The Impact of Communication Skills on the Social Interaction of Students with Down Syndrome: Special Education Teachers' Perspectives

Tara Pokey

Follow this and additional works at: https://commons.emich.edu/honors

Part of the Special Education and Teaching Commons

Recommended Citation
https://commons.emich.edu/honors/581

This Open Access Senior Honors Thesis is brought to you for free and open access by the Honors College at DigitalCommons@EMU. It has been accepted for inclusion in Senior Honors Theses by an authorized administrator of DigitalCommons@EMU. For more information, please contact lib-ir@emich.edu.
The Impact of Communication Skills on the Social Interaction of Students with Down Syndrome: Special Education Teachers' Perspectives

Abstract
It is important for children to have effective socialization, no matter what type of disability they may have when it comes to communication. Friendship and play opportunities with others usually provide cognitive learning opportunities as well as social learning opportunities. For most children, school is a key setting for them to engage in friendships and develop social interactions. This study investigated eight special education teachers' perspectives on the communication needs of children with Down syndrome within the school context, as well as the teachers' knowledge and resources needed to facilitate their students' social interactions. The participants reported having little knowledge about specific speech and language skills needed to assist their students with Down syndrome to better communicate and interact with others. Even though most teachers felt they lacked specific training, some identified ways to facilitate communication in their classrooms. Among the teachers, those who reported more consistent collaboration with school speech-language pathologists (SLPs) felt better equipped to facilitate communication and social interactions with this population. Finally, the results of this study highlight the importance of interprofessional collaboration between special education teachers and SLPs to address the communication needs of students with Down syndrome.

Degree Type
Open Access Senior Honors Thesis

Department
Special Education

First Advisor
Ana Claudia Harten

Second Advisor
David Winters, Ph.D.

Keywords
Interprofessional Collaboration, Interaction, Articulation, Down Syndrome, Training

Subject Categories
Special Education and Teaching

This open access senior honors thesis is available at DigitalCommons@EMU: https://commons.emich.edu/honors/581
THE IMPACT OF COMMUNICATION SKILLS ON THE SOCIAL INTERACTION OF STUDENTS WITH DOWN SYNDROME: SPECIAL EDUCATION TEACHERS' PERSPECTIVES

By
Tara Pokey
A Senior Thesis Submitted to the
Eastern Michigan University
Honors College
in Partial Fulfillment of the Requirements for Graduation
with Honors in Special Education: Speech-Language Pathology

Approved at Ypsilanti, Michigan, on this date 8 May 2018

Honors Advisor (Print Name and have signed)

Honors Director (Print Name and have signed)
The Impact of Communication Skills on the Social Interaction of Students with Down Syndrome: Special Education Teachers’ Perspectives

By

Tara Pokey

Abstract

It is important for children to have effective socialization, no matter what type of disability they may have when it comes to communication. Friendship and play opportunities with others usually provide cognitive learning opportunities as well as social learning opportunities. For most children, school is a key setting for them to engage in friendships and develop social interactions. This study investigated eight special education teachers’ perspectives on the communication needs of children with Down syndrome within the school context, as well as the teachers’ knowledge and resources needed to facilitate their students’ social interactions. The participants reported having little knowledge about specific speech and language skills needed to assist their students with Down syndrome to better communicate and interact with others. Even though most teachers felt they lacked specific training, some identified ways to facilitate communication in their classrooms. Among the teachers, those who reported more consistent collaboration with school speech-language pathologists (SLPs) felt better equipped to facilitate communication and social interactions with this population. Finally, the results of this study highlight the importance of interprofessional collaboration between special education teachers and SLPs to address the communication needs of students with Down syndrome.

Introduction

Background and Problem Statement
Down syndrome (DS) is a genetic disorder associated with the presence of an extra copy of chromosome 21, resulting in intellectual disabilities and language development delays (Zampini, Fasolo, Spinelli, Zanchi, Suttora, & Salemi, 2015). Because of this extra genetic material, individuals with DS face numerous physical abnormalities and cognitive problems, all of which may affect their speech and communication skills.

For individuals who have this condition, school is a primary place to participate in interactions with others and receive services. Among the different professionals in the school setting who work with students with Down syndrome, special education teachers and speech-language pathologists (SLPs) are of particular interest, as they can both potentially foster communication skills and social interactions among students with Down syndrome. While SLPs provide therapeutic services to students with Down syndrome, many times in a pull-out context, special education teachers are the ones working directly with these students throughout the day, especially for those in self-contained classrooms.

