid of it. But for me it's stressful. I'm a single mom, and autism is expensive." Since Amia's school does not provide ABA therapy, and medical insurance does not commonly cover ABA, Kay struggles to afford it. She said that

Amia's father is over two thousand dollars behind on child support payments and that he only takes interest in Amia when it fits into his schedule. Other family members, such as Kay's mother and brother, may offer support but "no one understands." Kay explained that life with Amia is difficult. She described Amia as never "destructive" but often "independent." Amia frequently attempts to do things that are beyond her ability without guidance. For example, Kay related an incident in which she left the room after serving Amia a peanut butter and jelly sandwich. While she was gone Amia attempted to add more jelly to the sandwich, and when Kay returned Amia had spilled jelly all over the kitchen. Amia also tries to fix or move electronic appliances and devices.

When Amia began playing the shaker in that first session I spent some time feeling unsure whether she was even aware that her mother and I were playing with her. She stared straight ahead, only occasionally glancing at Kay. I did not recognize her intention to create a collaborative musical expression until I attempted to end it by putting down my shaker, and she quickly put it back in my hand. Through Kay's model of viewing all of Amia's behaviors as intentional and communicative, I realized that while Amia may not engage in conversations verbally, she is certainly not holding back either. Amia used music-play to communicate with her mother and me, not necessarily through expressing specific thoughts or feelings, but by putting her own natural intensity into the sound. By endowing Amia with control and agency over her own actions and activities or, in other words, by letting Amia make choices, Kay remained open and available to Amia's own style of communication. In this way, and despite her pain and frustration over Amia's

autism diagnosis, Kay takes a person-centered approach to her parenting. Even in her stress, Kay seems to see Amia as a *person* with autism (Koen, 2008, 467). Kay and Amia's struggle exposes the need for balance in the discourse on autism conditions. Amia needs both person-centered opportunities, where she is understood on her own terms and not required to conform to a neurotypical standard, and educational and therapeutic supports that help her live within a neurotypical world and develop and nurture loving relationships.

Andrew: Music as Connection

Meeting Andrew and his family was a bit of a circus, albeit a welcome one. When I spoke with Andrew's mother, Melissa, via email she said that she could not find child care for her other two children, Andrew's three and a half year old twin brother, Wade, and his two year old sister, Harriet. Since problems with finding willing research participants threatened to halt the project, I invited her to bring the other children along to participate as well. I also anticipated that having neurotypical children participating as well might offer interesting interaction opportunities for Andrew. I knew from the moment Melissa and the children entered the music room that these sessions would involve more careful observation and vigilance on my part. All three children took immediate interest in the instruments, and Melissa and I worked continuously to prevent them from hitting the hand and finger drums with the xylophone mallets. This issue came up at least once for every child participant, and the music director felt concerned for the safety of the drums, since the membranes on these types of drums were designed for hand use only. Instrument care and safety was, in fact, a continual issue throughout the

project. Though it was a particular issue with Andrew and his siblings, all of the children who visited the music room had their own ideas of how they wanted to play with the instruments. I began each music-play session with a prayer that the instruments would remain intact, since I could not afford the cost of repairing them. The music director explained, for example, that repairing a bent peg on an Orff xylophone would cost in excess of one hundred dollars. This continual threat prevented me from allowing the music-play sessions to remain completely child-led, since I frequently needed to intervene when a child mishandled an instrument. It was a continual source of anxiety for me, and it prevented the children from having the freedom of unrestricted self-expression.

Though instrument safety was a concern, the enthusiasm Melissa, Andrew, Wade, and Harriet brought to music-play was invigorating. Melissa quickly settled into the role of attending to Wade and Harriet while I observed and played with Andrew. Andrew's favorite instrument throughout the project was the large buffalo drum. The drum was large enough that the children required help to play it, generally by an adult holding the drum in a vertical position while the child played it with a large, soft-tipped mallet designed particularly for this drum. As a result the drum became a tool that brought out interaction and communication in the children. Each child needed to seek the attention of an adult in order to play it, and since it involved two users, turn taking was a natural outgrowth of its presence in the music-play area. Andrew preferred to play a steady beat continually, returning to the same tempo even after moments of distraction. He periodically made eye contact with me and said, "drum," along with other syllables and speech I did not

recognize. At one point I laid the drum flat on the floor and Andrew continued to play his beat, so I began tapping the drum with my hand, doubling Andrew's tempo. Andrew began to speed up his beat almost immediately, and though he did not match my beat, this showed me that Andrew recognized musical signals and could respond with imitation.

Andrew's communication expanded slightly in our second session together. He said, "This is a drum," quite clearly while we sat playing together. He also explored more of the music-play area. At one point he attempted to enter the off-limits instrument closet, but followed my instructions immediately when I reminded him that we would only play with the instruments in the music-play area. He also showed me that he recognized the numbers one through five and the letter K by pointing to a set of labeled boxes on a shelf. However, Andrew's disposition and activity level changed during about the last fifteen minutes of the session, and in these moments Andrew introduced a behavior that presents another "symptom" of autism that communicates unspoken thoughts. I described this moment in my research journal.

> His mother noticed him standing near the hand drums and remarked, "He's stimming a little bit." "Stimming" is a common term in the autism community used to denote behaviors used by individuals with autism to change their level of arousal by stimulating their senses. While I did not notice this first moment of stimming, I did see when Andrew sat on the floor and began picking up a xylophone mallet and dropping it gently onto the carpet in a ritualistic fashion, over and over. Later he collected several mallets and continued to do this, dropping all of them at once onto the carpet, then picking them up and doing it again. I asked his mother if this was more stimming, and she said it was, explaining that he performed this behavior at home with things like small toys or leaves. I then asked her if he used this behavior to increase or decrease his arousal level and she said that she believed he was decreasing his arousal level, and was likely tired. The SCERTS assessment manual discusses how these types of sensory behaviors

> may serve the purpose of increasing or decreasing arousal, i.e. increasing physical awareness and energy or decreasing it (Prizant et al. 2006, 52).

Much of the disorder-focused discourse on autism presents the belief that stimming is problematic and inappropriate in any context. In his 2014 article "The Musicality of Stimming: Promoting Neurodiversity in the Ethnomusicology of Autism," Bakan addresses this viewpoint. Bakan quotes researcher Stephen M. Edelson, who calls stimming an issue that has to do "with some dysfunctional system in the brain or periphery" (Bakan 2014b, 145). However, Bakan also presents the idea of "good stimming," saying, "There is a growing sentiment, especially among neurodiversity proponents, Autistic self-advocates, and anthropologists specializing in the study of autism, that stimming is not problematic at all, that there is nothing socially inappropriate or undesirable about it" (Bakan 2014b, 145). He describes Zolabean, a member of the Artism Ensemble, who discovered that, at least early on in her involvement in the ensemble, stimming was the most comfortable and enjoyable way for her to participate, and that for her, stimming was an expression of her involvement mentally and emotionally (Bakan 2014b, 147). In Zolabean's description, stimming is comparable to spontaneous and interpretive dance, since it is free-flowing from her emotions and communicated without the framework of verbal language.

In Andrew's situation, his stimming on this date was an attempt to communicate feelings he was not yet able to describe verbally. Based on how their day had progressed to that point, Melissa believed Andrew was decreasing his arousal level in preparation for a nap. Her assessment was accurate, because soon Andrew lay down on the floor, and then he got up and stood near the door.

Recognizing the needs of her son, Melissa collected Wade and Harriet and left early that day. Andrew and his family did attend another music-play session the following week, but like Amia, he exhibited signs of emotional dysregulation that grew beyond his own ability to regain composure.

Andrew's scores on the SAP-O reflected consistent abilities in joint attention for the first two music-play sessions, with a notable decrease in the third session when he felt dysregulated. He showed the ability to "initiate bids for interaction," "shift gaze between people and objects," "monitor the attentional focus of a social partner," and "request social games" (Prizant et al. 2006). His scores in symbol use peaked during the second music-play session, when his imitation, responses to facial expressions and words, and coordination of words with gestures showed strengths in this area. He scored highly in self-regulation during the third session despite his dysregulated state. This is likely due to the large number of goals related to dysregulation, making Andrew's upsetting moments valuable for the observation of his ability to persevere through them. In the domain of transactional support Melissa revealed that she can attend to Andrew's needs and communicate with him, even while also caring for her other children. Melissa consistently followed Andrew's attentional focus, attuned to his emotion and pace, responded to his signals, and modeled appropriate behavior. As mentioned previously, such scores do little to represent a true picture of a child's abilities or his or her mother's abilities to provide care. However, the SCERTS assessment or other similar observational tools work well to show areas of strength and weakness. An integrative program based on the SCERTS Model assessment for a child like Andrew,

for example, might focus on enhancing and developing his communicative actions, eventually leading to greater strides in verbal language development.

Melissa brought Harriet with her to a post-research interview at my home while Andrew and Wade attended preschool. While Harriet played I asked Melissa about how Andrew communicated at home. She indicated that while Andrew's language is improving, he still uses mostly noises and physical touch to make his needs known. She tries to help improve his verbal communication and receptive language by talking to him about what she is doing during the day. She believes that music helps Andrew "engage" and that it improves his "focus," citing his undistracted attention on the buffalo drum during music-play. Like Anna, she felt that music-play sessions would only help communication if they continued on a weekly basis for a longer period of time. When asked about her feelings about Andrew's autism diagnosis she replied, "He's been cheated out of normalcy," adding that she would cure his autism if that were possible. Like Anna and Kay, Melissa put autism hand-in-hand with stress. She cited financial concerns about affording therapies and the desire to avoid judgment from others. Her comments further emphasize the need for a balance between available and affordable therapeutic aids for children with autism and a more accepting and understanding community for children and adults with autism.

Andrew never struck me as a person who lacks interest in personal relationships. On the contrary, he seemed drawn not just to the buffalo drum but to the opportunity it offered to him to play with me. Melissa reported on his SAP-R that Andrew "happily engages with adults," and music-play gave him the chance to

engage with me in something that seemed both collaborative and calming for him. The steady beat he played consistently matched his mother's belief in the power of music to "focus" his attention. However, he easily shifted that attention to musical communication when I introduced a different beat, and his imitative response followed the formula for conversation, whether that conversation occurs through musical improvisation or a chat about the weather. For Andrew music fulfilled a need for connection via expressions he could not yet achieve verbally. He realized that he would have my help and attention as long as he continued playing the buffalo drum, so he utilized that opportunity to show me what he could do. Then, in the second session, when he noticed he could maintain my full attention, he ventured into other parts of the music-play area and the room itself, receiving my reactions and responding to them. He knew he had my attention, and he capitalized on it. For a child with two siblings close in age, the attention of an adult is likely a hot commodity. Andrew analyzed the music-play situation and figured out how to have what he needed.

Sofia: Music as a Game

Sofia and her mother, Miranda, were the only music-play participants who remained in the study for the entire nine-week study period, and Miranda was the one who contacted the online support page that resulted in new participants joining in the last four weeks. As a result I had the opportunity to become more familiar with both of them and to observe more change in Sofia over time as I developed a relationship with her. In the first music-play session, with six children and six adults present, Sofia and Miranda blended in with the crowd. It was difficult to

observe, much less engage with, each individual child in the group context. However, during the time that I managed to invest with them that day, I experienced the first moment in which I believe true musical communication occurred. Miranda was playing quietly and steadily on one of the xylophones while Sofia tapped a rhythm on a djembe when I noticed them. Sofia made consistent eye contact with her mother, showing me that they were involved in this moment together, and the music connected them, despite the noisy chaos in the surrounding room. However, Sofia's rhythm did not musically coincide with Miranda's playing, at least not to my Western ears. As an experiment, I joined in the moment, playing a nearby hand drum, attempting to capture Sofia's rhythm while following her mother's beat. Sofia made eye contact with me then, and for a brief period we played together with Miranda at the same beat and tempo. I knew at that point that Sofia could recognize and engage in musical communication and that she was comfortable in the social context that ensemble-playing creates.

The second music-play session unexpectedly became my first private session with Sofia and Miranda. Sofia moved from one instrument to the next, announcing, "Try this one!" as she approached them. She took particular interest in the xylophones, and she and I engaged together on these instruments. After watching her play a pattern on one xylophone I sat down at an adjacent one and began mimicking her pattern. Then I introduced a new pattern and Sofia played along. She did not match my exact pitches but did approximate my pattern of moving left to right (lower to higher), playing with alternating hands, and skipping pitches.

This segment of the session displays my earliest approach to facilitating music-play. Having carefully studied the SCERTS Model manual, I worked with the children with the assessment goals in mind and with the idea that attempting to coax the children into scenarios of what I deemed "musical communication" could lead them closer to improvements in non-musical communication, and advancements in SCERTS assessment scores. In this early portion of my research my enthusiasm for the possibility of having quantifiable data to report along with ethnographic case studies clouded my commitment to a person-centered approach to the study. In a way, I put the importance of the research data in a higher priority position than the children themselves. Over time, however, getting to know the children led me to realize that they would provide the data in their own way. I eventually came to the conclusion that I could not anticipate the outcome of the research. I needed to remember that I was the learner, and the children were the culture. The children would determine what I needed to know and how they would tell it to me.

Sofia's approach to music-play became my job to discover. In the second session together she gave me my first clue. She became interested in the large buffalo drum, so I held it for her while she played. To my surprise, she initiated not only the interaction but also a turn-taking game. She picked up the mallet and announced, "Sofia's turn!" Then, after hitting it a few times, she handed it to me and said, "Your turn!" This followed over several exchanges. While game-play developed slowly over the course of my sessions with Sofia, social interaction surrounding the instruments remained consistent from the start. Throughout our

sessions together Sofia showed she was so adept at initiating social interaction that the initiation itself became unnecessary. Her mother and I quickly grew to assume that she wanted the interaction, so a rejection would have been more unique. For example, during our third session together Sofia explored a set of sand blocks by rubbing them against her body. When she discovered that she enjoyed the sensory stimulation of the sandpaper she brought the blocks to Miranda and rubbed them on her body as well. This exchange occurred at least once at each session over several weeks, after which Sofia traded this game for more complex interactions.

Eventually Miranda began to report that Sofia often requested "moosic class" throughout the week in between sessions. In fact, Sofia told me, "I like moosic class" directly during our fourth session together. Sofia began to generalize the turn-taking game across other instruments and using more various verbal communications to explain what she wanted. In short, Sofia wanted to lead the session, and this was when I realized that allowing her to do so was the appropriate ethnographic, person-centered approach. Sofia used previously learned phrases, or delayed echolalia (Prizant et al. 2006, 312) to explain to Miranda and me what she wanted us to do. For instance, when she wanted Miranda to play the xylophones with her, she gestured toward one xylophone while moving toward another and said, "This is for you." At this point Miranda began requiring her to ask to use the instruments. Sofia would move toward an instrument Miranda was using, saying, "I want this one," and Miranda would ask, "Ahem?" requiring Sofia to respond, "Please may I have this one?" During these music-play sessions that occurred in the middle of the nine-week study Sofia became cyclical in her physical approach to the

instruments. I arranged the instruments in a circle, and she generally worked around the circle systematically, always moving in the same direction. Miranda also noted that Sofia arranged the small finger drums in an arc and only approached them from left to right. However, Sofia became less likely to do this as the sessions continued, and in general she showed more freedom and less inhibition at each proceeding music-play session.

In our fifth session together Sofia expanded her ideas on how to lead the sessions further by adding an element of pretend play. At one point during this session Sofia sat on the rug playing a wood block and did not invite Miranda or me to join her, which seemed unusual for her. I recorded this moment in my research journal.

> Then she began repeating a phrase that sounded like echolalia, and included the word "watching." Neither her mother nor I could interpret what she was saying at first, but then she added "bye" to the end of the phrase and waved at the back wall. After several times through I finally understood the entire phrase to be, "Thank you for watching Sofia's music class. Bye!" Her mother explained that she watches YouTube videos that end in a similar fashion. Sofia pretended to star in her own YouTube video.

While pretend play recurred at several more music-play sessions with Sofia, social games involving the instruments became her obvious favorite among the many ways she utilized her music-play time. The most complex game that Sofia designed was "Chicken." Miranda initiated the idea of introducing this game, since they played it together previously in a different context. Miranda explained that one day Sofia accompanied her to her office but refused to leave at the appropriate time. Finally Miranda said, "Chicken says it's time to go, cluck cluck!" and Sofia left willingly. In one of our last sessions together Miranda held the large buffalo drum

while Sofia played. Sofia hit the drum with the mallet, and Miranda clucked like a chicken, then ducked her head to hide behind the drum. Sofia then turned to me, laughing, and said, "Where'd she go?" When she hit the drum Miranda appeared again. I wrote in my research journal, "Overall what I enjoy most about Sofia is her use of the instruments in socio-musical games like this. While I love playing, singing, and otherwise performing music in solitude, many of my most cherished musical experiences happened when practicing or performing as a group. Sofia sees music as a social event, and very often it is exactly that."

Sofia's scores on the SCERTS Model assessment reflected her social communication abilities well but did not depict an accurate picture of her abilities in relation to emotional regulation. In the social communication domain, Sofia scored highly in objectives like "engaging in reciprocal interaction," "shares attention," and "shares emotion" (Prizant et al. 2006). She also had remarkable success in categories like "learns by observation and imitation of familiar and unfamiliar actions and words" and "understands a variety of words and word combinations without contextual cues" (Prizant et al. 2006). The SCERTS Model assessment, and especially the social communication domain, is heavily weighted in the use of verbal language, and Sofia's more advanced skills in this area stood out. Sofia was less successful in the domain of emotional regulation, but this is not so much a reflection of weakness on Sofia's part as it is a reflection of the singularity of the contextual scenario of music-play. One of the objectives in this domain, "recovers from extreme dysregulation with support from partners," was unscored, not because Sofia lacks this ability, but because she simply never entered a state of emotional

dysregulation (Prizant et al. 2006). It is necessary to point out here that the SCERTS Model assessment requires that each child be observed across at least two contextual scenarios, and music-play can only serve as one.

My interview with Miranda confirmed many of my observations about Sofia. Despite the difficulties many children with autism experience in social, and in particular verbal, communication, it is a strength for Sofia. Miranda stated that there is now nothing that Sofia needs that she can't communicate in a way that Miranda understands her, and even others outside of their household understand her about seventy percent of the time. Sofia is newly diagnosed with autism as of August 2015, and her communicative ability continues to grow, with our music-play sessions contributing to that growth. Miranda also believes that the music-play affected more than Sofia's communication. She relayed the example that during a recent game of Memory, Sofia was able to take turns and reverse the game instructions to allow her mother a turn at finding the pictures that Sofia indicated. Miranda likened this game to Sofia's turn taking on the large buffalo drum and her ability to recall and expand on games she designed in previous sessions. Sofia enjoyed the music-play sessions so much that her family intends to continue them at home. The majority of Sofia's Christmas gifts were music-related, including a xylophone, harmonica, drums, and a keyboard that teaches playing techniques when attached to a tablet device.