Children with Down syndrome are at a disadvantage in establishing relationships because of their cognitive and communicative difficulties, often missing out on early opportunities to engage in social interactions with peers. Special education teachers have a vested responsibility to their students to better them in all areas of education, including participation in social interactions; However, many times teachers have to deal with aspects of a disability that are not necessarily part of their area of expertise; for instance, some of the physical conditions associated with Down syndrome that affect communication skills. The present study intended to explore special education teachers’
perspectives on the communication needs of students with Down syndrome and how they foster interaction and communication within the school setting.

**Purpose of the Study**

Having grown up around an individual with Down syndrome, the researcher has observed numerous aspects of communication that are affected by the extra genetic material. Although special education teachers have to deal with and witness the daily communication struggles of students with Down syndrome, little is known about how they address the specific communication needs of their students. The purpose of the study was to investigate the perspectives of special education teachers as they relate to the communication needs of students with Down syndrome, as well as factors of their practice that can help better facilitate social interactions among students with Down syndrome.

**Research Question**

This study aimed to address 3 main research questions: 1. How speech and communication difficulties hinder social interactions in individuals with Down syndrome in the school setting? 2. How do special education teachers deal with the physical aspects of the DS that affect, among other things, students' articulation and communication skills? 3. What kind of interprofessional practice do special education teachers and SLPs participate to facilitate students with DS social interactions?

**Justification and Significance**

In most schools, special education teachers are the professionals who work directly with students with DS and observe closely their communication needs and struggles as they interact with classmates throughout the day. Understanding how these
professionals deal with these students' communication needs is important to delineate practices that foster students' social interactions.

Review of the Literature

The impact of Hearing Loss on Communication Skills in Individuals with Down Syndrome

Those who are born with Down syndrome are at a higher risk for ear infections, which can result in hearing loss and need for hearing aids. To assess the impact of hearing loss on language skills among individuals with Down syndrome, Laws and Hall (2014) conducted a study comparing early hearing loss and language abilities in children between the ages of two and four, with and without the genetic abnormality.

The participants in the study were given language assessments to test for receptive vocabulary, language abilities, mean length of utterance, and articulation. Participants with Down syndrome scored much lower than those without in speech accuracy and language tests. As for receptive language and the results, the researchers concluded that the children with Down syndrome were seven months behind the typically developing children. These children were also three years behind in the vocabulary category. The researchers pointed out that the lower performance among those with Down syndrome could be a direct consequence of their hearing loss. The researchers also emphasized that the young age of the participants was a critical period for language development, and that they would most likely have additional language issues in the future because of this.

Articulatory Space in Individuals with Down Syndrome and How It Affects Language and Communication
Other physical attributes associated with Down syndrome are having a smaller articulatory space, larger tongue, and a higher arched hard palate. Such physical attributes have been associated with significant articulation difficulties among individuals with Down syndrome (Bunton & Leddy, 2011; Blagalakshmi, Renukarya, & Ranjangam, 2007). For instance, Bunton and Leddy (2011), measured and compared the acoustic vowel area in two adults with Down syndrome and two typically developed adults, and linked their speech intelligibility to measures of articulation. The researchers used pellets to track movement on various places of the mouth when speaking, including tongue, lips, and jaw. In addition, they also recorded sound pressure for analysis. They found that the articulatory space in individuals with Down syndrome was smaller in area than in those with a typical space, some up to 30%. They also found that the subjects with Down syndrome spoke slower and had longer vowel durations.

In a study by Blagalakshmi, Renukarya, & Ranjangam (2007), the palate-lingual contact of individuals with Down syndrome was compared to those of typically developing children. For that, the researchers took the impressions of the mouths of 88 children with Down syndrome and 48 typically developing children and compared for palatal arch length, average antero posterior length, volume, and palatal index. The researchers found that the palate-lingual contact in individuals with Down syndrome was weaker than those in typical children. They also found that in those with Down syndrome, the hard palate is higher arched and more narrow. These differences have a significant impact on the communication in individuals with Down syndrome, as they physically cannot make certain articulations or if they can, they are much weaker and less intelligible than those who do not have the genetic disorder. Moreover, the researchers
pointed out that those with Down syndrome are more likely to have their language affected by their articulatory space because of a smaller workspace, larger tongue, higher arched and a more narrow hard palate.