Miranda's feelings about Sofia's autism diagnosis were quite different from the painful expressions of the other mothers. Miranda indicated that she felt "OK" about the diagnosis currently and remarked that Sofia plays alone for hours. She

explained that many people express disbelief about Sofia having autism, which reflects my observation that Sofia did not exhibit many of the stereotypical signs of autism. Miranda also revealed that Sofia's father has an Aspergers diagnosis.

The contrast in Miranda's feelings about autism and Anna, Kay, and Melissa's feelings highlights the fact that the abilities of a child with autism, along with his or her strengths and weaknesses, can directly affect the experiences of family members and caregivers. Jim Sinclair, founder and president of Autism Network International, wrote this in his 1993 essay, "Don't Mourn For Us:"

> This is important, so take a moment to consider it: Autism is a way of being. It is not possible to separate the person from the autism.
>
> Therefore , when parents say,
>
> "I wish my child did not have autism,"
> what they're really saying is,
>
> "I wish that the autistic child I have did not exist, and I had a different (non-autistic) child instead."
>
> Read that again. This is what we hear when you mourn over our existence. This is what we hear when you pray for a cure. This is what we know, when you tell us of your fondest hopes and dreams for us: that your greatest wish is that one day we will cease to be, and strangers you can love will move in behind our faces (Sinclair 1993).

While Sinclair's statement is real, true, and powerful, parents and caregivers are on the front lines struggling with how to raise a child with autism in a neurotypical world. Parents who wish for a cure are likely not looking for a more lovable child but for one who they can care for confidently. At the same time, however, children and adults with autism need understanding and acceptance. Research, advocacy, and diplomacy is needed to bridge the gap between a caregiver's need for practical tools and help in raising a child with autism who may

one day have the ability to express feelings like Sinclair's and people with autism who wish for acceptance of their differences as a part of normal neurological variety. Sofia's strengths in social communication provide her family with distinct benefits as they care for her, yet they still utilize therapeutic tools like special education, applied behavioral analysis, speech therapy, and occupational therapy to help her thrive. Shifting the perspectives of parents and caregivers is essential, but making therapeutic tools available to people with autism is essential as well.

Though I set out in this research to search for data as "the solution of the particular problem" (Nettl 2005, 232), I found in time that my research subjects, the children with autism, were more compelling than any quantifiable data could convey. The introduction of participation problems was worrisome, but rather than hampering the project, changes in the research design and methodology served to clarify my clouded view of the children themselves. More than mere research subjects and assessment scores, these children had their own stories to tell, and they could achieve that through the medium of music-play. If autism is indeed a culture, then a person-centered, ethnographic approach is the appropriate way to study it ethnomusicologically.

Therefore I changed lenses. I looked carefully at each child, asking what made him or her unique, what were his or her strengths and weaknesses, and how did he or she both use and overcome them? I asked how they used music in their lives, instead of asking how music could change them. While Johnathan, Amia, Andrew, and Sofia can offer only a small view of autism culture, they represent a portion of a population who, in a great variety of ways, seeks understanding and

acceptance. Through music these children sought emotional release, relational communication, social connection, fun, and friendship. In this way, music is a tool, useful both in solitude and in connection with others and malleable to our needs and desires. For people with autism it can provide an outlet for self-expression privately or publically, or it can serve as a way of uniting them with others regardless of neurology.

Anna, Kay, Melissa, and Miranda may provide a second panoramic view from another portion of the autism community, that of parents and family members. For these mothers, recognizing and affirming the personhood of their children with autism came second to achieving an understanding of them or perhaps just getting through their day successfully. Each mother had an approach to her child that was not just unique but tailored toward her child's needs, desires, and personality. Each mother attained a distinct connection to her child despite the child's differences in communication and behavior and in response to his or her needs. But whether these mothers realized or believed in their success is unclear. How can the autism community find common ground between people with autism who seek acceptance through neurodiversity and parents who struggle to get through the day? In the forward to her book *Loud Hands: Autistic People, Speaking,* Julia Bascom writes, "We are fine. We are complete, complex, human beings leading rich and meaningful existences…" (Bascom 2012, 10). But what if they're not? What if my child does not believe he or she is leading a "rich and meaningful existence?" Nothing in my research on neurodiversity and its proponents suggests that the movement is opposed to therapeutic intervention. However, because autism research is cross

disciplinary, changing the "pathology paradigm" needs to occur across all disciplinary boundaries as well. Every educational and therapeutic intervention that touches people with autism, and each practitioner of each intervention, must shift his or her perspective without losing sight of the very real need for therapeutic aid. It is a lofty yet worthy goal.

CHAPTER 5

CONCLUSION

Summarizing the research data from a study such as this one is difficult. The danger in an ethnographic analysis of a culture is the natural inclination toward generalizations, and it is difficult to define, with human research subjects, at what point generalizations turn into stereotypes. There is no one type of person with autism, just as there is no one type of person. While the autism community is certainly a culture, what unifies this particular culture is not its music, its ethnicity, or its geographic location.

The autism community comes together by a common medical diagnosis with some shared fundamental characteristics "wound into" their personalities (Bakan 2014a), but otherwise people with autism are as diverse in background, location, and music choices as all of human existence. Because of this, an ethnography of autism can not proceed in the same fashion as an ethnography of an individual music culture. Instead, I need to summarize how music functions within autism culture, or at least within the small sector of autism culture that these four children represent. Pointing out that music may function differently at different times for any individual, autistic or not, is important. That is likely what draws most of mankind to this "human obsession," to use Levitin's expression. However, my research determined that musical communication within autism culture is valuable for its function as a medium for connecting to others. In this way, these children with autism used music to communicate beyond their current level of ability within a neurotypical framework. Though each child utilized music differently and brought

forth unique musical functions based on his or her needs, the overall theme is that all of these musical functions center around social connection.

Johnathan, for example, though he was interested in a mostly solitary music experience, still connected with me through shifting his gaze. This was only a small sign that he was open to socio-musical interaction, but it is a significant one. On the SCERTS Model assessment SAP-O form, "shifts gaze between people and objects" falls under the objective entitled "shares attention," a portion of the objectives building toward skills in joint attention behaviors (Prizant et al. 2006), and other goals that form the building blocks of social relationships. Nevertheless, Johnathan's interest in a less social musical experience does not indicate that he is less interested in the functionality of music. Even the school music director at the host location remarked that Johnathan's playing style on the xylophone was rhythmically intricate. The depth and intensity in Johnathan's playing revealed an emotional expression that defied his limited verbal communication. In a way Johnathan, through his focused playing, allowed his mother and me into his emotional world, or at least his emotional moment. Perhaps the conclusion I can draw from this is that emotional expression through music is valuable to children with autism because their diagnosis and its characteristics make communication in the neurotypical format more difficult. The health concerns and everyday struggles in Johnathan's background seem to necessitate a form of emotional release, and music-play provided a platform for it.

Amia seemed to achieve a satisfying level of emotional expression as well, though she also desired to bridge the gap in her communication between her

mother, herself, and me. She confidently took the lead in our follow-the-leader-style musical improvisations, likely because Kay's parenting style empowered her and because of her own natural tendency toward independence. Amia connected with Kay and me musically because she took leadership over her music-play experience, and thus she provided herself with agency and empowered her own socially communicative abilities. The communicative connection she had with Kay is a good sign that her skills in this area will continue to grow, but more importantly, she took control over the experience, since music-play offered her that option. In a disorder-focused therapy session Amia would not have that control. Instead she used music-play as a tool for an intimate socio-musical communicative connection.

Though Andrew did not achieve the musical communication that Amia did, he may not have desired it. Both children made social connections through their music-play, but Andrew's was a simpler connection. Where Amia communicated, Andrew created a simple space where he and I played together, absorbed by each other's company. The steady pulsing of his beat on the large buffalo drum seemed to soothe him, and despite the busyness of the room and the presence of his brother and sister, he found comfort in it. At the same time he still allowed me into that comfortable place with him and seemed to appreciate my attention, even if I was just there to hold the drum. As Melissa described, the buffalo drum focused Andrew. In the second session this focus opened up a communicative door for him, and he began to show us through his actions that he needed something. Though disorder-focused literature and research categorizes stimming as dysfunctional, his choice to engage in it communicated his need, in this case a need to sleep, to his mother.

Though perhaps less direct than verbal communication, Andrew's stimming conveyed a need he had, making it a functional form for communication. Further therapeutic intervention to teach language is certainly necessary for Andrew, since few others would understand the contextual meaning of his stimming behavior, but his display of communicative behavior worked in this situation.

With her more advanced skills in social communication, Sofia took advantage of music-play to create social scenarios she could control. In each successive music-play session she took more and more command of the room and her playmates. In her first session in the group setting she connected musically with Miranda and me, and in her last session she designed a complicated game involving role-play with the large buffalo drum. Sofia used delayed echolalia for much of her verbal communication, but she successfully engineered her learned phrases to fit appropriately into her interactions. For example, she used a memorized script from the ending of a YouTube video to reenact the video, but not in its exact context. She placed herself in the role of narrator, and the music-play session became the setting. In the same way, she also took a role-playing game introduced by her mother in a different context and successfully incorporated it into music-play with the large buffalo drum. Sofia's use of delayed echolalia in appropriate context reflects a typical progression of language learning for children with autism. The SCERTS Model authors state, "Language acquisition progresses from the predominant use of echolalia with little evidence of comprehension or communicative intent, to the use of echolalia for a variety of communicative functions, which is later followed by a decrease in echolalia that co-occurs with an increase in creative, spontaneously

generated utterances" (Prizant et al. 2006, 80). Therefore socio-musical play revealed Sofia's progress toward more spontaneous communication. More importantly, however, music-play provided an outlet for Sofia in which she not only had the opportunity to play socially with her mother and myself but also could design her own way of doing so. The person-centered approach, though it is common practice from ethnomusicological standards, is revolutionary from the perspective of disorder-centered research and intervention. From the perspective of the child with autism, this approach is also completely unique. The setting of person-centered socio-music-play provides each child with personal agency, something they are not likely to experience in a special education or therapeutic context. It also differs from their home experiences in that he or she has the opportunity to lead the action. In this study, since a parent also participated, each child could connect and bond with his or her mother in a new way.

The research data from the SCERTS assessment and ethnographic accounts of these four children leads to several conclusions. The first, and perhaps "the solution of the particular problem," is that person-centered music-play can provide autistic children with the opportunity and ability to communicate with family members and others. Each child that completed the study communicated in some fashion, though how communication occurred and what he or she communicated varied a great deal. Some of this variety is likely the result of each child's communicative ability within the framework of neurotypical verbal communication. Though SCERTS assessment scores showed that each child had some ability in the domain of social communication, goals achieved successfully ranged from shifting

eye gaze and monitoring the attentional focus of a partner to initiating, and in Sofia's case creating social games. Using my original approach to the study, I may have concluded that the less-abled children in the domain of social communication were less communicative, or even uncommunicative, during music-play, but the children proved that that is simply not true. By taking a step back, recommitting to a person-centered approach, and adjusting my lens, to continue with Nettl's analogy, I was able to see that how each child communicated did not just reflect his or her communicative ability but also, and more significantly, what he or she wished to communicate. Consequentially, the kind of communication received from the child reflected his or her choices in the use and functionality of music-play. A child who views music as a tool of emotional release has less need to ensure that his co-participants understand him if he achieves that release through the sensory experience of playing itself. In contrast, a child who views music as a social experience will utilize it for reaching out to others, especially in the case of a child with autism whose ability to do so verbally is limited. So does this mean that music-play is less effective for children for whom music is viewed as a more solitary activity? That depends on whether the goal of music-play is increased ability, therapeutic expression, or social connection. For Johnathan, playing the xylophone exuberantly certainly seemed therapeutic in terms of emotional expression, but this type of music-play may not achieve increased ability in neurotypical verbal communication because for Johnathan that's not the function of music. Anna pointed this out herself when she expressed that music-play would be "very beneficial," but qualified that statement with suggestions like adding communicative

goals or including music-play in supplemental therapy programs. Her suggestions are valid and important to consider, but the danger in classifying music-play as only another possibility in the realm of therapeutic intervention comes from devaluing its unique contribution as a method of uninhibited self-expression. This is exactly what Johnathan achieved in his music-play sessions and not something he likely finds elsewhere in his life. The conclusion from this is that while music-play is effective as both a therapeutic intervention and a medium for emotional expression a strong line should divide these two possibilities for usage. If a child who utilizes music for emotional release is then asked to use it only for yet another form of therapy designed to get him talking, then music-play transforms in his mind and he loses the freedom he associates with music. This reduces music's functionality to nothing more than a context for learning other skills.

Certainly the study shows that music-play, even without specific therapeutic goals, can serve as a context for assessment and evaluation using the SCERTS Model. Though scoring in this isolated scenario made the outcomes of the assessment less useful than a true contextual application of the assessment, making observations of the goals according to the SAP-O was easy and perhaps simpler in this scenario of one-on-one observation without outside therapeutic or educational goals. Continuing to use music-play as a therapeutic tool within the SCERTS Model program framework brings us back to the point of whether or not to reduce music's expressive functions down to a system for learning. I began the study with this research question. Can music-play serve as a catalyst for children with autism to increase or refine their abilities to communicate interactively? Now, after watching

these four children interact with music, I wonder if music *should* be used in this way. I do not intend to call into question the validity of music therapy as a setting for educational goals, even for children with autism. Instead, I believe that this study highlights the significance of music-play as a therapeutic context for emotional expression and social connection when music-play remains person-centered and child-led. To only utilize music as an opportunity to develop other skills would take away its function as a comfortable and safe place to be oneself without neurotypical requirements and inhibitions. This would devalue music itself, at least in the eyes of the child with autism.

The inability of the SCERTS assessment to reflect certain aspects of socio-musical communication that the children achieved also highlights the need for a more person-centered approach in educational research and interventions for children with autism. For example, Sofia's scores in the emotional regulation domain remained low only because she enjoyed the context of music-play so much that I never had the opportunity to observe her in an emotionally dysregulated state. Since emotional expression and recovery from dysregulation is a good part of the emotional regulation portion of the assessment, Sofia received low scores simply because she enjoyed herself. If the SCERTS assessment were used in its intended setting, where evaluators observe children across several contexts, Sofia may have provided them with moments of dysregulation, but for a child who Miranda described as generally happy, this can mean lower scores in an area where she is otherwise successful. The assessment also failed to recognize Amia's strengths in communication, since her communication was socio-musical and not language-

based. In general, the SCERTS assessment goals are intended to lead a child further and further toward neurotypical communication and behavior. This is key, since children with autism will need to learn to function in a largely neurotypical world that at this point fails to appreciate their differences. Yet it is in missing the value of those very differences that the assessment fails to recognize the intrinsic value of socio-musical communication to lead to further communicative developments in children.

That music-play can serve both expressive and therapeutic functions speaks to the inherent value of music, and the children's innate abilities to use the music-play setting as a tool for getting their needs met shows the strength of the human bond to others, even when neurological differences separate us. My interviews with the mothers emphasized the stress of the separation they felt from their children, just as Jim Sinclair's essay points out the same from the perspective of the person with autism. Miranda, the only mother who did not seem burdened by her child's autism diagnosis, also had the child with the strongest abilities in neurotypcial communication. While proponents of the neurodiversity movement seek autism acceptance, parents of children with autism are seeking help. Parenting a child with autism often leaves mothers, fathers, and caregivers searching for a cure because they find themselves raising a child with whom they cannot communicate, a child whose sensory sensitivities are enhanced beyond those of neurotypical children, and a child who simply does not understand the people around him/her. Such neurological differences need not impede him or her in achieving a "rich and meaningful existence" (Bascom 2012, 10) as an adult, but to get there he needs

therapeutic and educational intervention. Having a child with autism tasks parents with coordinating, participating in, and affording numerous interventions, in addition to fulfilling their child's needs for food, sleep, entertainment, connection, and love. Furthermore, the pathology paradigm so prevalent in medical research and services takes root in parents as well when they seek diagnosis and treatment. The neurodiversity movement does acknowledge and support interventions for people with autism. Autism Network International (ANI), an organization coordinated by Jim Sinclair, states this as one of its philosophies and goals. "In addition to promoting self-advocacy for autistic adults who are able to participate independently, ANI also works to improve the lives of autistic people who, whether because they are too young, or because they do not have adequate communication skills, are not able to advocate for themselves" (Autism Network International).

Parents are likely unable to accept the concept of neurodiversity because they experience such difficulty helping their child on a day-to-day basis and progress toward social communication and emotional regulation is slow. All of the mothers in this study loved their children. To disregard their feelings on their child's autism diagnosis or to paint it as unloving or uninformed devalues their hard work and experience with their children. Opinions and beliefs from parents and caregivers are just as valuable and worthy as those of people with autism, since they are a necessary component to success for people with autism. Rather than disagreement or contention, open discourse is necessary to shift perspectives and find common ground. If parents of children with autism and proponents of neurodiversity can go as far as to consider themselves subgroups of one unified

autism culture, their advocacy will become united, goals defined, and paradigms changed. Music-play can facilitate this type of communication by enabling parents to view their children with autism as capable, functional individuals.

Organizations like the Artism Ensemble move in the direction of this kind of inclusivity. Bakan's 2014 article "Ethnomusicological Perspectives on Autism, Neurodiversity, and Music Therapy" describes Artism as including four to five children with autism, their co-participating parents, and "professional musicians of diverse musicultural background" (Bakan 2014a). This collaborative effort takes advantage of music-play's function as a social connection for children with autism. Music-play allows these children to not only participate but also take leadership over their musical compositions and improvisations (Bakan 2014a). The children can communicate with the adults as to how the music will sound and what it achieves. However, the article does not describe the abilities of the child participants in terms of neurotypical verbal communication, so it is unclear how they communicate and connect with the adult members of the ensemble. The Artism Ensemble received some criticism after a June 2013 presentation for the Society for Disability Studies. Zach Richter, a scholar, author, and advocate with autism voiced concern on behalf of a panel including mostly other individuals with autism (Bakan 2014c). The panel offered a set of suggestions that at the time of the writing Bakan planned to incorporate (Bakan 2014c). The suggestions included decreasing the volume to accommodate sound sensitivities, providing audiences with alternatives to clapping to show their appreciation, and removing the phrase "autism awareness" from literature since this phrase is considered offensive by

many who support autism self-advocacy (Bakan 2014c). Incorporating these and further suggestions from the autism community will not only align this group and future similar ensembles with a person-centered approach, but also enable neurotypical participants and audience members to better recognize and understand such neurological differences. More significant, however, is the opportunity that involvement in such an ensemble can provide to people with autism of all ability levels to communicatively connect with others of all neurological profiles. Such ensembles or music-play groups need not even present themselves as specifically intended to cater toward people with autism if they recruit members from organizations or support groups from the autism community and neurotypical organizations as well. Parents of children with autism may question their child's ability to participate, but encouragement from ensemble coordinators could result in a neurologically diverse group.

It follows, then, that the further development of the Artism Ensemble and the organization of other similar ensembles could significantly impact relations between people with autism, caregivers of children with autism, and members of the professional music community. Perhaps more importantly, communication between members of the ensemble musically, verbally, and otherwise could strengthen bonds. While the suggestion of Richter and his panel to include both adults and children with autism is a significant step for the Artism Ensemble, further development of the ensemble's basic concept could include separate organizations for children's and adult's ensembles, with both age groups including people with autism and neurotypical people. Inclusive organizations like Artism need not

simply cater to the needs and desires of the group members with autism. Neurotypical individuals benefit by expanding their perceptions on communication, ability, sensitivity, and normalcy.

My utilization of the SCERTS Model assessment shows that music-play, even when it remains person-centered and child-led, is a viable context in which evaluators can examine the communicative and emotional skills of children with autism. However, further research could determine how music-play might contribute effectively to a SCERTS Model educational program. Can a person-centered program still add value to an educational intervention program, or would the approach need to become therapeutic? If so, is a trained music therapist needed or is it possible to expand school music education programs to include this type of work? If evaluators introduce therapeutic interventions to the context of music-play, will this cause children in the program to abandon interest in music as a form of self-expression or entertainment? Or can music safely take on both these roles without losing its power? Additionally, is it possible to alter the SCERTS Model assessment so that socio-musical communication functions as a step toward further developments in neurotypical language abilities? Can researchers successfully alter the assessment to include musical communication as one avenue for expressing the desire and ability to interact in a communicative way?

Anna's suggestion that music-play could become a supplemental therapy within other intervention programs is valid. Further research on music-play will help determine if music remains useful for both therapeutic intervention and self-expression when used for dual purposes. One way to make use of this study is to

develop school or community-based music-play programs that are inclusive of all neurological profiles and abilities. Existing organizations could design programs for children or adults, or a group for all ages. Music therapists, teachers, or local musicians could facilitate while activities remained participant-led, and organization of musical roles, performances, or compositions could be determined by group decision. Local community facilities, such as churches, recreation centers, or schools could host the organizations, and with portable instruments the organization would not require a permanent location. Having such holistically therapeutic organizations hosted by recreation facilities makes involvement more available and affordable for families of children with autism who already struggle to afford costly therapies not covered by medical insurance. The therapeutic value of such an organization is the same as that of any music-play setting, with children and adults with autism receiving the opportunity to communicate through music regardless of their verbal communicative abilities, along with the benefit of emotional expression and release. Neurotypical individuals who participate would learn to communicate and better understand others across neurological boundaries, and also benefit from emotional expression and release.

There is a very real need for the person-centered approach inherent to ethnomusicology and anthropological studies to breech the walls around disorder-focused medical research on autism. However, this is unlikely to happen until music-play and other person-centered events and concepts gain validity by first becoming a part of the autism community. Gaining the support and approval of families of children and adults with autism will allow this and similar ideas to catch

the attention of researchers in other fields that deal with autism studies. This study suggests that the best way to accomplish this is by letting the children lead, allowing parents to slowly enter into a communicative world with their child through music. When a parent not only sees their child learning through play but also participates in that play, they are doing more than getting through the day. They are creating and nurturing an emotional bond that so many parents of children with autism fear they will never achieve. More importantly, the children feel this bond as well and begin to sense the value of connecting with the individuals who love them. From this connection families grow stronger and parents begin to see their child as a *person* with autism. With the support of their families children like those in this study and others grow to become autistic self-advocates who can create and describe a new viewpoint on autism, disability, and life itself.

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APPENDIX A

JOHNATHAN

SCERTS

SAP-OBSERVATION FORM: Language Partner Stage (page 1)

Child's name: Johnathan Date of birth: _____

Background information:
Johnathan, 7
1st grade

Team members:
Melanie Makovsky- researcher
Anna-mother

Documentation of assessment context

Group size:	☐ One to one	☒ Small group	☐ Large group
Partner:	☒ Familiar adults	☐ Familiar peers/siblings	☒ Unfamiliar adults ☐ Unfamiliar peers
Natural contexts:	☐ Home	☒ Learning center/school	☐ Community

Activity variables:
1. Structured/Unstructured
2. Must do/Fun
3. Adult directed/Child directed
4. Motor based/Sedentary
5. Familiar/Unfamiliar
6. Preferred/Nonpreferred
7. Easy/Difficult
8. Language based/Non-language based
9. Social/Solitary
10. Busy/Calm

Transitions:
1:
2:
3:

Date of observation		Length of total observation:	30 minutes
Qtr 1 start date:	11/24/15		
Qtr 2 start date:	12/3/15	Length of total observation:	30 minutes
Qtr 3 start date:		Length of total observation:	
Qtr 4 start date:		Length of total observation:	

SCERTS Profile Summary	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Social Communication				
Joint Attention	8 /62	7 /62	/62	/62
Symbol Use	6 /50	4 /50	/50	/50
Emotional Regulation				
Mutual Regulation	4 /46	4 /46	/46	/46
Self-Regulation	5 /56	5 /56	/56	/56
Transactional Support				
Interpersonal Support	11 /66	8 /66	/66	/66
Learning Support	1 /50	1 /50	/50	/50

Social-Emotional Growth Indicators Profile	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Happiness	1 /10	2 /10	/10	/10
Sense of Self	- /10	- /10	/10	/10
Sense of Other	- /10	- /10	/10	/10
Active Learning and Organization	2 /10	- /10	/10	/10
Flexibility and Resilience	2 /10	1 /10	/10	/10
Cooperation and Appropriateness of Behavior	- /10	- /10	/10	/10
Independence	- /10	- /10	/10	/10
Social Membership and Friendships	3 /10	3 /10	/10	/10

SCORING KEY:
2 = criterion met consistently with at least three partners in at least two contexts
1 = criterion met inconsistently, in one activity, or with assistance
0 = criterion not met based on observed or reported information or would not be expected

SCERTS®

SAP OBSERVATION FORM: Language Partner Stage (page 2)
Social Communication

Child's name: Johnathan

Qtr 1	Qtr 2	Qtr 3	Qtr 4	JOINT ATTENTION
				1. Engages in reciprocal interaction
1	1			JA1.1 Initiates bids for interaction (= SR1.1) + / +
1				JA1.2 Engages in brief reciprocal interaction (= SR1.2) + /
				JA1.3 Engages in extended reciprocal interaction (= SR1.3) /
				2. Shares attention
1	1			JA2.1 Shifts gaze between people and objects + / +
				JA2.2 Follows contact and distal point (= SU2.2) /
1	1			JA2.3 Monitors attentional focus of a social partner + / +
				JA2.4 Secures attention to oneself prior to expressing intentions (≈ JA5.5)
				3. Shares emotion
1	1			JA3.1 Shares negative and positive emotion (= MR1.1; ≈ MR3.1, MR3.2) + / +
				JA3.2 Understands and uses symbols to express a range of emotions (≈ MR1.2, SR3.5) /
				JA3.3 Attunes to changes in partners' expression of emotion (≈ SU2.4; = MR2.5) /
				JA3.4 Describes the emotional state of another person (↔ SU5.6) /
				4. Shares intentions to regulate the behavior of others (↔ JA7.2, JA8.2, SU4–SU5, MR3.7)
1	1			JA4.1 Requests desired food or objects (≈ MR2.6) + / +
				JA4.2 Protests/refuses undesired food or objects (≈ MR3.4) /
				JA4.3 Requests help or other actions (≈ MR3.3) /
				JA4.4 Protests undesired actions or activities (≈ MR3.4) /
				5. Shares intentions for social interaction (↔ JA7.2, JA8.2, SU4–SU5)
				JA5.1 Requests comfort (≈ MR3.1) /
				JA5.2 Requests social game /
1	1			JA5.3 Takes turns + /
				JA5.4 Greets /
				JA5.5 Calls (≈ JA2.4) /
1	1			JA5.6 Shows off + /
				JA5.7 Requests permission /
				6. Shares intentions for joint attention (↔ JA7.2, JA8.2, SU4–SU5)
				JA6.1 Comments on object /
				JA6.2 Comments on action or event /
				JA6.3 Requests information about things of interest /
				7. Persists and repairs communication breakdowns
				JA7.1 Uses appropriate rate of communication for context /
				JA7.2 Repeats and/or modifies communication to repair (↔ JA4–JA6) /
				JA7.3 Recognizes breakdowns in communication /
				8. Shares experiences in reciprocal interaction
				JA8.1 Coordinates attention, emotion, and intentions to share experiences /
				JA8.2 Shows reciprocity in speaker and listener roles to share experiences (↔ JA4–JA6) /
				JA8.3 Initiates interaction and shares experiences with a friend /

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

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SAP-OBSERVATION FORM: Language Partner Stage (page 3)
Social Communication

Child's name: Johnathan

Qtr 1	Qtr 2	Qtr 3	Qtr 4	SYMBOL USE
				1 Learns by observation and imitation of familiar and unfamiliar actions and words
1				SU1.1 Spontaneously imitates familiar actions or words immediately after a model +/
1				SU1.2 Spontaneously imitates unfamiliar actions or words immediately after a model +/
				SU1.3 Spontaneously imitates actions or words and adds a different behavior /
				SU1.4 Spontaneously imitates a variety of behaviors later in a different context /
				2 Understands nonverbal cues in familiar and unfamiliar activities
1	1			SU2.1 Follows situational and gestural cues in familiar and unfamiliar activities (= SR4.2) +/+
				SU2.2 Follows contact and distal point (= JA2.2) /
				SU2.3 Follows instructions with visual cues (photographs or pictures) /
				SU2.4 Responds to facial expression and intonation cues (≈ JA3.3) /
				3 Uses familiar objects conventionally in play
				SU3.1 Uses a variety of objects in constructive play /
				SU3.2 Uses a variety of familiar objects conventionally toward self /
				SU3.3 Uses a variety of familiar objects conventionally toward other /
1				SU3.4 Combines a variety of actions with objects in play +/
				4 Uses gestures and nonverbal means to share intentions (↔ JA4–JA6, MR3.3, MR3.4)
				SU4.1 Uses a variety of conventional and symbolic gestures ☐ a. show ☐ d. clap ☐ f. head nod ☐ b. wave ☐ e. head shake ☐ g. other _____ ☐ c. distal reach/point /
				SU4.2 Uses sequence of gestures or nonverbal means in coordination with gaze /
				5 Uses words and word combinations to express meanings (↔ JA4–JA6, MR3.3, MR3.4)
				SU5.1 Coordinates sounds/words with gaze and gestures /
	1			SU5.2 Uses at least 5–10 words or echolalic phrases as symbols /+
				SU5.3 Uses early relational words ☐ a. existence ☐ b. nonexistence/disappearance ☐ c. recurrence ☐ d. rejection /
				SU5.4 Uses variety of names for objects, body parts, and agents /
				SU5.5 Uses variety of advanced relational words ☐ a. personal-social ☐ b. action ☐ c. modifier ☐ d. *wh-* word /
				SU5.6 Uses variety of relational meanings in word combinations (↔ JA3.4) ☐ a. modifier + object ☐ b. negation + object ☐ c. agent + action + object /
				6 Understands a variety of words and word combinations without contextual cues
1	1			SU6.1 Responds to own name +/+
1	1			SU6.2 Responds to a variety of familiar words and phrases (= SR1.6) +/+
				SU6.3 Understands a variety of names without contextual cues /
				SU6.4 Understands a variety of relational words without contextual cues / ☐ a. action ☐ b. modifier ☐ c. *wh-* word
				SU6.5 Understands a variety of relational meanings in word combinations without contextual cues ☐ a. modifier + object ☐ b. negation + object ☐ c. agent + action + object /

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

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SAP OBSERVATION FORM: Language Partner Stage (page 4)
Emotional Regulation

Child's name: Johnathan

Qtr 1	Qtr 2	Qtr 3	Qtr 4	MUTUAL REGULATION
				1. Expresses range of emotions (↔ SU1–SU5)
1				MR1.1 Shares negative and positive emotion (= JA3.1) +
				MR1.2 Understands and uses symbols to express a range of emotions (≈ JA3.2; = SR3.5)
				MR1.3 Changes emotional expression in familiar activities based on partners' feedback
				2. Responds to assistance offered by partners
1				MR2.1 Soothes when comforted by partners +
1	1			MR2.2 Engages when alerted by partners + +
1	1			MR2.3 Responds to bids for interaction + +
				MR2.4 Responds to changes in partners' expression of emotion
				MR2.5 Attunes to changes in partners' expression of emotion (= JA3.3)
				MR2.6 Makes choices when offered by partners
				MR2.7 Changes regulatory strategies based on partners' feedback in familiar activities
				3. Requests partners' assistance to regulate state
				MR3.1 Shares negative emotion to seek comfort (≈ JA3.1; ↔ JA5.1)
	1			MR3.2 Shares positive emotion to seek interaction (≈ JA3.1) +
				MR3.3 Requests help when frustrated (≈ JA4.3; ↔ SU4–SU5)
				MR3.4 Protests when distressed (≈ JA4.2, JA4.4; ↔ SU4–SU5)
				MR3.5 Uses language strategies to request a break
	1			MR3.6 Uses language strategies to request regulating activity or input +
				MR3.7 Uses language strategies to exert social control (↔ JA4)
				4. Recovers from extreme dysregulation with support from partners
				MR4.1 Responds to partners' efforts to assist with recovery by moving away from activity
				MR4.2 Responds to partners' use of behavioral strategies
				MR4.3 Responds to partners' use of language strategies
				MR4.4 Responds to partners' attempts to reengage in interaction or activity
				MR4.5 Decreases amount of time to recover from extreme dysregulation due to support from partners
				MR4.6 Decreases intensity of dysregulated state due to support from partners

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

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SAP-OBSERVATION FORM: Language Partner Stage: Emotional Regulation (page 5)

Child's name: Johnathan

Qtr 1	Qtr 2	Qtr 3	Qtr 4	SELF-REGULATION
				1. Demonstrates availability for learning and interacting
				SR1.1 Initiates bids for interaction (= JA1.1) /
1				SR1.2 Engages in brief reciprocal interaction (= JA1.2) + /
				SR1.3 Engages in extended reciprocal interaction (= JA1.3) /
1				SR1.4 Responds to sensory and social experiences with differentiated emotions + /
				SR1.5 Demonstrates ability to inhibit actions and behaviors /
	1			SR1.6 Responds to a variety of familiar words and phrases (=-SU6.2) / +
				SR1.7 Persists during tasks with reasonable demands /
	1			SR1.8 Demonstrates emotional expression appropriate to context / +
				2. Uses behavioral strategies to regulate arousal level during familiar activities
	1			SR2.1 Uses behavioral strategies to regulate arousal level during solitary and social activities / +
				SR2.2 Uses behavioral strategies modeled by partners to regulate arousal level /
1	1			SR2.3 Uses behavioral strategies to engage productively in an extended activity + / +
				3. Uses language strategies to regulate arousal level during familiar activities
				SR3.1 Uses language strategies to regulate arousal level during solitary activities /
				SR3.2 Uses language strategies to regulate arousal level during social interactions /
				SR3.3 Uses language strategies modeled by partners to regulate arousal level /
				SR3.4 Uses language strategies to engage productively in an extended activity /
				SR3.5 Uses symbols to express a range of emotions (≈ JA3.2; = MR1.2) /
				4. Regulates emotion during new and changing situations
1				SR4.1 Participates in new and changing situations + /
1				SR4.2 Follows situational and gestural cues in unfamiliar activities (= SU2.1) + /
				SR4.3 Uses behavioral strategies to regulate arousal level in new and changing situations /
				SR4.4 Uses language strategies to regulate arousal level in new and changing situations /
	1			SR4.5 Uses behavioral strategies to regulate arousal level during transitions / +
				SR4.6 Uses language strategies to regulate arousal level during transitions /
				5. Recovers from extreme dysregulation by self
				SR5.1 Removes self from overstimulating or undesired activity /
				SR5.2 Uses behavioral strategies to recover from extreme dysregulation /
				SR5.3 Uses language strategies to recover from extreme dysregulation /
				SR5.4 Reengages in interaction or activity after recovery from extreme dysregulation /
				SR5.5 Decreases amount of time to recover from extreme dysregulation /
				SR5.6 Decreases intensity of dysregulated state /

SCORING KEY: 2, criterion met consistently (across three partners in two contexts); **1,** criterion met inconsistently or with assistance; **0,** criterion not met

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SAP OBSERVATION FORM: Language Partner Stage (page 6)
Transactional Support

Child's name: Johnathan

Qtr 1	Qtr 2	Qtr 3	Qtr 4	INTERPERSONAL SUPPORT
				1. Partner is responsive to child
1				IS1.1 Follows child's focus of attention +/
1	1			IS1.2 Attunes to child's emotion and pace +/+
	1			IS1.3 Responds appropriately to child's signals to foster a sense of communicative competence +/+
	1			IS1.4 Recognizes and supports child's behavioral and language strategies to regulate arousal level +/+
				IS1.5 Recognizes signs of dysregulation and offers support /
				IS1.6 Imitates child /
				IS1.7 Offers breaks from interaction or activity as needed /
				IS1.8 Facilitates reengagement in interactions and activities following breaks /
				2. Partner fosters initiation
1				IS2.1 Offers choices nonverbally or verbally +/
1				IS2.2 Waits for and encourages initiations +/
				IS2.3 Provides a balance of initiated and respondent turns /
	1			IS2.4 Allows child to initiate and terminate activities +/+
				3. Partner respects child's independence
				IS3.1 Allows child to take breaks to move about as needed /
				IS3.2 Provides time for child to solve problems or complete activities at own pace /
				IS3.3 Interprets problem behavior as communicative and/or regulatory /
				IS3.4 Honors protests, rejections, or refusals when appropriate /
				4. Partner sets stage for engagement
1				IS4.1 Gets down on child's level when communicating +/
	1			IS4.2 Secures child's attention before communicating /+
				IS4.3 Uses appropriate proximity and nonverbal behavior to encourage interaction /
				IS4.4 Uses appropriate words and intonation to support optimal arousal level and engagement /
				5. Partner provides developmental support
1				IS5.1 Encourages imitation +/
				IS5.2 Encourages interaction with peers /
				IS5.3 Attempts to repair breakdowns verbally or nonverbally /
1	1			IS5.4 Provides guidance and feedback as needed for success in activities +/+
				IS5.5 Provides guidance on expressing emotions and understanding the cause of emotions /
				6. Partner adjusts language input
1				IS6.1 Uses nonverbal cues to support understanding +/
1	1			IS6.2 Adjusts complexity of language input to child's developmental level +/+
1				IS6.3 Adjusts quality of language input to child's arousal level +/
				7. Partner models appropriate behaviors
				IS7.1 Models appropriate nonverbal communication and emotional expressions /
1	1			IS7.2 Models a range of communicative functions ☐ a. behavior regulation ☐ b. social interaction ☐ c. joint attention +/+
				IS7.3 Models appropriate constructive and symbolic play /
1				IS7.4 Models appropriate behavior when child uses inappropriate behavior +/
				IS7.5 Models "child-perspective" language /