Cognition and Socialization in Individuals with Down Syndrome

Cognitive and communicative difficulties associated with Down syndrome can have a significant impact on an individual's social and emotional wellbeing. Children's relationships with others of their own age play an important role in the child's development. Early opportunities to engage in communication with others lay the foundations for learning to communicate in more complex ways, to co-operate with others, to play together, and to make friends. Unfortunately, children with Down syndrome are at a disadvantage in establishing relationships with other children because of their cognitive and communicative difficulties. Studies of children with Down syndrome across the age range from preschool to teenage years have highlighted the fact that these children usually have less play contact with friends than their typically developing counterparts (Buckley & Sacks, 2002; Cuckle & Wilson, 2002).

The cognitive aspect in those with Down syndrome affects their day-to-day life, more importantly, their language. A study was conducted by Zambini, et al. (2015) to test the prosodic skills in those with Down syndrome and compare them to typically developing children. The researchers set up a 20-minute play session with the child and their mother and structured it in a way so most of them would be presented at the same time with new toys and during this play session only spontaneous utterances were analyzed. When the session was completed, the researchers split the utterances into categories: word combinations, simple sentences, non-finite complex sentences and finite
complex sentences, and then further broke them up even more to show pragmatic
function: declarative utterances, imperative utterances and interrogative utterances.
Prosody was then analyzed using the fundamental frequency, highest and lowest pitches,
and number of movements. Their final results showed that typical children produced a
total of 718 multi-word utterances and children with Down syndrome only produced 388.
The researchers highlighted that the production of single word combinations were high in
those with Down syndrome; however, these children produced no finite complex
sentences. In both groups, the single intonation utterances were very similar reflecting
that both groups were able to show some aspects of prosody. The results also showed that
those single intonation utterances produced by participants with Down syndrome had a
lower fundamental frequency. A more noteworthy issue observed was that those with
Down syndrome were less able to produce interrogative utterances because of the rising
gate of the phrase.

Being that individuals with Down syndrome are already at a disadvantage when
communicating with others, the friendships they make are extremely important. A study
conducted by Watt, Johnson, & Virji-Babul (2010) identified that children with Down
syndrome are more likely to name an adult as a friend, rather than a child or someone
their own age, which probably reflects the dynamic they are used to, given their more
frequent interactions with caregivers and adults. The researchers used a two-step research
process where children with Down syndrome were shown pictures, and first had to decide
which one best showed friendship and then had to answer whether or not what was being
portrayed was acceptable to do in a friendship. The pictures involved both adults and
children as potential participants in different activities. These findings are very valuable
as they indicate that communication in the school setting should be improved so that students can make friends around their same age rather than looking at a parent or authority figure as a friend.

In addition, individuals with Down syndrome may have problems with apraxia of speech, voice quality, and dysarthria (Martin, Klusek, Estigarribia & Roberts, 2009). Each of these may affect communication in individuals with Down syndrome.

Methodology

Study Design

This study adopted a qualitative research approach. Data was collected via semi-structured face-to-face interviews consisting of open-ended questions paired with follow-up inquiries to expand on and clarify participant response. The interviews were audio-recorded with the permission of each participant, then transcribed to allow for analysis and interpretation.

Participants

Eight special education teachers volunteered to participate, all of which worked in schools located in Michigan in self-contained classrooms. The participants were recruited through email and signed informed consent forms before being interviewed. Two teachers taught in schools where the population of students was both general education and special education (P7 and P8); however, the other six worked in center-based programs where the entire school consisted of special education students (P1, P2, P3, P4, P5, and P6). One special education teacher provided services to students who were nonverbal (P3). Three of the teachers taught students ages 18-26 (P1, P2, and P4), two teachers taught younger children ages three to five (P3 and P5), one teacher taught
students ages 13-26 (P6) and one teacher taught high school age students, 14-18 (P7). In each classroom, there were students with a variety of disabilities, and all of which had at least one student with Down syndrome.

Data Analysis and Results

The interviews were transcribed and analyzed with respect to common themes and perspectives. Participant responses were cross-referenced to assist with the identification of common themes. Analysis of interviews revealed eight main themes, which are discussed in the following sections.

Theme 1: Training

Six special education teachers mentioned specific topics that they felt they are not adequately trained. The topics consisted of: articulation, anatomy, and discipline. Articulation is one of the main aspects the participants felt they were lacking in training. In individuals with Down syndrome, articulation is a physical piece of the genetic disorder that can directly affect communication with others. One teacher stated, "I do not know enough about speech to help him reach his full potential" (P1), and another said, "I don't feel super confident in any articulation stuff" (P3). One participant said, "I guess in that way I felt I wasn't really prepared for school it was more through experience and learning from my speech therapist ways to help them" (P5). Lastly, it was stated, "I would love to know more about how to demonstrate to them and what exercises to use to facilitate and strengthen those muscles you use in speech" (P8).