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

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SAP-OBSERVATION FORM: Language Partner Stage (page 7)
Transactional Support

Child's name: Johnathan

Ctr 1	Ctr 2	Ctr 3	Ctr 4	LEARNING SUPPORT
				1 Partner structures activity for active participation
				LS1.1 Defines clear beginning and ending to activity /
1				LS1.2 Creates turn-taking opportunities and leaves spaces for child to fill in +/
				LS1.3 Provides predictable sequence to activity /
				LS1.4 Offers repeated learning opportunities /
				LS1.5 Offers varied learning opportunities /
				2 Partner uses augmentative communication support to foster development
				LS2.1 Uses augmentative communication support to enhance child's communication and expressive language /
				LS2.2 Uses augmentative communication support to enhance child's understanding of language and behavior /
				LS2.3 Uses augmentative communication support to enhance child's expression and understanding of emotion /
				LS2.4 Uses augmentative communication support to enhance child's emotional regulation /
				3 Partner uses visual and organizational support
				LS3.1 Uses support to define steps within a task /
				LS3.2 Uses support to define steps and time for completion of activities /
				LS3.3 Uses visual support to enhance smooth transitions between activities /
				LS3.4 Uses support to organize segments of time across the day /
				LS3.5 Uses visual support to enhance attention in group activities /
				LS3.6 Uses visual support to foster active involvement in group activities /
				4 Partner modifies goals, activities, and learning environment
				LS4.1 Adjusts social complexity to support organization and interaction /
				LS4.2 Adjusts task difficulty for child success /
	1			LS4.3 Modifies sensory properties of learning environment +/
				LS4.4 Arranges learning environment to enhance attention /
				LS4.5 Arranges learning environment to promote child initiation /
				LS4.6 Designs and modifies activities to be developmentally appropriate /
				LS4.7 Infuses motivating materials and topics in activities /
				LS4.8 Provides activities to promote initiation and extended interaction /
				LS4.9 Alternates between movement and sedentary activities as needed /
				LS4.10 "Ups the ante" or increases expectations appropriately /

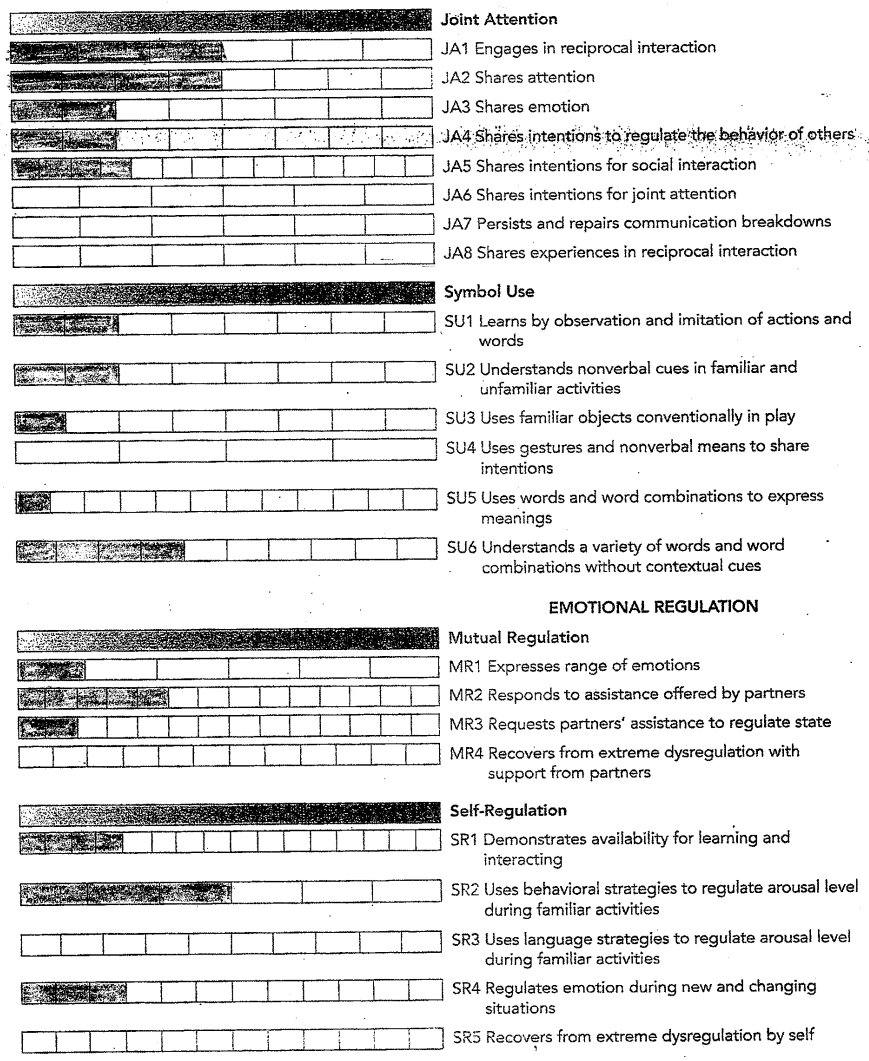
SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

SAP Summary Form
Language Partner Stage

Child's name: Jonnathan

Quarterly start date of observation: 11/24/15 Child's age: 7

SCERTS Profile



SOCIAL COMMUNICATION

Joint Attention

- JA1 Engages in reciprocal interaction
- JA2 Shares attention
- JA3 Shares emotion
- JA4 Shares intentions to regulate the behavior of others
- JA5 Shares intentions for social interaction
- JA6 Shares intentions for joint attention
- JA7 Persists and repairs communication breakdowns
- JA8 Shares experiences in reciprocal interaction

Symbol Use

- SU1 Learns by observation and imitation of actions and words
- SU2 Understands nonverbal cues in familiar and unfamiliar activities
- SU3 Uses familiar objects conventionally in play
- SU4 Uses gestures and nonverbal means to share intentions
- SU5 Uses words and word combinations to express meanings
- SU6 Understands a variety of words and word combinations without contextual cues

EMOTIONAL REGULATION

Mutual Regulation

- MR1 Expresses range of emotions
- MR2 Responds to assistance offered by partners
- MR3 Requests partners' assistance to regulate state
- MR4 Recovers from extreme dysregulation with support from partners

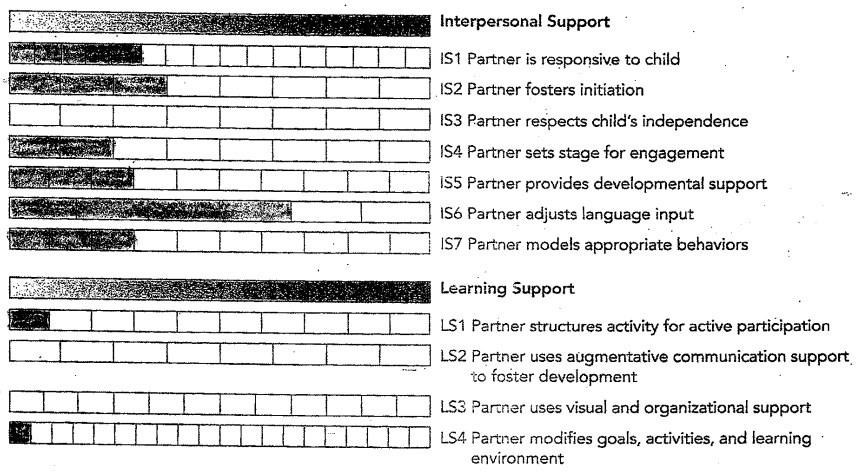
Self-Regulation

- SR1 Demonstrates availability for learning and interacting
- SR2 Uses behavioral strategies to regulate arousal level during familiar activities
- SR3 Uses language strategies to regulate arousal level during familiar activities
- SR4 Regulates emotion during new and changing situations
- SR5 Recovers from extreme dysregulation by self

Johnathan

SCERTS Profile (continued)

TRANSACTIONAL SUPPORT



Interpersonal Support

IS1 Partner is responsive to child

IS2 Partner fosters initiation

IS3 Partner respects child's independence

IS4 Partner sets stage for engagement

IS5 Partner provides developmental support

IS6 Partner adjusts language input

IS7 Partner models appropriate behaviors

Learning Support

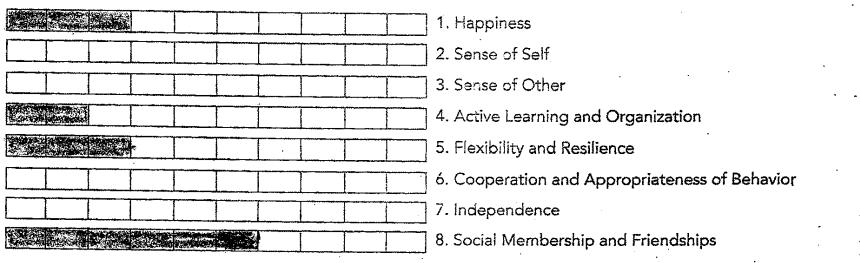
LS1 Partner structures activity for active participation

LS2 Partner uses augmentative communication support to foster development

LS3 Partner uses visual and organizational support

LS4 Partner modifies goals, activities, and learning environment

Social-Emotional Growth Indicators Profile



1. Happiness
2. Sense of Self
3. Sense of Other
4. Active Learning and Organization
5. Flexibility and Resilience
6. Cooperation and Appropriateness of Behavior
7. Independence
8. Social Membership and Friendships

Family Perception and Priorities

Is this profile an accurate picture of your child? If not, explain.

Is there any additional information that is needed to develop your child's educational plan?

If you were to focus your energies on one thing for your child, what would that be?

What skills would you like your child to learn in the next 3 months?

APPENDIX B

AMIA

SCERTS

SAP-OBSERVATION FORM: Language Partner Stage (page 1)

Child's name: Amia Date of birth:

Background information:

Amia
Age 7

Team members:

Melanie Makovsky- researcher
Kay- mother

Documentation of assessment context

Group size:	☐ One to one	☒ Small group	☐ Large group
Partner:	☒ Familiar adults	☐ Familiar peers/siblings	☒ Unfamiliar adults ☐ Unfamiliar peers
Natural contexts:	☐ Home	☒ Learning center/school	☐ Community

Activity variables:

1. Structured/Unstructured
2. Must do/Fun
3. Adult directed/Child directed
4. Motor based/Sedentary
5. Familiar/Unfamiliar
6. Preferred/Nonpreferred
7. Easy/Difficult
8. Easy based/Non-language based
9. Social/Solitary
10. Busy/Calm

Transitions:

1:
2:
3:

Date of observation		
Qtr 1 start date:	12/3/15	Length of total observation: 30 minutes
Qtr 2 start date:	12/16/15	Length of total observation: 30 minutes
Qtr 3 start date:	12/17/15	Length of total observation: 20 minutes
Qtr 4 start date:		Length of total observation:

SCERTS Profile Summary	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Social Communication				
Joint Attention	5 /62	6 /62	5 /62	/62
Symbol Use	3 /50	6 /50	1 /50	/50
Emotional Regulation				
Mutual Regulation	3 /46	5 /46	11 /46	/46
Self-Regulation	6 /56	4 /56	7 /56	/56
Transactional Support				
Interpersonal Support	15 /66	19 /66	22 /66	/66
Learning Support	1 /50	1 /50	1 /50	/50

Social-Emotional Growth Indicators Profile	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Happiness	1 /10	1 /10	1 /10	/10
Sense of Self	2 /10	1 /10	4 /10	/10
Sense of Other	- /10	2 /10	1 /10	/10
Active Learning and Organization	1 /10	1 /10	- /10	/10
Flexibility and Resilience	2 /10	2 /10	- /10	/10
Cooperation and Appropriateness of Behavior	- /10	- /10	- /10	/10
Independence	1 /10	2 /10	5 /10	/10
Social Membership and Friendships	3 /10	4 /10	1 /10	/10

SCORING KEY:

2 = criterion met consistently with at least three partners in at least two contexts
1 = criterion met inconsistently, in one activity, or with assistance
0 = criterion not met based on observed or reported information or would not be expected

SAP-OBSERVATION FORM: Language Partner Stage (page 2)
Social Communication

Child's name: Amia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	JOINT ATTENTION
				1 Engages in reciprocal interaction
1	1			JA1.1 Initiates bids for interaction (= SR1.1) +/+/
				JA1.2 Engages in brief reciprocal interaction (= SR1.2) //
				JA1.3 Engages in extended reciprocal interaction (= SR1.3) //
				2 Shares attention
1	1			JA2.1 Shifts gaze between people and objects +/+/
				JA2.2 Follows contact and distal point (= SU2.2) //
1	1	1		JA2.3 Monitors attentional focus of a social partner +/+/+
				JA2.4 Secures attention to oneself prior to expressing intentions (≈ JA5.5) //
				3 Shares emotion
		1		JA3.1 Shares negative and positive emotion (= MR1.1; ≈ MR3.1, MR3.2) //+
				JA3.2 Understands and uses symbols to express a range of emotions (≈ MR1.2, SR3.5) //
				JA3.3 Attunes to changes in partners' expression of emotion (≈ SU2.4; = MR2.5) //
				JA3.4 Describes the emotional state of another person (↔ SU5.6) //
				4 Shares intentions to regulate the behavior of others (↔ JA7.2, JA8.2, SU4–SU5, MR3.7)
		1		JA4.1 Requests desired food or objects (≈ MR2.6) //+
		1		JA4.2 Protests/refuses undesired food or objects (≈ MR3.4) //+
				JA4.3 Requests help or other actions (≈ MR3.3) //
1	1	1		JA4.4 Protests undesired actions or activities (≈ MR3.4) +/+/+
				5 Shares intentions for social interaction (↔ JA7.2, JA8.2, SU4–SU5)
				JA5.1 Requests comfort (≈ MR3.1) //
1	1			JA5.2 Requests social game +/+/
				JA5.3 Takes turns //
	1			JA5.4 Greets /+/
				JA5.5 Calls (≈ JA2.4) //
				JA5.6 Shows off //
				JA5.7 Requests permission //
				6 Shares intentions for joint attention (↔ JA7.2, JA8.2, SU4–SU5)
				JA6.1 Comments on object //
				JA6.2 Comments on action or event //
				JA6.3 Requests information about things of interest //
				7 Persists and repairs communication breakdowns
				JA7.1 Uses appropriate rate of communication for context //
				JA7.2 Repeats and/or modifies communication to repair (↔ JA4–JA6) //
				JA7.3 Recognizes breakdowns in communication //
				8 Shares experiences in reciprocal interaction
				JA8.1 Coordinates attention, emotion, and intentions to share experiences //
				JA8.2 Shows reciprocity in speaker and listener roles to share experiences (↔ JA4–JA6) //
				JA8.3 Initiates interaction and shares experiences with a friend //

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

SAP-OBSERVATION FORM: Language Partner Stage (page 3)
Social Communication

Child's name: Amia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	SYMBOL USE
				1 Learns by observation and imitation of familiar and unfamiliar actions and words
	1			SU1.1 Spontaneously imitates familiar actions or words immediately after a model +/+
1				SU1.2 Spontaneously imitates unfamiliar actions or words immediately after a model +//
1	1			SU1.3 Spontaneously imitates actions or words and adds a different behavior +/+/
				SU1.4 Spontaneously imitates a variety of behaviors later in a different context //
				2 Understands nonverbal cues in familiar and unfamiliar activities
1	1			SU2.1 Follows situational and gestural cues in familiar and unfamiliar activities (= SR4.2) +/+/
				SU2.2 Follows contact and distal point (= JA2.2) //
				SU2.3 Follows instructions with visual cues (photographs or pictures) //
				SU2.4 Responds to facial expression and intonation cues (≈ JA3.3) //
				3 Uses familiar objects conventionally in play
				SU3.1 Uses a variety of objects in constructive play //
				SU3.2 Uses a variety of familiar objects conventionally toward self //
				SU3.3 Uses a variety of familiar objects conventionally toward other //
				SU3.4 Combines a variety of actions with objects in play //
				4 Uses gestures and nonverbal means to share intentions (↔ JA4–JA6, MR3.3, MR3.4)
				SU4.1 Uses a variety of conventional and symbolic gestures ☐ a. show ☐ d. clap ☐ f. head nod ☐ b. wave ☐ e. head shake ☐ g. other _____ ☐ c. distal reach/point //
				SU4.2 Uses sequence of gestures or nonverbal means in coordination with gaze //
				5 Uses words and word combinations to express meanings (↔ JA4–JA6, MR3.3, MR3.4)
	1			SU5.1 Coordinates sounds/words with gaze and gestures +/
				SU5.2 Uses at least 5–10 words or echolalic phrases as symbols //
				SU5.3 Uses early relational words ☐ a. existence ☐ b. nonexistence/disappearance ☐ c. recurrence ☐ d. rejection //
				SU5.4 Uses variety of names for objects, body parts, and agents //
				SU5.5 Uses variety of advanced relational words ☐ a. personal-social ☐ b. action ☐ c. modifier ☐ d. *wh*- word //
				SU5.6 Uses variety of relational meanings in word combinations (↔ JA3.4) ☐ a. modifier + object ☐ b. negation + object ☐ c. agent + action + object //
				6 Understands a variety of words and word combinations without contextual cues
	1	1		SU6.1 Responds to own name +/+
	1			SU6.2 Responds to a variety of familiar words and phrases (= SR1.6) +/
				SU6.3 Understands a variety of names without contextual cues //
				SU6.4 Understands a variety of relational words without contextual cues ☐ a. action ☐ b. modifier ☐ c. *wh*- word //
				SU6.5 Understands a variety of relational meanings in word combinations without contextual cues ☐ a. modifier + object ☐ b. negation + object ☐ c. agent + action + object //

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

SAP-OBSERVATION FORM: Language Partner Stage — Emotional Regulation (page 4)