Although some teachers stated they did not know enough about the articulation aspects to aid their students' speech, some refuted with statements such as, "In this population, the severe population, [we] aren't picky about articulation at all, we are just
looking for any communication or communicative intent” (P3) and, “I work with high school age and a lot of times when they get to that age, there is not a whole lot of change in articulation so we didn’t stress that a ton” (P7).

Participants identified during the interview different physical attributes among children with Down syndrome that can have an impact on their communication skills. For instance, one participant stated, “[What] stands out to me in children with Down syndrome is their larger tongues” (P3), and “You see a lot of tongue thrusting forward” (P3). It is important to note that participants also pointed out lack of training in key areas related to communication. For instance, one participant made a point about lack of training when it came to medical conditions and how those conditions can affect articulation. This participant said, “Most of my students with Down syndrome have the same medical concerns or physical restrictions and if I had learned about them earlier I would have picked up by now strategies to help them physically and with speech, as well” (P5). Individuals with Down syndrome have many more characteristics than just having an enlarged tongue. Being trained in all aspects of the syndrome are equally important to provide the best of care for those students affected by the condition and promote social interaction.

The topic of discipline was brought up numerous times during the interviews. Three teachers stated that training in this area would be beneficial, as exemplified in the following quote: “[He is] physically aggressive, he does not want to do his work...so I think just [learning] a better way to communicate [with their student] all together” (P1). When it came to what they do for discipline, a special education teacher stated, “You have to trick them into the illusion of control. You have to give them just enough control
so that they feel they are making decisions for themselves, and this participant also claimed, "You need to get more creative [with consequences], like restricting access to things they really like, because your typical kid with Down syndrome is perfectly happy to sit away from the group in a chair by themselves" (P3). Another participant stated, "I do a lot of discipline nonverbal and I act like I don't care, and when they see they are not getting a reaction out of you, they change their tone" (P7).

**Theme 2: Behavior**

Behavior in individuals with Down syndrome was a common theme and the participants spoke about difficult behaviors among their students. An example is "stubbornness", which could hinder their students' communication, in addition to affecting how they provide services to their students. Five out of the eight participants stated in their interview that they have had a student with Down syndrome who was stubborn, using a stereotypic terminology, which matches to stereotypes commonly known in the society, as exemplified in these quotes, "Oh man, kids with Down syndrome are super stubborn" (P3), and "I don't know if it's true for all of them but it's true for those I've worked with, and they are very stubborn and will do things on their own time" (P7).

Two participants spoke about how stereotyping students with Down syndrome can affect the type of service delivery they are providing to their students. During the interview, a participant stated, "Well I think that people usually with students with Down syndrome they kind of have this mentality that every kid with Down syndrome is really happy all the time and likes to go hug everybody and socialize. It's a stereotype that comes with the syndrome and it is not true" (P5). This particular teacher also mentioned,
"With Down syndrome, there's a lot of stereotypes that come with the syndrome that people kind of assume that every student with Down syndrome is going to be really friendly or really stubborn, but they are just all really different" (P5).

**Theme 3: Service Provision**

During the interview a question was asked about what sounds that the participants believe their students with Down syndrome have trouble saying. In answering, five participants commented on how difficult they thought this question was, or they simply could not formulate an answer. One said, "I have no idea, I would say most of their speech is vowel sounds and a lot of times they have trouble making consonant sounds" (P5). This participant also stated, "They usually have trouble saying multiple syllable words" (P5). One teacher believes her students have trouble "With the blending of sounds" (P8).

Specifically, on the topic of service provision, the participants were asked about how often and how long their students with Down syndrome see the school speech-language pathologist and if they believe this time is sufficient enough to help their students' speech and communication problems. Two of the three participants who reported having older students in their classrooms, ages 18-26 years-old, thought that once a week for half an hour was enough, stating "Because they are adults now, yes I think its sufficient enough" (P2), and "I think at this point with their age, I think it's enough, and they can also go see her [the SLP] at any time" (P4). However, one of the other special education teachers who serviced older students stated, "The speech teacher that we had this last year only did whole group lessons, so even if kids didn't get speech she would still come into the class and teach a lesson to the entire class" (P7). Because
of this, the participant felt "I kind of wish she did a little more pull out to focus on those certain skills even if it was just a short session a week" (P7).