Child's name: Amia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	MUTUAL REGULATION
				1 Expresses range of emotions (↔ SU4–SU5)
		1		MR1.1 Shares negative and positive emotion (= JA3.1) //+
				MR1.2 Understands and uses symbols to express a range of emotions (≈ JA3.2; = SR3.5) //
				MR1.3 Changes emotional expression in familiar activities based on partners' feedback //
				2 Responds to assistance offered by partners
				MR2.1 Soothes when comforted by partners //
1	1			MR2.2 Engages when alerted by partners +/+/
1	1			MR2.3 Responds to bids for interaction +/+/
	1			MR2.4 Responds to changes in partners' expression of emotion /+/
				MR2.5 Attunes to changes in partners' expression of emotion (= JA3.3) //
	1	1		MR2.6 Makes choices when offered by partners /+/+
				MR2.7 Changes regulatory strategies based on partners' feedback in familiar activities //
				3 Requests partners' assistance to regulate state
		1		MR3.1 Shares negative emotion to seek comfort (≈ JA3.1; ↔ JA5.1) //+
	1			MR3.2 Shares positive emotion to seek interaction (≈ JA3.1) /+/
				MR3.3 Requests help when frustrated (≈ JA4.3; ↔ SU4–SU5) //
1		1		MR3.4 Protests when distressed (≈ JA4.2, JA4.4; ↔ SU4–SU5) +/ /+
		1		MR3.5 Uses language strategies to request a break //+
		1		MR3.6 Uses language strategies to request regulating activity or input //+
		1		MR3.7 Uses language strategies to exert social control (↔ JA4) //+
				4 Recovers from extreme dysregulation with support from partners
		1		MR4.1 Responds to partners' efforts to assist with recovery by moving away from activity //+
		1		MR4.2 Responds to partners' use of behavioral strategies //+
		1		MR4.3 Responds to partners' use of language strategies //+
				MR4.4 Responds to partners' attempts to reengage in interaction or activity //
				MR4.5 Decreases amount of time to recover from extreme dysregulation due to support from partners //
		1		MR4.6 Decreases intensity of dysregulated state due to support from partners //+

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

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SAP-OBSERVATION FORM: Language Partner Stage (page 5)
Emotional Regulation

Child's name: Amia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	SELF-REGULATION
				1 Demonstrates availability for learning and interacting
1	1			SR1.1 Initiates bids for interaction (= JA1.1) +/+/
				SR1.2 Engages in brief reciprocal interaction (= JA1.2) //
				SR1.3 Engages in extended reciprocal interaction (= JA1.3) //
	1	1		SR1.4 Responds to sensory and social experiences with differentiated emotions +/+
				SR1.5 Demonstrates ability to inhibit actions and behaviors //
	1			SR1.6 Responds to a variety of familiar words and phrases (= SU6.2) /+/
				SR1.7 Persists during tasks with reasonable demands //
				SR1.8 Demonstrates emotional expression appropriate to context //
				2 Uses behavioral strategies to regulate arousal level during familiar activities
	1	1		SR2.1 Uses behavioral strategies to regulate arousal level during solitary and social activities +/+
				SR2.2 Uses behavioral strategies modeled by partners to regulate arousal level //
1	1			SR2.3 Uses behavioral strategies to engage productively in an extended activity +/+/
				3 Uses language strategies to regulate arousal level during familiar activities
				SR3.1 Uses language strategies to regulate arousal level during solitary activities //
				SR3.2 Uses language strategies to regulate arousal level during social interactions //
				SR3.3 Uses language strategies modeled by partners to regulate arousal level //
				SR3.4 Uses language strategies to engage productively in an extended activity //
				SR3.5 Uses symbols to express a range of emotions (≈ JA3.2; = MR1.2) //
				4 Regulates emotion during new and changing situations
1	1			SR4.1 Participates in new and changing situations +/+/
1	1			SR4.2 Follows situational and gestural cues in unfamiliar activities (= SU2.1) +/+/
1	1			SR4.3 Uses behavioral strategies to regulate arousal level in new and changing situations +/+
				SR4.4 Uses language strategies to regulate arousal level in new and changing situations //
	1	1		SR4.5 Uses behavioral strategies to regulate arousal level during transitions +/+
				SR4.6 Uses language strategies to regulate arousal level during transitions //
				5 Recovers from extreme dysregulation by self
		1		SR5.1 Removes self from overstimulating or undesired activity //+
		1		SR5.2 Uses behavioral strategies to recover from extreme dysregulation //+
		1		SR5.3 Uses language strategies to recover from extreme dysregulation //+
1				SR5.4 Reengages in interaction or activity after recovery from extreme dysregulation +//
				SR5.5 Decreases amount of time to recover from extreme dysregulation //
		1		SR5.6 Decreases intensity of dysregulated state //+

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

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SAP-OBSERVATION FORM: Language Partner Stage (page 6)
Transactional Support

Child's name: Amia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	INTERPERSONAL SUPPORT
				1 Partner is responsive to child
1	1	1		IS1.1 Follows child's focus of attention +/+/+
1	1	1		IS1.2 Attunes to child's emotion and pace +/+/+
	1	1		IS1.3 Responds appropriately to child's signals to foster a sense of communicative competence +/+/+
	1	1		IS1.4 Recognizes and supports child's behavioral and language strategies to regulate arousal level /+/+
1	1	1		IS1.5 Recognizes signs of dysregulation and offers support +/+/+
1	1	1		IS1.6 Imitates child +/+/+
		1		IS1.7 Offers breaks from interaction or activity as needed //+
		1		IS1.8 Facilitates reengagement in interactions and activities following breaks //+
				2 Partner fosters initiation
	1	1		IS2.1 Offers choices nonverbally or verbally /+/+
1	1	1		IS2.2 Waits for and encourages initiations +/+/+
				IS2.3 Provides a balance of initiated and respondent turns //
1	1	1		IS2.4 Allows child to initiate and terminate activities +/+/+
				3 Partner respects child's independence
1	1			IS3.1 Allows child to take breaks to move about as needed +/+/
1	1			IS3.2 Provides time for child to solve problems or complete activities at own pace +/+/
	1	1		IS3.3 Interprets problem behavior as communicative and/or regulatory /+/+
		1		IS3.4 Honors protests, rejections, or refusals when appropriate //+
				4 Partner sets stage for engagement
1	1	1		IS4.1 Gets down on child's level when communicating +/+/+
1	1	1		IS4.2 Secures child's attention before communicating +/+/+
1	1	1		IS4.3 Uses appropriate proximity and nonverbal behavior to encourage interaction +/+/+
1	1	1		IS4.4 Uses appropriate words and intonation to support optimal arousal level and engagement +/+/+
				5 Partner provides developmental support
1	1	1		IS5.1 Encourages imitation +/+/+
				IS5.2 Encourages interaction with peers //
				IS5.3 Attempts to repair breakdowns verbally or nonverbally //
		1		IS5.4 Provides guidance and feedback as needed for success in activities //+
				IS5.5 Provides guidance on expressing emotions and understanding the cause of emotions //
				6 Partner adjusts language input
		1		IS6.1 Uses nonverbal cues to support understanding //+
1	1			IS6.2 Adjusts complexity of language input to child's developmental level +/+/
1	1			IS6.3 Adjusts quality of language input to child's arousal level +/+/
				7 Partner models appropriate behaviors
				IS7.1 Models appropriate nonverbal communication and emotional expressions //
		1		IS7.2 Models a range of communicative functions /+ ☐ a. behavior regulation ☐ b. social interaction ☐ c. joint attention
				IS7.3 Models appropriate constructive and symbolic play //
		1		IS7.4 Models appropriate behavior when child uses inappropriate behavior //+
				IS7.5 Models "child-perspective" language //

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

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SAP-OBSERVATION FORM: Language Partner Stage (page 7)
Transactional Support

Child's name: Amia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	LEARNING SUPPORT
				1 Partner structures activity for active participation
		1		LS1.1 Defines clear beginning and ending to activity 1/+
1	1			LS1.2 Creates turn-taking opportunities and leaves spaces for child to fill in +/+/
				LS1.3 Provides predictable sequence to activity 1/
				LS1.4 Offers repeated learning opportunities 1/
				LS1.5 Offers varied learning opportunities 1/
				2 Partner uses augmentative communication support to foster development
				LS2.1 Uses augmentative communication support to enhance child's communication and expressive language 1/
				LS2.2 Uses augmentative communication support to enhance child's understanding of language and behavior 1/
				LS2.3 Uses augmentative communication support to enhance child's expression and understanding of emotion 1/
				LS2.4 Uses augmentative communication support to enhance child's emotional regulation 1/
				3 Partner uses visual and organizational support
				LS3.1 Uses support to define steps within a task 1/
				LS3.2 Uses support to define steps and time for completion of activities 1/
				LS3.3 Uses visual support to enhance smooth transitions between activities 1/
				LS3.4 Uses support to organize segments of time across the day 1/
				LS3.5 Uses visual support to enhance attention in group activities 1/
				LS3.6 Uses visual support to foster active involvement in group activities 1/
				4 Partner modifies goals, activities, and learning environment
				LS4.1 Adjusts social complexity to support organization and interaction 1/
				LS4.2 Adjusts task difficulty for child success 1/
				LS4.3 Modifies sensory properties of learning environment 1/
				LS4.4 Arranges learning environment to enhance attention 1/
				LS4.5 Arranges learning environment to promote child initiation 1/
				LS4.6 Designs and modifies activities to be developmentally appropriate 1/
				LS4.7 Infuses motivating materials and topics in activities 1/
				LS4.8 Provides activities to promote initiation and extended interaction 1/
				LS4.9 Alternates between movement and sedentary activities as needed 1/
				LS4.10 "Ups the ante" or increases expectations appropriately 1/

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

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SAP Summary Form
Language Partner Stage

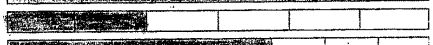
Child's name: Amia

Quarterly start date of observation: 12/3/15 Child's age: 7

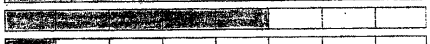
SCERTS Profile

SOCIAL COMMUNICATION

Joint Attention



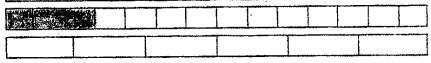
JA1 Engages in reciprocal interaction



JA2 Shares attention

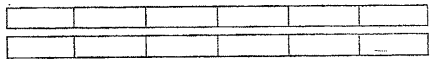
JA3 Shares emotion

JA4 Shares intentions to regulate the behavior of others



JA5 Shares intentions for social interaction

JA6 Shares intentions for joint attention

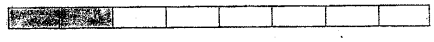


JA7 Persists and repairs communication breakdowns

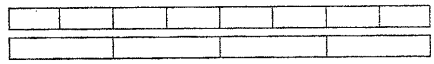
JA8 Shares experiences in reciprocal interaction

Symbol Use

SU1 Learns by observation and imitation of actions and words

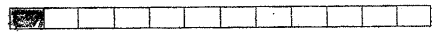


SU2 Understands nonverbal cues in familiar and unfamiliar activities

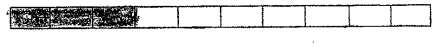


SU3 Uses familiar objects conventionally in play

SU4 Uses gestures and nonverbal means to share intentions

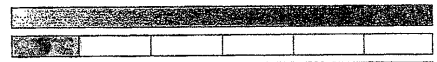


SU5 Uses words and word combinations to express meanings



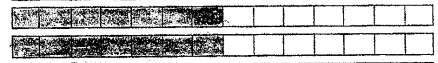
SU6 Understands a variety of words and word combinations without contextual cues

EMOTIONAL REGULATION



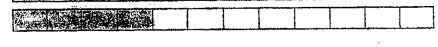
Mutual Regulation

MR1 Expresses range of emotions



MR2 Responds to assistance offered by partners

MR3 Requests partners' assistance to regulate state

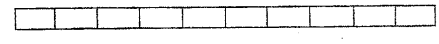


MR4 Recovers from extreme dysregulation with support from partners

Self-Regulation

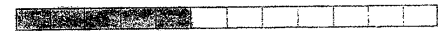
SR1 Demonstrates availability for learning and interacting

SR2 Uses behavioral strategies to regulate arousal level during familiar activities



SR3 Uses language strategies to regulate arousal level during familiar activities

SR4 Regulates emotion during new and changing situations

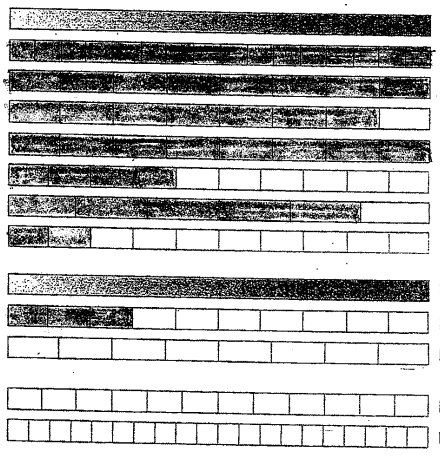


SR5 Recovers from extreme dysregulation by self

Amia

SCERTS Profile (continued)

TRANSACTIONAL SUPPORT



Interpersonal Support

IS1 Partner is responsive to child

IS2 Partner fosters initiation

IS3 Partner respects child's independence

IS4 Partner sets stage for engagement

IS5 Partner provides developmental support

IS6 Partner adjusts language input

IS7 Partner models appropriate behaviors

Learning Support

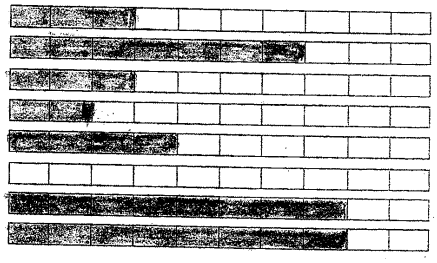
LS1 Partner structures activity for active participation

LS2 Partner uses augmentative communication support to foster development

LS3 Partner uses visual and organizational support

LS4 Partner modifies goals, activities, and learning environment

Social-Emotional Growth Indicators Profile



1. Happiness
2. Sense of Self
3. Sense of Other
4. Active Learning and Organization
5. Flexibility and Resilience
6. Cooperation and Appropriateness of Behavior
7. Independence
8. Social Membership and Friendships

Family Perception and Priorities

Is this profile an accurate picture of your child? If not, explain.

Is there any additional information that is needed to develop your child's educational plan?

If you were to focus your energies on one thing for your child, what would that be?

What skills would you like your child to learn in the next 3 months?

APPENDIX C

ANDREW

SCERTS

SAP-OBSERVATION FORM: Language Partner Stage (page 1)

Child's name: Andrew Date of birth:

Background information:

Andrew, 3 1/2

Team members:

Melanie Makovsky - researcher
Melissa - mother
Harriet - Wade - brother, age 3 1/2; sister, age

Documentation of assessment context

Group size:	☐ One to one	☒ Small group	☐ Large group
Partner:	☒ Familiar adults	☒ Familiar peers/siblings	☒ Unfamiliar adults ☐ Unfamiliar peers
Natural contexts:	☐ Home	☒ Learning center/school	☐ Community

Activity variables:

1. Structured/Unstructured
2. Must do/Fun
3. Adult directed/Child directed
4. Motor based/Sedentary
5. Familiar/Unfamiliar
6. Preferred/Nonpreferred
7. Easy/Difficult
8. Language based/Non-language based
9. Social/Solitary
10. Busy/Calm

Transitions:

1:
2:
3:

Date of observation			
Qtr 1 start date: 12/3/15	Length of total observation: 40 minutes		
Qtr 2 start date: 12/10/15	Length of total observation: 40 minutes		
Qtr 3 start date: 12/17/15	Length of total observation: 20 minutes		
Qtr 4 start date:	Length of total observation:		

SCERTS Profile Summary	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Social Communication				
Joint Attention	8 /62	8 /62	4 /62	/62
Symbol Use	6 /50	7 /50	3 /50	/50
Emotional Regulation				
Mutual Regulation	4 /46	4 /46	7 /46	/46
Self-Regulation	3 /56	10 /56	9 /56	/56
Transactional Support				
Interpersonal Support	10 /66	19 /66	17 /66	/66
Learning Support	– /50	1 /50	1 /50	/50

Social-Emotional Growth Indicators Profile	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Happiness	2 /10	2 /10	1 /10	/10
Sense of Self	– /10	1 /10	3 /10	/10
Sense of Other	– /10	2 /10	– /10	/10
Active Learning and Organization	1 /10	1 /10	– /10	/10
Flexibility and Resilience	1 /10	– /10	2 /10	/10
Cooperation and Appropriateness of Behavior	1 /10	1 /10	– /10	/10
Independence	1 /10	1 /10	2 /10	/10
Social Membership and Friendships	4 /10	3 /10	– /10	/10

SCORING KEY:

2 = criterion met consistently with at least three partners in at least two contexts
1 = criterion met inconsistently, in one activity, or with assistance
0 = criterion not met based on observed or reported information or would not be expected

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SAP-OBSERVATION FORM: Language Partner Stage (page 2)
Social Communication

Child's name: Andrew

Qtr 1	Qtr 2	Qtr 3	Qtr 4	JOINT ATTENTION
				1 Engages in reciprocal interaction
\	\			JA1.1 Initiates bids for interaction (= SR1.1) +/+/
				JA1.2 Engages in brief reciprocal interaction (= SR1.2)/ /
				JA1.3 Engages in extended reciprocal interaction (= SR1.3)/ /
				2 Shares attention
\	\		\	JA2.1 Shifts gaze between people and objects +/+/+
	\			JA2.2 Follows contact and distal point (= SU2.2) /+/
\	\			JA2.3 Monitors attentional focus of a social partner +/+/
				JA2.4 Secures attention to oneself prior to expressing intentions (≈ JA5.5)/ /
				3 Shares emotion
		\		JA3.1 Shares negative and positive emotion (= MR1.1; ≈ MR3.1, MR3.2)/ /+
				JA3.2 Understands and uses symbols to express a range of emotions (≈ MR1.2, SR3.5)/ /
\				JA3.3 Attunes to changes in partners' expression of emotion (≈ SU2.4; = MR2.5) +/ /
				JA3.4 Describes the emotional state of another person (↔ SU5.6) / /
				4 Shares intentions to regulate the behavior of others (↔ JA7.2, JA8.2, SU4–SU5, MR3.7)
				JA4.1 Requests desired food or objects (≈ MR2.6)/ /
		\		JA4.2 Protests/refuses undesired food or objects (≈ MR3.4)/ /+
				JA4.3 Requests help or other actions (≈ MR3.3)/ /
		\		JA4.4 Protests undesired actions or activities (≈ MR3.4)/ /+
				5 Shares intentions for social interaction (↔ JA7.2, JA8.2, SU4–SU5)
	\			JA5.1 Requests comfort (≈ MR3.1)/+/
\	\			JA5.2 Requests social game +/+/
				JA5.3 Takes turns / /
				JA5.4 Greets / /
				JA5.5 Calls (≈ JA2.4)/ /
	\			JA5.6 Shows off /+/
				JA5.7 Requests permission / /
				6 Shares intentions for joint attention (↔ JA7.2, JA8.2, SU4–SU5)
\	\			JA6.1 Comments on object +/+/
\				JA6.2 Comments on action or event +/ /
				JA6.3 Requests information about things of interest/ /
				7 Persists and repairs communication breakdowns
				JA7.1 Uses appropriate rate of communication for context/ /
				JA7.2 Repeats and/or modifies communication to repair (↔ JA4–JA6)/ /
				JA7.3 Recognizes breakdowns in communication / /
				8 Shares experiences in reciprocal interaction
				JA8.1 Coordinates attention, emotion, and intentions to share experiences/ /
				JA8.2 Shows reciprocity in speaker and listener roles to share experiences (↔ JA4–JA6)/ /
\				JA8.3 Initiates interaction and shares experiences with a friend +/ /

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

SAP-OBSERVATION FORM: Language Partner Stage (page 3)
Social Communication

Child's name: Andrew

Qtr 1	Qtr 2	Qtr 3	Qtr 4	SYMBOL USE
				1 Learns by observation and imitation of familiar and unfamiliar actions and words
1	1			SU1.1 Spontaneously imitates familiar actions or words immediately after a model +/+/
1				SU1.2 Spontaneously imitates unfamiliar actions or words immediately after a model +/ /
				SU1.3 Spontaneously imitates actions or words and adds a different behavior / /
				SU1.4 Spontaneously imitates a variety of behaviors later in a different context / /
				2 Understands nonverbal cues in familiar and unfamiliar activities
1	1			SU2.1 Follows situational and gestural cues in familiar and unfamiliar activities (= SR4.2) +/+/
	1			SU2.2 Follows contact and distal point (= JA2.2) /+/
				SU2.3 Follows instructions with visual cues (photographs or pictures) / /
	1			SU2.4 Responds to facial expression and intonation cues (≈ JA3.3) /+/
				3 Uses familiar objects conventionally in play
				SU3.1 Uses a variety of objects in constructive play / /
				SU3.2 Uses a variety of familiar objects conventionally toward self / /
				SU3.3 Uses a variety of familiar objects conventionally toward other / /
				SU3.4 Combines a variety of actions with objects in play / /
				4 Uses gestures and nonverbal means to share intentions (↔ JA4–JA6, MR3.3, MR3.4)
				SU4.1 Uses a variety of conventional and symbolic gestures ☐ a. show ☐ d. clap ☐ f. head nod ☐ b. wave ☐ e. head shake ☐ g. other _____ / / ☐ c. distal reach/point
1				SU4.2 Uses sequence of gestures or nonverbal means in coordination with gaze +/ /
				5 Uses words and word combinations to express meanings (↔ JA4–JA6, MR3.3, MR3.4)
1	1	1		SU5.1 Coordinates sounds/words with gaze and gestures +/+/+
				SU5.2 Uses at least 5–10 words or echolalic phrases as symbols / /
				SU5.3 Uses early relational words ☐ a. existence ☐ b. nonexistence/disappearance ☐ c. recurrence ☐ d. rejection / /
				SU5.4 Uses variety of names for objects, body parts, and agents / /
				SU5.5 Uses variety of advanced relational words ☐ a. personal-social ☐ b. action ☐ c. modifier ☐ d. *wh-* word / /
				SU5.6 Uses variety of relational meanings in word combinations (↔ JA3.4) ☐ a. modifier + object ☐ b. negation + object ☐ c. agent + action + object / /
				6 Understands a variety of words and word combinations without contextual cues
	1	1		SU6.1 Responds to own name /+/+
	1			SU6.2 Responds to a variety of familiar words and phrases (= SR1.6) /+/
				SU6.3 Understands a variety of names without contextual cues / /
				SU6.4 Understands a variety of relational words without contextual cues / / ☐ a. action ☐ b. modifier ☐ c. *wh-* word
				SU6.5 Understands a variety of relational meanings in word combinations without contextual cues / / ☐ a. modifier + object ☐ b. negation + object ☐ c. agent + action + object

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

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SAP-OBSERVATION FORM: Language Partner Stage (page 4)
Emotional Regulation

Child's name: Andrew

Qtr 1	Qtr 2	Qtr 3	Qtr 4	MUTUAL REGULATION
				1 Expresses range of emotions (↔ SU4–SU5)
		1		MR1.1 Shares negative and positive emotion (= JA3.1) / /+
				MR1.2 Understands and uses symbols to express a range of emotions (≈ JA3.2; = SR3.5) / /
				MR1.3 Changes emotional expression in familiar activities based on partners' feedback / /
				2 Responds to assistance offered by partners
	1	1		MR2.1 Soothes when comforted by partners /+/+
1	1			MR2.2 Engages when alerted by partners +/+/
1	1			MR2.3 Responds to bids for interaction +/+/
				MR2.4 Responds to changes in partners' expression of emotion / /
				MR2.5 Attunes to changes in partners' expression of emotion (= JA3.3) / /
1				MR2.6 Makes choices when offered by partners +/ /
	1			MR2.7 Changes regulatory strategies based on partners' feedback in familiar activities /+/
				3 Requests partners' assistance to regulate state
		1		MR3.1 Shares negative emotion to seek comfort (≈ JA3.1; ↔ JA5.1) / /+
1				MR3.2 Shares positive emotion to seek interaction (≈ JA3.1) +/ /
				MR3.3 Requests help when frustrated (≈ JA4.3; ↔ SU4–SU5) / /
		1		MR3.4 Protests when distressed (≈ JA4.2, JA4.4; ↔ SU4–SU5) / /+
				MR3.5 Uses language strategies to request a break / /
				MR3.6 Uses language strategies to request regulating activity or input / /
				MR3.7 Uses language strategies to exert social control (↔ JA4) / /
				4 Recovers from extreme dysregulation with support from partners
		1		MR4.1 Responds to partners' efforts to assist with recovery by moving away from activity / /+
		1		MR4.2 Responds to partners' use of behavioral strategies / /+
				MR4.3 Responds to partners' use of language strategies / /
				MR4.4 Responds to partners' attempts to reengage in interaction or activity / /
				MR4.5 Decreases amount of time to recover from extreme dysregulation due to support from partners /
		1		MR4.6 Decreases intensity of dysregulated state due to support from partners / /+

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

SAP-OBSERVATION FORM: Language Partner Stage (page 5)
Emotional Regulation

Child's name: Andrew

Qtr 1	Qtr 2	Qtr 3	Qtr 4	SELF-REGULATION
				1 Demonstrates availability for learning and interacting
	/			SR1.1 Initiates bids for interaction (= JA1.1) /+/
	.			SR1.2 Engages in brief reciprocal interaction (= JA1.2) / /
				SR1.3 Engages in extended reciprocal interaction (= JA1.3) / /
	/	\		SR1.4 Responds to sensory and social experiences with differentiated emotions /+/+
/	/			SR1.5 Demonstrates ability to inhibit actions and behaviors +/+/
	/			SR1.6 Responds to a variety of familiar words and phrases (= SU6.2) /+/
				SR1.7 Persists during tasks with reasonable demands / /
/	/			SR1.8 Demonstrates emotional expression appropriate to context +/+/
				2 Uses behavioral strategies to regulate arousal level during familiar activities
	/	\		SR2.1 Uses behavioral strategies to regulate arousal level during solitary and social activities /+/+
	/			SR2.2 Uses behavioral strategies modeled by partners to regulate arousal level /+/
				SR2.3 Uses behavioral strategies to engage productively in an extended activity / /
				3 Uses language strategies to regulate arousal level during familiar activities
				SR3.1 Uses language strategies to regulate arousal level during solitary activities / /
				SR3.2 Uses language strategies to regulate arousal level during social interactions / /
				SR3.3 Uses language strategies modeled by partners to regulate arousal level / /
				SR3.4 Uses language strategies to engage productively in an extended activity / /
				SR3.5 Uses symbols to express a range of emotions (≈ JA3.2; = MR1.2) / /
				4 Regulates emotion during new and changing situations
/				SR4.1 Participates in new and changing situations +/ /
				SR4.2 Follows situational and gestural cues in unfamiliar activities (= SU2.1) / /
	/	\		SR4.3 Uses behavioral strategies to regulate arousal level in new and changing situations /+/+
				SR4.4 Uses language strategies to regulate arousal level in new and changing situations / /
	/	\		SR4.5 Uses behavioral strategies to regulate arousal level during transitions /+/+
				SR4.6 Uses language strategies to regulate arousal level during transitions / /
				5 Recovers from extreme dysregulation by self
	/	\		SR5.1 Removes self from overstimulating or undesired activity /+/+
		\		SR5.2 Uses behavioral strategies to recover from extreme dysregulation / /+
				SR5.3 Uses language strategies to recover from extreme dysregulation / /
		\		SR5.4 Reengages in interaction or activity after recovery from extreme dysregulation / /+
		\		SR5.5 Decreases amount of time to recover from extreme dysregulation / /+
		\		SR5.6 Decreases intensity of dysregulated state / /+

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

SAP-OBSERVATION FORM: Language Partner Stage (page 6)
Transactional Support

Child's name: Andrew

Qtr 1	Qtr 2	Qtr 3	Qtr 4	INTERPERSONAL SUPPORT
				1 Partner is responsive to child
				IS1.1 Follows child's focus of attention +/+/+
				IS1.2 Attunes to child's emotion and pace +/+/+
				IS1.3 Responds appropriately to child's signals to foster a sense of communicative competence +/+/+
				IS1.4 Recognizes and supports child's behavioral and language strategies to regulate arousal level +/+
				IS1.5 Recognizes signs of dysregulation and offers support +/+
				IS1.6 Imitates child / /
				IS1.7 Offers breaks from interaction or activity as needed +/+
				IS1.8 Facilitates reengagement in interactions and activities following breaks / /+
				2 Partner fosters initiation
				IS2.1 Offers choices nonverbally or verbally /+/
				IS2.2 Waits for and encourages initiations /+/
				IS2.3 Provides a balance of initiated and respondent turns / /
				IS2.4 Allows child to initiate and terminate activities /+/+
				3 Partner respects child's independence
				IS3.1 Allows child to take breaks to move about as needed /+/+
				IS3.2 Provides time for child to solve problems or complete activities at own pace / /
				IS3.3 Interprets problem behavior as communicative and/or regulatory /+/+
				IS3.4 Honors protests, rejections, or refusals when appropriate +/+/+
				4 Partner sets stage for engagement
				IS4.1 Gets down on child's level when communicating +/+/+
				IS4.2 Secures child's attention before communicating +/+/+
				IS4.3 Uses appropriate proximity and nonverbal behavior to encourage interaction +/+/+
				IS4.4 Uses appropriate words and intonation to support optimal arousal level and engagement / /
				5 Partner provides developmental support
				IS5.1 Encourages imitation +/ /
				IS5.2 Encourages interaction with peers / /
				IS5.3 Attempts to repair breakdowns verbally or nonverbally / /
				IS5.4 Provides guidance and feedback as needed for success in activities +/+/
				IS5.5 Provides guidance on expressing emotions and understanding the cause of emotions / /+
				6 Partner adjusts language input
				IS6.1 Uses nonverbal cues to support understanding +/ /
				IS6.2 Adjusts complexity of language input to child's developmental level / /
				IS6.3 Adjusts quality of language input to child's arousal level / /
				7 Partner models appropriate behaviors
				IS7.1 Models appropriate nonverbal communication and emotional expressions /+/+
				IS7.2 Models a range of communicative functions ☐ a. behavior regulation ☐ b. social interaction ☐ c. joint attention /+/
				IS7.3 Models appropriate constructive and symbolic play / /
				IS7.4 Models appropriate behavior when child uses inappropriate behavior +/+/+
				IS7.5 Models "child-perspective" language / /

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

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SAP-OBSERVATION FORM: Language Partner Stage (page 7)
Transactional Support

Child's name: Andrew

Qtr 1	Qtr 2	Qtr 3	Qtr 4	LEARNING SUPPORT
				1 Partner structures activity for active participation
	1	1		LS1.1 Defines clear beginning and ending to activity +/+
				LS1.2 Creates turn-taking opportunities and leaves spaces for child to fill in / /
				LS1.3 Provides predictable sequence to activity / /
				LS1.4 Offers repeated learning opportunities / /
				LS1.5 Offers varied learning opportunities / /
				2 Partner uses augmentative communication support to foster development
				LS2.1 Uses augmentative communication support to enhance child's communication and expressive language / /
				LS2.2 Uses augmentative communication support to enhance child's understanding of language and behavior / /
				LS2.3 Uses augmentative communication support to enhance child's expression and understanding of emotion / /
				LS2.4 Uses augmentative communication support to enhance child's emotional regulation / /
				3 Partner uses visual and organizational support
				LS3.1 Uses support to define steps within a task / /
				LS3.2 Uses support to define steps and time for completion of activities / /
				LS3.3 Uses visual support to enhance smooth transitions between activities / /
				LS3.4 Uses support to organize segments of time across the day / /
				LS3.5 Uses visual support to enhance attention in group activities / /
				LS3.6 Uses visual support to foster active involvement in group activities / /
				4 Partner modifies goals, activities, and learning environment
				LS4.1 Adjusts social complexity to support organization and interaction / /
				LS4.2 Adjusts task difficulty for child success / /
				LS4.3 Modifies sensory properties of learning environment / /
				LS4.4 Arranges learning environment to enhance attention / /
				LS4.5 Arranges learning environment to promote child initiation / /
				LS4.6 Designs and modifies activities to be developmentally appropriate / /
				LS4.7 Infuses motivating materials and topics in activities / /
				LS4.8 Provides activities to promote initiation and extended interaction / /
				LS4.9 Alternates between movement and sedentary activities as needed / /
				LS4.10 "Ups the ante" or increases expectations appropriately / /

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

SCERTS

SAP Summary Form
Language Partner Stage

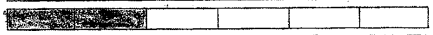
Child's name: Andrew

Quarterly start date of observation: 12/3/15 Child's age: 3 1/2

SCERTS Profile

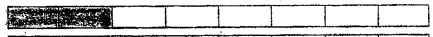
SOCIAL COMMUNICATION

Joint Attention

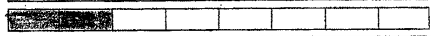


JA1 Engages in reciprocal interaction

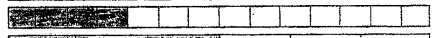
JA2 Shares attention



JA3 Shares emotion

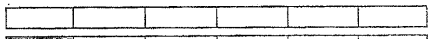


JA4 Shares intentions to regulate the behavior of others

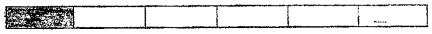


JA5 Shares intentions for social interaction

JA6 Shares intentions for joint attention

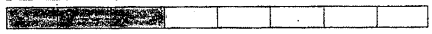


JA7 Persists and repairs communication breakdowns



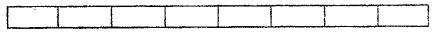
JA8 Shares experiences in reciprocal interaction

Symbol Use

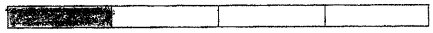


SU1 Learns by observation and imitation of actions and words

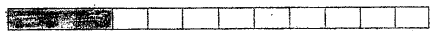
SU2 Understands nonverbal cues in familiar and unfamiliar activities



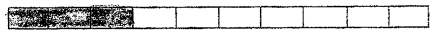
SU3 Uses familiar objects conventionally in play



SU4 Uses gestures and nonverbal means to share intentions



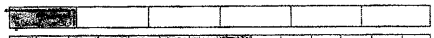
SU5 Uses words and word combinations to express meanings



SU6 Understands a variety of words and word combinations without contextual cues

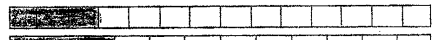
EMOTIONAL REGULATION

Mutual Regulation

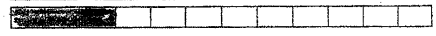


MR1 Expresses range of emotions

MR2 Responds to assistance offered by partners



MR3 Requests partners' assistance to regulate state

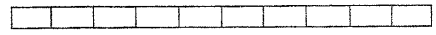


MR4 Recovers from extreme dysregulation with support from partners

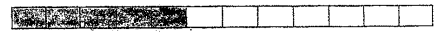
Self-Regulation

SR1 Demonstrates availability for learning and interacting

SR2 Uses behavioral strategies to regulate arousal level during familiar activities



SR3 Uses language strategies to regulate arousal level during familiar activities



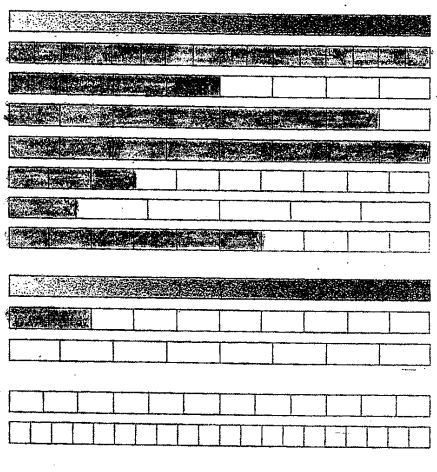
SR4 Regulates emotion during new and changing situations

SR5 Recovers from extreme dysregulation by self

Andrew

SCERTS Profile (continued)

TRANSACTIONAL SUPPORT



Interpersonal Support

IS1 Partner is responsive to child

IS2 Partner fosters initiation

IS3 Partner respects child's independence

IS4 Partner sets stage for engagement

IS5 Partner provides developmental support

IS6 Partner adjusts language input

IS7 Partner models appropriate behaviors

Learning Support

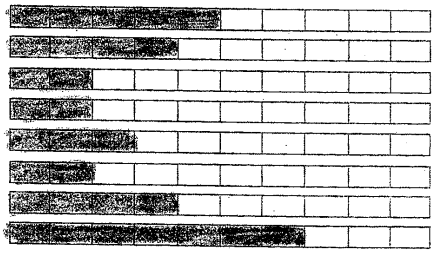
LS1 Partner structures activity for active participation

LS2 Partner uses augmentative communication support to foster development

LS3 Partner uses visual and organizational support

LS4 Partner modifies goals, activities, and learning environment

Social-Emotional Growth Indicators Profile



1. Happiness
2. Sense of Self
3. Sense of Other
4. Active Learning and Organization
5. Flexibility and Resilience
6. Cooperation and Appropriateness of Behavior
7. Independence
8. Social Membership and Friendships

Family Perception and Priorities

Is this profile an accurate picture of your child? If not, explain.

Is there any additional information that is needed to develop your child's educational plan?

If you were to focus your energies on one thing for your child, what would that be?

What skills would you like your child to learn in the next 3 months?