Regarding the younger students, all but one of the teachers felt the service being provided by the speech-language pathologist was not enough to fully help their students with Down syndrome. An interesting comment was made by a participant who said, "I think I get really focused on curriculum and standards and academic content...I know I drop the communication ball a lot and I don't mean to its just there's a lot of other things happening and when there is an SLP in the room they are really good at picking that up for me, so I never think there's enough speech and language sources" (P3). Another participant stated "It should be more one on one because what we do now is group activities so my whole class will participate. I think if it was more one on one, my student would do a lot better" (P1). One participant who felt that students were getting adequate time and service addressing their communication skills cited her collaboration with the SLP as a factor contributing to sufficient services to her students, as indicated in her statement "We [them and the SLP] work together very well and she gives me things to work on in a daily basis so although she's not here specifically she will tell me things to work on" (P5).

**Theme 4: Interactions in the Classroom**

The participants made many comments about the level of social interaction of their students with Down syndrome during the interviews. They gave specific examples of activities they do to facilitate interactions among their students, including, among other things, group time, journal time, small group activities, social games, sharing, having a partner and playing with toys.
Three participants indicated that their students with Down syndrome seem more comfortable talking to adults in the classroom, that is teachers and paraprofessionals, rather than to their classmates, as indicated in these quotes, "*I think that’s it’s just a common thing where they [students with Down syndrome] are just more comfortable talking to staff/adults, period*" (P2), "*He’s shy with the students in my class, but he initiates most conversations with me*" (P1).

Five participants stated during the interview that they believe their students with Down syndrome are closer to students with disabilities, regarding friendships, rather than to students who are typically developing. This may be due to the fact that all of the students with Down syndrome were in self-contained classrooms for students with disabilities. as indicated by these participants’ statements, "*I think that it tends to be a closer friendship because they are all here all the time and they can be here for years together and create a close bond*" (P7); "*It’s just like a regular high school, you have the person that’s in a committed relationship for a long time, and you have the groups where the guy dates a lot of people and they think he’s a player. It’s the same thing here, they just have special needs*" (P2).

Although all of these students were in self-contained classrooms, some classrooms were located in buildings with the general education population. Because of this, the topic of inclusion was brought up by the participants. One of the teachers is starting a peer-mentoring program at the high school where her classroom is located (P7). The teacher explained that she would meet with the typically developing students once a week and go over a section of the curriculum that brings about disability awareness, and then those general education students would meet with their partner they are paired with.
in the special education classroom and spend an hour of their school day with them. The teacher stated, "They feel more involved in what's going on in the high school program and being around the same age nondisabled peers seems to be helping them feel more accepted" (P7).

Another teacher spoke about inclusion of her students with general education peers, which involved having her students eating lunch with general education students. This teacher believes that in doing this, "it gives them some independent conversation time with their peers" (P8). This participant explained how she intends to collaborate with a general education teacher and arrange an afternoon where both classes will merge and play games together at least once a month. In doing so, the goal would be to, "Truly learn social etiquette of playing a game and being social with their peers" (P8).

Theme 5: Social Interactions Outside the Classroom

Half of the participants reported that their students with Down syndrome do not have friendships with typically developing individuals because they do not have the opportunity to interact with them outside of school. However, four of them gave specific examples as to where exactly they get these social interactions, including, "In Trenton, they do Victory Day, which is where students from our school go and play football and interact with the Trenton High School students" (P2). Another example was, "CBI, Community Based Instruction, where we get the students out of their comfort zone...and they are able to go into the community and do different jobs" (P1). This participant also remarked, "It helps them understand they can talk to other people" (P1). "One of my students is involved with boy scouts so that is where he interacts with typical 5-year
olds” (P5) stated another participant about interactions outside the classroom with typically developing individuals.

As for interactions with special education peers and classmates outside of the classroom, a participant stated, “They do a lot of things together whether it's Special Olympics or school dances or activities outside of school, they are very involved in the community but it's usually with each other” (P2). The same special education teacher also said, “The majority of their interaction comes inside of school because interactions outside of school require them to not only initiate it but also support from their families to provide transportation and put something together” (P2).

Theme 6: Social Interactions and Articulation Difficulties

During the interview, a question was asked pertaining to whether or not the participants believed their students' speech and communication difficulties interfered with the type of social interactions they have. Six participants thought that their students' speech and communication difficulties hindered social interactions. However, one of them said, “Once they figure out each other's quirks and what works for one another, it [communication] can be very fluid” (P8). There was also another participant who felt that at first it does affect interactions, however, overtime students get to know each other and become easier to understand. One teacher thought, “They don't always understand what is going on in the social interaction so staff will have to support them” (P2).

The participants reported that it is not uncommon for the students with Down syndrome to get upset because their fellow classmates cannot understand them during conversation. One participant said, “Sometimes it becomes aggressive where he will just hit or tip over a chair or hit the wall” (P1). “If they want something [and] they don't
know how to communicate, that is when you get some of those acting out behaviors” (P3) is another statement that was said.

The two participants who did not think that their students’ speech and communication difficulties affect their interaction with classmates, indicated that their students relied on alternative ways of communication whenever there was a breakdown in communication, as evidenced by their comments, “When others have difficulty understanding he will use gestures, signs, or pictures as an aid in his communication” (P5), “I don’t think their speech and communication difficulties interfere at that level because they have different kinds of speech devices that actually have them communicate with other students or staff when needed” (P6).

**Theme 7: Interprofessional Collaboration with SLPs**

Two questions were asked to the participants pertaining to the collaboration between the special education teacher and the speech-language pathologist. One was if they collaborate and how often, and the other was if they have ever gotten any particular techniques from the speech-language pathologist that they have used in their classroom to help their students with Down syndrome with communication.

Five out of eight participants stated that they do collaborate with their school SLP. “We collaborate all the time, probably weekly, when we plan activities to do and a ton on IEP [Individualized Education Plan] goals and objectives” (P3). Another said, “Yes, we did a weekly technology group” (P7). They also reported collaborating with the school SLP for specific activities, as indicated by this teacher statement, “Preparing the students for speeches or going out in the community and [if the students] need something to assist them in a better way” (P4).
Although five of the participants stated there is interprofessional collaboration between them and the school SLP, most were unable to list specific examples of techniques the SLP suggested them to use to assist with the communication needs of their students with Down syndrome, "I would not say specific exercises, but we spend a lot of time collaborating on augmentative communication devices" (P3). Another stated, "Yes, my speech pathologist, she will program anything that I need in our communication app in the iPad and we use Proloquo [2 Go]" (P5).

Three participants said they do not collaborate much with the SLP. One participant did say, "Unless I go to her, there is not much collaboration. She does not often come to me, but she will when she needs an idea or if she is struggling behaviorally with him" (P8). Another said that since, "We do four progress reports per year, and she [the SLP] fills out how they are doing" [and] other that there is not a ton of collaboration" (P2). One participant explained, "I don't [collaborate]. I actually asked them to stay away from me when I'm doing my job" (P6).

**Theme 8: Communication with Parents**

Although school is a primary place for students with Down syndrome to interact and improve their communication skills, home is just as important. To know what their child is working on in school can be helpful in facilitating interactions while at home. Because of this, a question was asked during the interview as to if the special education teachers collaborate and communicate with the parents, and how often.

Out of all the participants, five stated that they do collaborate with parents. Some examples as to how and what they communicate to parents are, "I send home a daily note of things we have done and there's always a speech and language portion" (P3), and
"We have an open-door policy, they can come in at any time if they want to come observe a lesson" (P5). The participants indicated that the collaboration was especially important to facilitate class activities, "If I knew we were going to be talking about their families or a certain holiday, I would ask ahead of time details about it" (P7) and "In order to have a more authentic communication about their life and home and not just us guessing what they said, we do have pretty open communication" (P8).

Two participants specifically stated that they do not collaborate or communicate often with parents. One participant said, "Besides the progress reports and the IEP, unless there is a problem, I don't really call them" (P2). The other participant stated, "Most of the time I talk to them is a drop off or pick up basis and or during our after-school teacher conferences" (P6).

Discussion

For students, school is the primary place to participate in social interactions. Students with Down syndrome are at a disadvantage in establishing relationships because of the cognitive and communicative difficulties associated with the syndrome. Sometimes, special education teachers have to deal with aspects of the disability that are not necessarily part of their area of expertise. In the current research, the teachers highlighted the lack of training regarding the articulation difficulties experienced by students with Down syndrome. Their articulation difficulties can directly affect speech, and, therefore, further hinder social interactions and communication skills.

The findings suggest that special education teachers would benefit from more specific training in the areas of speech and language skills. For instance, specific knowledge/training on anatomy/physiology of the speech articulators and how this relates
to communication challenges for students with Down syndrome could be beneficial, as special education teachers could develop and implement strategies to help their students in the classroom. One way for this knowledge to be obtained is have school SLPs hold training workshops for special education teachers where they could show the best ways to demonstrate the articulation of certain speech sounds, in addition to suggest activities special education teachers can use in their classroom.