APPENDIX D

SOFIA

SCERTS

SAP-OBSERVATION FORM: Language Partner Stage (page 1)

Child's name: Sofia Date of birth: _____

Background information:
Sofia, 3 1/2

Team members:
Melanie Makovsky- researcher
Miranda- mother

Documentation of assessment context

Group size:	☐ One to one	☒ Small group	☐ Large group
Partner:	☒ Familiar adults	☐ Familiar peers/siblings	☒ Unfamiliar adults ☐ Unfamiliar peers
Natural contexts:	☐ Home	☒ Learning center/school	☐ Community

Activity variables:
1. Structured/Unstructured
2. Must do/Fun
3. Adult directed/Child directed
4. Motor based/Sedentary
5. Familiar/Unfamiliar
6. Preferred/Nonpreferred
7. Easy/Difficult
8. Language based/Non-language based
9. Social/Solitary
10. Busy/Calm

Transitions: 1: 2: 3:

Date of observation				
Qtr 1 start date: 10/22-10/29/15	Length of total observation:	40 minutes		
Qtr 2 start date: 11/5/15	Length of total observation:	30 minutes		
Qtr 3 start date: 11/12/15	Length of total observation:	37 minutes		
Qtr 4 start date: 11/19/15	Length of total observation:	40 minutes		

SCERTS Profile Summary	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Social Communication				
Joint Attention	16/62	17/62	23/62	16/62
Symbol Use	15/50	13/50	16/50	16/50
Emotional Regulation				
Mutual Regulation	8/46	11/46	9/46	8/46
Self-Regulation	8/56	9/56	12/56	13/56
Transactional Support				
Interpersonal Support	10/66	26/66	25/66	23/66
Learning Support	-/50	2/50	1/50	4/50

Social-Emotional Growth Indicators Profile	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Happiness	4/10	3/10	5/10	4/10
Sense of Self	3/10	5/10	3/10	3/10
Sense of Other	2/10	3/10	3/10	2/10
Active Learning and Organization	2/10	1/10	2/10	1/10
Flexibility and Resilience	1/10	2/10	3/10	2/10
Cooperation and Appropriateness of Behavior	2/10	2/10	2/10	1/10
Independence	2/10	2/10	1/10	1/10
Social Membership and Friendships	2/10	3/10	4/10	4/10

SCORING KEY:
2 = criterion met consistently with at least three partners in at least two contexts
1 = criterion met inconsistently, in one activity, or with assistance
0 = criterion not met based on observed or reported information or would not be expected

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SAP OBSERVATION FORM: Language Partner Stage
Social Communication (page 2)

Child's name: Sofia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	JOINT ATTENTION
				1. Engages in reciprocal interaction
				JA1.1 Initiates bids for interaction (= SR1.1)
				JA1.2 Engages in brief reciprocal interaction (= SR1.2)
				JA1.3 Engages in extended reciprocal interaction (= SR1.3)
				2. Shares attention
				JA2.1 Shifts gaze between people and objects
				JA2.2 Follows contact and distal point (= SU2.2)
				JA2.3 Monitors attentional focus of a social partner
				JA2.4 Secures attention to oneself prior to expressing intentions (≈ JA5.5)
				3. Shares emotion
				JA3.1 Shares negative and positive emotion (= MR1.1; ≈ MR3.1, MR3.2)
				JA3.2 Understands and uses symbols to express a range of emotions (≈ MR1.2, SR3.5)
				JA3.3 Attunes to changes in partners' expression of emotion (≈ SU2.4; = MR2.5)
				JA3.4 Describes the emotional state of another person (↔ SU5.6)
				4. States intentions to regulate the behavior of others (↔ JA7.2, JA8.2, SU4–SU5, MR3.7)
				JA4.1 Requests desired food or objects (≈ MR2.6)
				JA4.2 Protests/refuses undesired food or objects (≈ MR3.4)
				JA4.3 Requests help or other actions (≈ MR3.3)
				JA4.4 Protests undesired actions or activities (≈ MR3.4)
				5. Shares intentions for social interaction (↔ JA7.2, JA8.2, SU4–SU5)
				JA5.1 Requests comfort (≈ MR3.1)
				JA5.2 Requests social game
				JA5.3 Takes turns
				JA5.4 Greets
				JA5.5 Calls (≈ JA2.4)
				JA5.6 Shows off
				JA5.7 Requests permission
				6. Shares intentions for joint attention (↔ JA7.2, JA8.2, SU4–SU5)
				JA6.1 Comments on object
				JA6.2 Comments on action or event
				JA6.3 Requests information about things of interest
				7. Persists and repairs communication breakdowns
				JA7.1 Uses appropriate rate of communication for context
				JA7.2 Repeats and/or modifies communication to repair (↔ JA4–JA6)
				JA7.3 Recognizes breakdowns in communication
				8. Shares experiences in reciprocal interaction
				JA8.1 Coordinates attention, emotion, and intentions to share experiences
				JA8.2 Shows reciprocity in speaker and listener roles to share experiences (↔ JA4–JA6)
				JA8.3 Initiates interaction and shares experiences with a friend

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

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SAP OBSERVATION FORM: Language Partner Stage (page 3)
Social Communication

Child's name: Sofia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	SYMBOL USE
				1. Learns by observation and imitation of familiar and unfamiliar actions and words
\	\	\	\	SU1.1 Spontaneously imitates familiar actions or words immediately after a model +/+/+/+
\	·	\	\	SU1.2 Spontaneously imitates unfamiliar actions or words immediately after a model +/+/+
\	·	·	·	SU1.3 Spontaneously imitates actions or words and adds a different behavior +/ / /
·	·	·	·	SU1.4 Spontaneously imitates a variety of behaviors later in a different context / / /
				2. Understands nonverbal cues in familiar and unfamiliar activities
\	\	·	·	SU2.1 Follows situational and gestural cues in familiar and unfamiliar activities (= SR4.2) +/+/
\	·	\	·	SU2.2 Follows contact and distal point (= JA2.2) +/ /+/
·	·	·	·	SU2.3 Follows instructions with visual cues (photographs or pictures) / / /
\	\	\	·	SU2.4 Responds to facial expression and intonation cues (≈ JA3.3) +/+/+/
				3. Uses familiar objects conventionally in play
·	·	·	·	SU3.1 Uses a variety of objects in constructive play / / /
·	·	\	\	SU3.2 Uses a variety of familiar objects conventionally toward self / /+/+
·	·	·	·	SU3.3 Uses a variety of familiar objects conventionally toward other / / /
·	·	·	·	SU3.4 Combines a variety of actions with objects in play / / /+
				4. Uses gesture and nonverbal means to share intentions (↔ JA4, JA6, MR3.3, MR3.4)
·	·	·	·	SU4.1 Uses a variety of conventional and symbolic gestures ☐ a. show ☐ d. clap ☐ f. head nod ☐ b. wave ☐ e. head shake ☐ g. other _____ ☐ c. distal reach/point / / /
·	·	·	·	SU4.2 Uses sequence of gestures or nonverbal means in coordination with gaze / / /
				5. Uses words and word combinations to express meanings (↔ JA4, JA6, MR3.3, MR3.4)
\	\	\	\	SU5.1 Coordinates sounds/words with gaze and gestures +/+/+/+
·	\	\	\	SU5.2 Uses at least 5–10 words or echolalic phrases as symbols /+/+/+
\	\	\	\	SU5.3 Uses early relational words ☑ a. existence ☐ b. nonexistence/disappearance ☑ c. recurrence ☑ d. rejection /+/+/+
\	·	\	\	SU5.4 Uses variety of names for objects, body parts, and agents +/ /+/+
·	\	\	·	SU5.5 Uses variety of advanced relational words ☐ a. personal-social ☐ b. action ☐ c. modifier ☐ d. wh- word /+/+/
\	\	\	·	SU5.6 Uses variety of relational meanings in word combinations (↔ JA3.4) ☐ a. modifier + object ☐ b. negation + object ☐ c. agent + action + object /+/+/
				6. Understands a variety of words and word combinations without contextual cues
\	\	\	\	SU6.1 Responds to own name +/+/+/+
\	\	\	\	SU6.2 Responds to a variety of familiar words and phrases (= SR1.6) +/+/+/+
\	\	\	\	SU6.3 Understands a variety of names without contextual cues +/+/+/+
\	\	\	·	SU6.4 Understands a variety of relational words without contextual cues ☑ a. action ☑ b. modifier ☑ c. wh- word +/+/+/
\	\	\	·	SU6.5 Understands a variety of relational meanings in word combinations without contextual cues ☑ a. modifier + object ☐ b. negation + object ☐ c. agent + action + object /+/+

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

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SAP OBSERVATION FORM–Language Partner Stage (page 4)
Emotional Regulation

Child's name: Sofia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	MUTUAL REGULATION
				1. Expresses range of emotions (SU4–SU5)
1	1	1	1	MR1.1 Shares negative and positive emotion (= JA3.1) +/+/+/+
1		1		MR1.2 Understands and uses symbols to express a range of emotions (≈ JA3.2; = SR3.5) +/+
	1	1	1	MR1.3 Changes emotional expression in familiar activities based on partners' feedback /+/+/+
				2. Responds to assistance offered by partners
	1			MR2.1 Soothes when comforted by partners /+ /
	1	1		MR2.2 Engages when alerted by partners /+/+
1	1	1	1	MR2.3 Responds to bids for interaction +/+/+/+
	1		1	MR2.4 Responds to changes in partners' expression of emotion /+/ /+
		1	1	MR2.5 Attunes to changes in partners' expression of emotion (= JA3.3) / /+/+
				MR2.6 Makes choices when offered by partners / / /
1				MR2.7 Changes regulatory strategies based on partners' feedback in familiar activities +/ /+/
				3. Requests partners' assistance to regulate state (SU4–SU5)
1	1			MR3.1 Shares negative emotion to seek comfort (≈ JA3.1; ↔ JA5.1) +/+/
1	1	1	1	MR3.2 Shares positive emotion to seek interaction (≈ JA3.1) +/+/+/+
			1	MR3.3 Requests help when frustrated (≈ JA4.3; ↔ SU4–SU5) / / /+
1	1			MR3.4 Protests when distressed (≈ JA4.2, JA4.4; ↔ SU4–SU5) +/+/ /
				MR3.5 Uses language strategies to request a break / / /
1	1			MR3.6 Uses language strategies to request regulating activity or input +/+/ /
	1	1	1	MR3.7 Uses language strategies to exert social control (↔ JA4) /+/+/+
				4. Recovers from extreme dysregulation with support from partners
				MR4.1 Responds to partners' efforts to assist with recovery by moving away from activity / / /
				MR4.2 Responds to partners' use of behavioral strategies / / /
				MR4.3 Responds to partners' use of language strategies / / /
				MR4.4 Responds to partners' attempts to reengage in interaction or activity / / /
				MR4.5 Decreases amount of time to recover from extreme dysregulation due to support from partners /
				MR4.6 Decreases intensity of dysregulated state due to support from partners / / /

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

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SAP OBSERVATION FORM: Language Partner Stage — Emotional Regulation (page 5)

Child's name: Sofia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	SELF-REGULATION
				1. Demonstrates availability for learning and interacting
1	1	1	1	SR1.1 Initiates bids for interaction (= JA1.1) +/+/+/+
1	1	1		SR1.2 Engages in brief reciprocal interaction (= JA1.2) +/+/+/+
			1	SR1.3 Engages in extended reciprocal interaction (= JA1.3) / /+
1	1	1	1	SR1.4 Responds to sensory and social experiences with differentiated emotions +/+/+/+
				SR1.5 Demonstrates ability to inhibit actions and behaviors / /
	1	1	1	SR1.6 Responds to a variety of familiar words and phrases (= SU6.2) /+/+/+
1		1	1	SR1.7 Persists during tasks with reasonable demands +/ /+/+
1	1	1	1	SR1.8 Demonstrates emotional expression appropriate to context +/+/+/+
				2. Uses behavioral strategies to regulate arousal level during familiar activities
				SR2.1 Uses behavioral strategies to regulate arousal level during solitary and social activities / /
				SR2.2 Uses behavioral strategies modeled by partners to regulate arousal level / /
	1	1	1	SR2.3 Uses behavioral strategies to engage productively in an extended activity A/+/+
				3. Uses language strategies to regulate arousal level during familiar activities
			1	SR3.1 Uses language strategies to regulate arousal level during solitary activities / /+
			1	SR3.2 Uses language strategies to regulate arousal level during social interactions / /+
				SR3.3 Uses language strategies modeled by partners to regulate arousal level / /
			1	SR3.4 Uses language strategies to engage productively in an extended activity / /A
		1		SR3.5 Uses symbols to express a range of emotions (≈ JA3.2; = MR1.2) / /+/
				4. Regulates emotion during new and changing situations
1	1	1		SR4.1 Participates in new and changing situations +/+/+/
1	1	1		SR4.2 Follows situational and gestural cues in unfamiliar activities (= SU2.1) +/+/+/
				SR4.3 Uses behavioral strategies to regulate arousal level in new and changing situations / /
				SR4.4 Uses language strategies to regulate arousal level in new and changing situations / /
				SR4.5 Uses behavioral strategies to regulate arousal level during transitions / /
		1	1	SR4.6 Uses language strategies to regulate arousal level during transitions / /+/+
				5. Recovers from extreme dysregulation by self
1	1	1	1	SR5.1 Removes self from overstimulating or undesired activity +/+/+/+
				SR5.2 Uses behavioral strategies to recover from extreme dysregulation / /
				SR5.3 Uses language strategies to recover from extreme dysregulation / /
				SR5.4 Reengages in interaction or activity after recovery from extreme dysregulation / /
				SR5.5 Decreases amount of time to recover from extreme dysregulation / /
				SR5.6 Decreases intensity of dysregulated state / /

SCORING KEY: 2, criterion met consistently (across three partners in two contexts); **1,** criterion met inconsistently or with assistance; **0,** criterion not met

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SAP OBSERVATION FORM: Language Partner Stage (page 6)
Transactional Supports

Child's name: Sofia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	INTERPERSONAL SUPPORT
				1. Partner is responsive to child's signals
				IS1.1 Follows child's focus of attention +/+/+/+
				IS1.2 Attunes to child's emotion and pace +/+/+/+
				IS1.3 Responds appropriately to child's signals to foster a sense of communicative competence +/+/+/+
				IS1.4 Recognizes and supports child's behavioral and language strategies to regulate arousal level +/+/+
				IS1.5 Recognizes signs of dysregulation and offers support +/+/
				IS1.6 Imitates child +/+/+/+
				IS1.7 Offers breaks from interaction or activity as needed / / /
				IS1.8 Facilitates reengagement in interactions and activities following breaks / /
				2. Partner fosters initiation
				IS2.1 Offers choices nonverbally or verbally +/ /
				IS2.2 Waits for and encourages initiations /+/+/+
				IS2.3 Provides a balance of initiated and respondent turns /+/+/+
				IS2.4 Allows child to initiate and terminate activities /+/+/+
				3. Partner respects child's independence
				IS3.1 Allows child to take breaks to move about as needed / /
				IS3.2 Provides time for child to solve problems or complete activities at own pace /+/+/+
				IS3.3 Interprets problem behavior as communicative and/or regulatory / /
				IS3.4 Honors protests, rejections, or refusals when appropriate / / /
				4. Partner sets stage for engagement
				IS4.1 Gets down on child's level when communicating +/+/+
				IS4.2 Secures child's attention before communicating +/+/+/+
				IS4.3 Uses appropriate proximity and nonverbal behavior to encourage interaction +/+/+
				IS4.4 Uses appropriate words and intonation to support optimal arousal level and engagement +/+/+
				5. Partner provides developmental support
				IS5.1 Encourages imitation +/+/+/+
				IS5.2 Encourages interaction with peers /+/
				IS5.3 Attempts to repair breakdowns verbally or nonverbally /+/+/
				IS5.4 Provides guidance and feedback as needed for success in activities +/+/+/+
				IS5.5 Provides guidance on expressing emotions and understanding the cause of emotions / /+/
				6. Partner adjusts language input
				IS6.1 Uses nonverbal cues to support understanding /+/+/+
				IS6.2 Adjusts complexity of language input to child's developmental level +/+/+/+
				IS6.3 Adjusts quality of language input to child's arousal level /+/+/+
				7. Partner models appropriate behaviors
				IS7.1 Models appropriate nonverbal communication and emotional expressions +/+/+/+
				IS7.2 Models a range of communicative functions ☐ a. behavior regulation ☑ b. social interaction ☑ c. joint attention /+/+/+
				IS7.3 Models appropriate constructive and symbolic play +/
				IS7.4 Models appropriate behavior when child uses inappropriate behavior +/+/+/+
				IS7.5 Models "child-perspective" language /+ /+/+

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

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SAP OBSERVATION FORM: Language Partner Stage
Transactional Support

Child's name: Sofia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	LEARNING SUPPORT
				1 Partner structures activity for active participation
				LS1.1 Defines clear beginning and ending to activity / /
	1		1	LS1.2 Creates turn-taking opportunities and leaves spaces for child to fill in / + / /
				LS1.3 Provides predictable sequence to activity / / /
				LS1.4 Offers repeated learning opportunities / / /
				LS1.5 Offers varied learning opportunities / / /
				2 Partner uses augmentative communication support to foster development
				LS2.1 Uses augmentative communication support to enhance child's communication a expressive language / / /
				LS2.2 Uses augmentative communication support to enhance child's understanding o and behavior / / /
				LS2.3 Uses augmentative communication support to enhance child's expression and understanding of emotion / / /
				LS2.4 Uses augmentative communication support to enhance child's emotional regula
				3 Partner uses visual and organizational support
				LS3.1 Uses support to define steps within a task / / /
				LS3.2 Uses support to define steps and time for completion of activities / / /
				LS3.3 Uses visual support to enhance smooth transitions between activities / / /
				LS3.4 Uses support to organize segments of time across the day / / /
				LS3.5 Uses visual support to enhance attention in group activities / / /
				LS3.6 Uses visual support to foster active involvement in group activities / / /
				4 Partner modifies goals, activities, and learning environment
				LS4.1 Adjusts social complexity to support organization and interaction / / /
				LS4.2 Adjusts task difficulty for child success / / /
				LS4.3 Modifies sensory properties of learning environment / / /
				LS4.4 Arranges learning environment to enhance attention / / /
				LS4.5 Arranges learning environment to promote child initiation / / /
				LS4.6 Designs and modifies activities to be developmentally appropriate / / /
		1	1	LS4.7 Infuses motivating materials and topics in activities / / + / +
	1		1	LS4.8 Provides activities to promote initiation and extended interaction / + / / +
				LS4.9 Alternates between movement and sedentary activities as needed / / /
			1	LS4.10 "Ups the ante" or increases expectations appropriately / / / +

SCORING KEY: 2, criterion met consistently (across three partners in two contexts); **1,** criterion met inconsistently or with assistance; **0,** criterion not met

SAP-OBSERVATION FORM: Language Partner Stage (page 1)

Child's name: Sofia Date of birth: _____

Background information:
3 1/2 years

Team members:
Melanie Makovsky- researcher
Miranda- mother

Documentation of assessment context

Group size:	❑ One to one	☒ Small group	❑ Large group	
Partner:	☒ Familiar adults	❑ Familiar peers/siblings	☒ Unfamiliar adults	❑ Unfamiliar peers
Natural contexts:	❑ Home	☒ Learning center/school	❑ Community	

Activity variables:

1. Structured/(Unstructured)	3. Adult directed/(Child directed)	5. (Familiar)/Unfamiliar	7. (Easy)/Difficult	9. (Social)/Solitary
2. Must do/(Fun)	4. (Motor based)/Sedentary	6. (Preferred)/Nonpreferred	8. Language based/(Non-language based)	10. (Busy)/Calm

Transitions: 1: 2: 3:

Date of observation	
Qtr 1 start date: 12/3/15	Length of total observation: 30 minutes
Qtr 2 start date: 12/10/15	Length of total observation: 30 minutes
Qtr 3 start date:	Length of total observation:
Qtr 4 start date:	Length of total observation:

SCERTS Profile Summary	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Social Communication				
Joint Attention	16/62	16/62	/62	/62
Symbol Use	14/50	10/50	/50	/50
Emotional Regulation				
Mutual Regulation	6/46	6/46	/46	/46
Self-Regulation	5/56	6/56	/56	/56
Transactional Support				
Interpersonal Support	16/66	18/66	/66	/66
Learning Support	1/50	3/50	/50	/50

Social-Emotional Growth Indicators Profile	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Happiness	2/10	3/10	/10	/10
Sense of Self	2/10	2/10	/10	/10
Sense of Other	3/10	2/10	/10	/10
Active Learning and Organization	1/10	–/10	/10	/10
Flexibility and Resilience	1/10	–/10	/10	/10
Cooperation and Appropriateness of Behavior	1/10	1/10	/10	/10
Independence	–/10	1/10	/10	/10
Social Membership and Friendships	4/10	4/10	/10	/10

SCORING KEY:
2 = criterion met consistently with at least three partners in at least two contexts
1 = criterion met inconsistently, in one activity, or with assistance
0 = criterion not met based on observed or reported information or would not be expected

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SAP-OBSERVATION FORM: Language Partner Stage (page 2)
Social Communication

Child's name: Sofia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	JOINT ATTENTION
				1 Engages in reciprocal interaction
1	1			JA1.1 Initiates bids for interaction (= SR1.1) +/+
1	1			JA1.2 Engages in brief reciprocal interaction (= SR1.2) +/+
				JA1.3 Engages in extended reciprocal interaction (= SR1.3)
				2 Shares attention
1	1			JA2.1 Shifts gaze between people and objects +/+
				JA2.2 Follows contact and distal point (= SU2.2)
1	1			JA2.3 Monitors attentional focus of a social partner +/+
1	1			JA2.4 Secures attention to oneself prior to expressing intentions (≈ JA5.5) +/+
				3 Shares emotion
				JA3.1 Shares negative and positive emotion (= MR1.1; ≈ MR3.1, MR3.2)
				JA3.2 Understands and uses symbols to express a range of emotions (≈ MR1.2, SR3.5)
1	1			JA3.3 Attunes to changes in partners' expression of emotion (≈ SU2.4; = MR2.5) +
				JA3.4 Describes the emotional state of another person (↔ SU5.6)
				4 Shares intentions to regulate the behavior of others (↔ JA7.2, JA8.2, SU4–SU5, MR3.7)
1	1			JA4.1 Requests desired food or objects (≈ MR2.6) + /+
				JA4.2 Protests/refuses undesired food or objects (≈ MR3.4)
				JA4.3 Requests help or other actions (≈ MR3.3)
				JA4.4 Protests undesired actions or activities (≈ MR3.4)
				5 Shares intentions for social interaction (↔ JA7.2, JA8.2, SU4–SU5)
				JA5.1 Requests comfort (≈ MR3.1)
1	1			JA5.2 Requests social game +/+
1	1			JA5.3 Takes turns +/+
1	1			JA5.4 Greets +/+
1	1			JA5.5 Calls (≈ JA2.4) +/+
1	1			JA5.6 Shows off +/+
1	1			JA5.7 Requests permission +/+
				6 Shares intentions for joint attention (↔ JA7.2, JA8.2, SU4–SU5)
1	1			JA6.1 Comments on object +/+
1	1			JA6.2 Comments on action or event +/+
				JA6.3 Requests information about things of interest
				7 Persists and repairs communication breakdowns
1	1			JA7.1 Uses appropriate rate of communication for context +/+
				JA7.2 Repeats and/or modifies communication to repair (↔ JA4–JA6)
				JA7.3 Recognizes breakdowns in communication
				8 Shares experiences in reciprocal interaction
				JA8.1 Coordinates attention, emotion, and intentions to share experiences
				JA8.2 Shows reciprocity in speaker and listener roles to share experiences (↔ JA4–JA6)
				JA8.3 Initiates interaction and shares experiences with a friend

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

SAP-OBSERVATION FORM: Language Partner Stage (page 3)
Social Communication

Child's name: Sofia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	SYMBOL USE
				1 Learns by observation and imitation of familiar and unfamiliar actions and words
/	/			SU1.1 Spontaneously imitates familiar actions or words immediately after a model +/+
				SU1.2 Spontaneously imitates unfamiliar actions or words immediately after a model
/	/			SU1.3 Spontaneously imitates actions or words and adds a different behavior +/+
/				SU1.4 Spontaneously imitates a variety of behaviors later in a different context +
				2 Understands nonverbal cues in familiar and unfamiliar activities
/	/			SU2.1 Follows situational and gestural cues in familiar and unfamiliar activities (= SR4.2) +/+
				SU2.2 Follows contact and distal point (= JA2.2)
				SU2.3 Follows instructions with visual cues (photographs or pictures)
/	/			SU2.4 Responds to facial expression and intonation cues (≈ JA3.3) +/+
				3 Uses familiar objects conventionally in play
				SU3.1 Uses a variety of objects in constructive play
				SU3.2 Uses a variety of familiar objects conventionally toward self
				SU3.3 Uses a variety of familiar objects conventionally toward other
				SU3.4 Combines a variety of actions with objects in play
				4 Uses gestures and nonverbal means to share intentions (↔ JA4–JA6, MR3.3, MR3.4)
				SU4.1 Uses a variety of conventional and symbolic gestures ☐ a. show ☐ d. clap ☐ f. head nod ☐ b. wave ☐ e. head shake ☐ g. other _____ ☐ c. distal reach/point
				SU4.2 Uses sequence of gestures or nonverbal means in coordination with gaze
				5 Uses words and word combinations to express meanings (↔ JA4–JA6, MR3.3, MR3.4)
/	/			SU5.1 Coordinates sounds/words with gaze and gestures +/+
/	/			SU5.2 Uses at least 5–10 words or echolalic phrases as symbols +/+
/				SU5.3 Uses early relational words ☑ a. existence ☑ b. nonexistence/disappearance ☐ c. recurrence ☐ d. rejection +
/	/			SU5.4 Uses variety of names for objects, body parts, and agents +/+
/	/			SU5.5 Uses variety of advanced relational words ☑ a. personal-social ☑ b. action ☑ c. modifier ☑ d. *wh-* word +/+
				SU5.6 Uses variety of relational meanings in word combinations (↔ JA3.4) ☑ a. modifier + object ☐ b. negation + object ☐ c. agent + action + object
				6 Understands a variety of words and word combinations without contextual cues
/	/			SU6.1 Responds to own name +/+
/	/			SU6.2 Responds to a variety of familiar words and phrases (= SR1.6) +/+
/				SU6.3 Understands a variety of names without contextual cues +
/				SU6.4 Understands a variety of relational words without contextual cues + ☐ a. action ☐ b. modifier ☐ c. *wh-* word
				SU6.5 Understands a variety of relational meanings in word combinations without contextual cues ☐ a. modifier + object ☐ b. negation + object ☐ c. agent + action + object

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

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SAP-OBSERVATION FORM: Language Partner Stage (page 4)
Emotional Regulation

Child's name: Sofia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	MUTUAL REGULATION
				1 Expresses range of emotions (↔ SU4–SU5)
				MR1.1 Shares negative and positive emotion (= JA3.1)
				MR1.2 Understands and uses symbols to express a range of emotions (≈ JA3.2; = SR3.5)
1				MR1.3 Changes emotional expression in familiar activities based on partners' feedback +
				2 Responds to assistance offered by partners
				MR2.1 Soothes when comforted by partners
1	1			MR2.2 Engages when alerted by partners +/+
1	1			MR2.3 Responds to bids for interaction +/+
1				MR2.4 Responds to changes in partners' expression of emotion +/+
	1			MR2.5 Attunes to changes in partners' expression of emotion (= JA3.3) /+
	1			MR2.6 Makes choices when offered by partners /+
				MR2.7 Changes regulatory strategies based on partners' feedback in familiar activities
				3 Requests partners' assistance to regulate state
				MR3.1 Shares negative emotion to seek comfort (≈ JA3.1; ↔ JA5.1)
1	1			MR3.2 Shares positive emotion to seek interaction (≈ JA3.1) +/+
				MR3.3 Requests help when frustrated (≈ JA4.3; ↔ SU4–SU5)
				MR3.4 Protests when distressed (≈ JA4.2, JA4.4; ↔ SU4–SU5)
				MR3.5 Uses language strategies to request a break
				MR3.6 Uses language strategies to request regulating activity or input
1	1			MR3.7 Uses language strategies to exert social control (↔ JA4) +/+
				4 Recovers from extreme dysregulation with support from partners
				MR4.1 Responds to partners' efforts to assist with recovery by moving away from activity
				MR4.2 Responds to partners' use of behavioral strategies
				MR4.3 Responds to partners' use of language strategies
				MR4.4 Responds to partners' attempts to reengage in interaction or activity
				MR4.5 Decreases amount of time to recover from extreme dysregulation due to support from partners
				MR4.6 Decreases intensity of dysregulated state due to support from partners

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

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SAP-OBSERVATION FORM: Language Partner Stage (page 5)
Emotional Regulation

Child's name: Sofia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	SELF-REGULATION
				1 Demonstrates availability for learning and interacting
1	1			SR1.1 Initiates bids for interaction (= JA1.1) +/+
1	1			SR1.2 Engages in brief reciprocal interaction (= JA1.2) +/+
				SR1.3 Engages in extended reciprocal interaction (= JA1.3)
1	1			SR1.4 Responds to sensory and social experiences with differentiated emotions +/+
				SR1.5 Demonstrates ability to inhibit actions and behaviors
1	1			SR1.6 Responds to a variety of familiar words and phrases (= SU6.2) +/+
	1			SR1.7 Persists during tasks with reasonable demands /+
1	1			SR1.8 Demonstrates emotional expression appropriate to context +/+
				2 Uses behavioral strategies to regulate arousal level during familiar activities
				SR2.1 Uses behavioral strategies to regulate arousal level during solitary and social activities
				SR2.2 Uses behavioral strategies modeled by partners to regulate arousal level
				SR2.3 Uses behavioral strategies to engage productively in an extended activity
				3 Uses language strategies to regulate arousal level during familiar activities
				SR3.1 Uses language strategies to regulate arousal level during solitary activities
				SR3.2 Uses language strategies to regulate arousal level during social interactions
				SR3.3 Uses language strategies modeled by partners to regulate arousal level
				SR3.4 Uses language strategies to engage productively in an extended activity
				SR3.5 Uses symbols to express a range of emotions (≈ JA3.2; = MR1.2)
				4 Regulates emotion during new and changing situations
				SR4.1 Participates in new and changing situations
				SR4.2 Follows situational and gestural cues in unfamiliar activities (= SU2.1)
				SR4.3 Uses behavioral strategies to regulate arousal level in new and changing situations
				SR4.4 Uses language strategies to regulate arousal level in new and changing situations
				SR4.5 Uses behavioral strategies to regulate arousal level during transitions
				SR4.6 Uses language strategies to regulate arousal level during transitions
				5 Recovers from extreme dysregulation by self
				SR5.1 Removes self from overstimulating or undesired activity
				SR5.2 Uses behavioral strategies to recover from extreme dysregulation
				SR5.3 Uses language strategies to recover from extreme dysregulation
				SR5.4 Reengages in interaction or activity after recovery from extreme dysregulation
				SR5.5 Decreases amount of time to recover from extreme dysregulation
				SR5.6 Decreases intensity of dysregulated state

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

SAP-OBSERVATION FORM: Language Partner Stage (page 6)
Transactional Support

Child's name: Sofia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	INTERPERSONAL SUPPORT
				1 Partner is responsive to child
1	1			IS1.1 Follows child's focus of attention +/+
1	1			IS1.2 Attunes to child's emotion and pace +/+
1	1			IS1.3 Responds appropriately to child's signals to foster a sense of communicative competence +/+
				IS1.4 Recognizes and supports child's behavioral and language strategies to regulate arousal level
				IS1.5 Recognizes signs of dysregulation and offers support
1	1			IS1.6 Imitates child +/+
				IS1.7 Offers breaks from interaction or activity as needed
				IS1.8 Facilitates reengagement in interactions and activities following breaks
				2 Partner fosters initiation
				IS2.1 Offers choices nonverbally or verbally
1	1			IS2.2 Waits for and encourages initiations +/+
1	1			IS2.3 Provides a balance of initiated and respondent turns +/+
1	1			IS2.4 Allows child to initiate and terminate activities +/+
				3 Partner respects child's independence
				IS3.1 Allows child to take breaks to move about as needed
	1			IS3.2 Provides time for child to solve problems or complete activities at own pace /+
				IS3.3 Interprets problem behavior as communicative and/or regulatory
				IS3.4 Honors protests, rejections, or refusals when appropriate
				4 Partner sets stage for engagement
1	1			IS4.1 Gets down on child's level when communicating +/+
1	1			IS4.2 Secures child's attention before communicating +/+
1	1			IS4.3 Uses appropriate proximity and nonverbal behavior to encourage interaction +/+
	1			IS4.4 Uses appropriate words and intonation to support optimal arousal level and engagement +/+
				5 Partner provides developmental support
1	1			IS5.1 Encourages imitation +/+
				IS5.2 Encourages interaction with peers
1				IS5.3 Attempts to repair breakdowns verbally or nonverbally +
	1			IS5.4 Provides guidance and feedback as needed for success in activities /+
				IS5.5 Provides guidance on expressing emotions and understanding the cause of emotions
				6 Partner adjusts language input
1	1			IS6.1 Uses nonverbal cues to support understanding +/+
1	1			IS6.2 Adjusts complexity of language input to child's developmental level +/+
				IS6.3 Adjusts quality of language input to child's arousal level
				7 Partner models appropriate behaviors
1	1			IS7.1 Models appropriate nonverbal communication and emotional expressions +/+
1	1			IS7.2 Models a range of communicative functions ☐ a. behavior regulation ☑ b. social interaction ☑ c. joint attention +/+
				IS7.3 Models appropriate constructive and symbolic play
				IS7.4 Models appropriate behavior when child uses inappropriate behavior
				IS7.5 Models "child-perspective" language

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

SAP-OBSERVATION FORM: Language Partner Stage (page 7)
Transactional Support

Child's name: Sofia

Qtr 1	Qtr 2	Qtr 3	Qtr 4	LEARNING SUPPORT
				1 Partner structures activity for active participation
				LS1.1 Defines clear beginning and ending to activity
1	1			LS1.2 Creates turn-taking opportunities and leaves spaces for child to fill in +/+
				LS1.3 Provides predictable sequence to activity
				LS1.4 Offers repeated learning opportunities
				LS1.5 Offers varied learning opportunities
				2 Partner uses augmentative communication support to foster development
				LS2.1 Uses augmentative communication support to enhance child's communication and expressive language
				LS2.2 Uses augmentative communication support to enhance child's understanding of language and behavior
				LS2.3 Uses augmentative communication support to enhance child's expression and understanding of emotion
				LS2.4 Uses augmentative communication support to enhance child's emotional regulation
				3 Partner uses visual and organizational support
				LS3.1 Uses support to define steps within a task
				LS3.2 Uses support to define steps and time for completion of activities
				LS3.3 Uses visual support to enhance smooth transitions between activities
				LS3.4 Uses support to organize segments of time across the day
				LS3.5 Uses visual support to enhance attention in group activities
				LS3.6 Uses visual support to foster active involvement in group activities
				4 Partner modifies goals, activities, and learning environment
				LS4.1 Adjusts social complexity to support organization and interaction
				LS4.2 Adjusts task difficulty for child success
				LS4.3 Modifies sensory properties of learning environment
				LS4.4 Arranges learning environment to enhance attention
				LS4.5 Arranges learning environment to promote child initiation
				LS4.6 Designs and modifies activities to be developmentally appropriate
	1			LS4.7 Infuses motivating materials and topics in activities +/+
	1			LS4.8 Provides activities to promote initiation and extended interaction +/+
				LS4.9 Alternates between movement and sedentary activities as needed
				LS4.10 "Ups the ante" or increases expectations appropriately

SCORING KEY: 2, criterion met consistently (across three partners in two contexts);
1, criterion met inconsistently or with assistance; **0,** criterion not met

SCERTS

SAP Summary Form
Language Partner Stage

Child's name: Sofia

Quarterly start date of observation: 10/22/15 Child's age: 3 1/2

SCERTS Profile

SOCIAL COMMUNICATION

Joint Attention

- JA1 Engages in reciprocal interaction
- JA2 Shares attention
- JA3 Shares emotion
- JA4 Shares intentions to regulate the behavior of others
- JA5 Shares intentions for social interaction
- JA6 Shares intentions for joint attention
- JA7 Persists and repairs communication breakdowns
- JA8 Shares experiences in reciprocal interaction

Symbol Use

- SU1 Learns by observation and imitation of actions and words
- SU2 Understands nonverbal cues in familiar and unfamiliar activities
- SU3 Uses familiar objects conventionally in play
- SU4 Uses gestures and nonverbal means to share intentions
- SU5 Uses words and word combinations to express meanings
- SU6 Understands a variety of words and word combinations without contextual cues

EMOTIONAL REGULATION

Mutual Regulation

- MR1 Expresses range of emotions
- MR2 Responds to assistance offered by partners
- MR3 Requests partners' assistance to regulate state
- MR4 Recovers from extreme dysregulation with support from partners

Self-Regulation

- SR1 Demonstrates availability for learning and interacting
- SR2 Uses behavioral strategies to regulate arousal level during familiar activities
- SR3 Uses language strategies to regulate arousal level during familiar activities
- SR4 Regulates emotion during new and changing situations
- SR5 Recovers from extreme dysregulation by self

Sofia

SCERTS Profile (continued)

TRANSACTIONAL SUPPORT

Interpersonal Support

- IS1 Partner is responsive to child
- IS2 Partner fosters initiation
- IS3 Partner respects child's independence
- IS4 Partner sets stage for engagement
- IS5 Partner provides developmental support
- IS6 Partner adjusts language input
- IS7 Partner models appropriate behaviors

Learning Support

- LS1 Partner structures activity for active participation
- LS2 Partner uses augmentative communication support to foster development
- LS3 Partner uses visual and organizational support
- LS4 Partner modifies goals, activities, and learning environment

Social-Emotional Growth Indicators Profile

1. Happiness
2. Sense of Self
3. Sense of Other
4. Active Learning and Organization
5. Flexibility and Resilience
6. Cooperation and Appropriateness of Behavior
7. Independence
8. Social Membership and Friendships

Family Perception and Priorities

Is this profile an accurate picture of your child? If not, explain.

Is there any additional information that is needed to develop your child's educational plan?

If you were to focus your energies on one thing for your child, what would that be?

What skills would you like your child to learn in the next 3 months?

APPENDIX E

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Hello Dr. Prizant,
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