Discipline was an area the participants felt they needed more training in, as well. One felt at a loss of how to deal with her students when their behavior turned physical. Two participants specifically stated that their students with Down syndrome were going to complete tasks on their own time and believed allowing them to do so is the best option. A few participants shared their knowledge as to the best strategies to go about disciplining their students, suggesting, among other things, giving choices as to how to complete a task so the student feels they are making choices for themselves and have the sense of control, simply having one's body language speak for itself, and getting creative with consequences, such as restricting access to a toy, rather than putting students in time out by themselves.

Five participants stated there was collaboration between them and the school's SLP. For students to reach their full potential in speech and communication, a relationship between these two professionals should exist. Results of this study suggest that collaboration is not simply a “yes” or “no” answer. Some participants answered, “yes” to collaboration efforts; however, this only included the yearly IEP. Quality collaboration that truly impacts students' speech and communication seems to encompass more than the yearly IEP. Some participants reported more thorough and consistent
collaboration, which involved sharing of SLP’s goals and classroom follow-up strategies. Studies have been showing that through interprofessional collaboration, the SLP can help plan activities and give insight on how to improve language and communication within the classroom.

As discussed in the results section of this study, some participants indicated that their students seemed more comfortable talking to adults in the room, rather than to their classmates, which corroborates with findings reported in Watt et al. 2010 study. It is important for children to have friends their own age and to learn how to communicate with them. The participants in the current study gave examples as to what activities they believe best facilitate interactions among students with Down syndrome. In addition, the participants also indicated that they could benefit from learning other speech and communication activities to foster social interactions among students with Down syndrome.

Conclusion

The findings in this study called attention to areas where there is a lack of knowledge of special education teachers regarding Down syndrome. Most participants stated they did not know enough about the syndrome in general, especially when it came to its communication difficulties. Speech and communication difficulties associated with the syndrome hinder interactions and lead to frustration and disruptive behaviors. It is important when having a student in the classroom with Down syndrome to know all aspects of the syndrome as it relates to communication so teachers can further aid these individuals in reaching their full potential in social interactions and friendships.
The findings in this study also highlight the importance of interprofessional collaboration between special education teachers and school SLPs. Special education teachers in the study who collaborated with their school’s SLP seemed to have a better idea as to how to help language and communication in their students with Down syndrome. Most participants did not think that the one to two times per week service provided by the SLP was enough to help their students speech and language difficulties, which makes it even more important that their students receive continued support for their communication needs in the class. The study calls for a more thorough and consistent collaboration between special education teachers and school SLPs. Such collaboration can better equip teachers to provide the continued support their students need to facilitate their communication and social interactions.

Limitations/Delimitations of the Study and Directions for Future Study

Only teachers in the state of Michigan were included in the present study. Future studies should consider broadening the study sample to incorporate participants from other states. Other states may have different policies regarding service provision, in addition to other qualifications their special education teachers need to possess, as well as opportunities for continued education and collaboration with other professionals. Also, all the participants who volunteered to participate in the study, taught in self-contained classrooms; future studies should include teachers working in inclusive classrooms.

Future studies should consider also interviewing parents and SLP's. SLP's could present their perspectives on their interprofessional collaboration with special education teachers and how interprofessional practice can improve children with Down syndrome’s communication skills. Parents, on the other hand, could give their perspectives as to how
they assist their child in the home setting with communication needs, as well as how involved their child is outside of school activities, and how those activities can help foster relationships between individuals with disabilities and typically developing individuals.
References


Communication in Individuals with Down Syndrome: An Informational Guide for the Special Education Teacher

By

Tara Pokey

A Senior Thesis Submitted to the Eastern Michigan University Honors College in Partial Fulfillment of the Requirements for Graduation with Honors in Speech-Language Pathology

April, 2018

Ana Claudia Harten, Ph.D CCC-SLP. Supervising Professor and Honors Advisor

David Winters, Ph.D., Department Head

Ramona Caponegro, Ph.D., Honors Director
Table of Contents

3. Purpose

4. Areas of Concern: Articulation

5. Areas of Concern: Stereotypes in Communication

6. Areas of Concern: Possible Communication Issues

7. Facilitating Communication Strategies and Social Interactions

10. Resources Outside the Classroom

13. Resources
Purpose

Down syndrome (DS) is a genetic disorder that affects individuals physically and cognitively. The physical and cognitive deficits associated with DS have a significant impact on an individual's ability to communicate and interact with others. The purpose of this guide is to provide key information to special education teachers to facilitate
communication and social interactions among their students with DS.

**Areas of Concern**

1. **Articulation**

   Individuals with DS may have a smaller articulatory space, larger tongue, and a higher arched hard palate, making it more difficult to articulate sounds during speech (Blagalakshmi, Renukarya, & Ranjangam, 2007).
Suggestions to Help Articulation
While in the Classroom:

- Have your students over articulate words during speech.
- Have the student speak slowly.
- Ask your Speech-Language Pathologist (SLP) to hold workshops on how to properly demonstrate speech sounds so you can provide a model for your students with DS.

2. Stereotypes in Communication

There are many misconceptions about individuals with DS, among which, they are happy all the time, like to hug everyone, are stubborn, are loners, are extremely social, and very friendly. It is important to keep in mind that children with DS will present variations in behaviors and social preferences as any other typically developing child (Poikey, 2018).
Suggestions to Address Stereotypes:

- Do not let stereotypes hinder your service provision while teaching. Each student is unique and should be treated as such. Try to identify triggers of certain behaviors so that activities and techniques can be used to address behaviors and triggers.

- Get to know your students’ likes and dislikes. Learn their personality.

3. Possible Communication Issues

- Research has identified that students with DS communicate more often with adults (teachers, paraprofessionals) than with classmates their own age. (Watt, Johnson, & Virji-Babul, 2010).

- Studies of children with Down syndrome across the age range
from preschool to teenage years have highlighted the fact that these children usually have less play contact with friends than their typically developing counterparts (Buckley & Sacks, 2002; Cuckle & Wilson, 2002).

- Speech and communicative difficulties in individuals with DS can hinder social interactions. Researchers have found that the palate-lingual contact in individuals with Down syndrome is weaker than those in typical children (Bhagalakshmi, G., Renukarya. A., & Ranjangam. S., 2007), which can have an impact on their intelligibility level.

4. Facilitating Communication Strategies and Social Interactions

- Have your students interact with one another rather than conversing with you. Some great activities include: small group activities, starting off the day
pairing up with a partner and asking one another questions, having them write in a journal and share it with the class and have classmates comment on it out loud (Poikey, 2018).

- If your classroom is self-contained, but located in a building with typically developing children, have your students eat lunch with the general education population so they have opportunities to socialize together (Poikey, 2018).

- Start a peer-to-peer mentoring program. A peer-to-peer mentoring program is a great option that can be implemented in any classroom setting. It could be once a week, once a month, or every couple of weeks. It is important that these relationships function as a friendship and not like a teacher/student relationship. It is meant for the students to be equals. Activities during this time can be: playing a game and learning proper turn taking (Poikey, 2018).
• When your students with DS are struggling to communicate, make resources available in your classroom for them to use. These can consist of: communication devices and apps to display messages, as well as communication boards (Poikey 2018).

• Avoid dismissing a student when he/she is trying to communicate with you, even if it is off topic. If it is off topic, comment back and redirect them (Poikey, 2018).

• Collaborate with your school SLP. Your SLP can give you general communication strategies, help you with visual supports, and augmentative communication devices. An activity you can do with your SLP and students is a technology group. As professionals, you can direct and support students while playing on apps that have to do with communication (Poikey, 2018).
• Collaborate with parents. Parents can be helpful in getting to know your student. In order to help your student reach their full communicative potential, it would be helpful to know about activities they are involved in at home, as well as in the community. Send notes home about what they are working in class, including strategies that be used to foster communication (Poikey, 2018).

5. Activities and Resources
Outside the Classroom

Communication is just as important outside the classroom. Resources can be provided to the families of your students with OS to get both family members and students more involved in the community.

• Special Olympics
   (National)
   http://www.specialolympics.org

This is a wonderful way to interact with students with and without
disabilities in addition to doing something that these individuals enjoy.

Special Olympics

• Support Groups (National)
  [http://www.ndss.org/resources/local-support/](http://www.ndss.org/resources/local-support/)

The National Down Syndrome Society has support groups worldwide. It is for families in addition to the individual with DS. There are recreational activities, conferences, parent support and education, helplines, training for medical professionals and educators and advocacy and Buddy Walks.
• Victory Day
  (Trenton, MI)
  [http://www.victorydayfootball.com/about.html](http://www.victorydayfootball.com/about.html)

At Trenton High School, football players and cheerleaders pair up with a student with a disability and they get to socialize together for the day, play football, and cheer.
References


13
Eastern Michigan University, Ypsilanti, Michigan.

