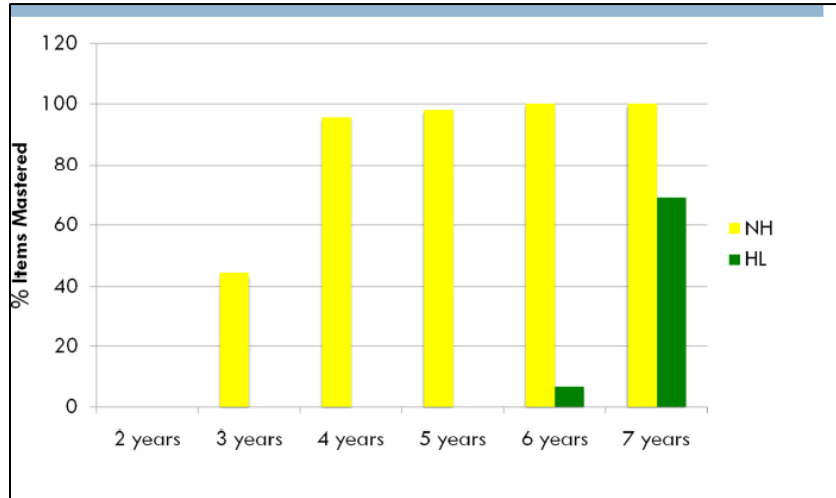


The Missing Link in Language Development of Deaf and Hard of Hearing Children: Pragmatic Language Development

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- Parents completed 45-item Pragmatics Checklist
- 109 children with normal hearing age 2-7 years
- 126 children with hearing loss of all degrees (19.8% mild; 24.2% moderate/moderate-severe; 32.9% severe; 23.1% profound)
- Children with hearing loss were between 3-7 years
- Normal hearing: 43% male; 56% female Hearing loss: 51% male; 49% female
- All children cognitively normal, English-speaking

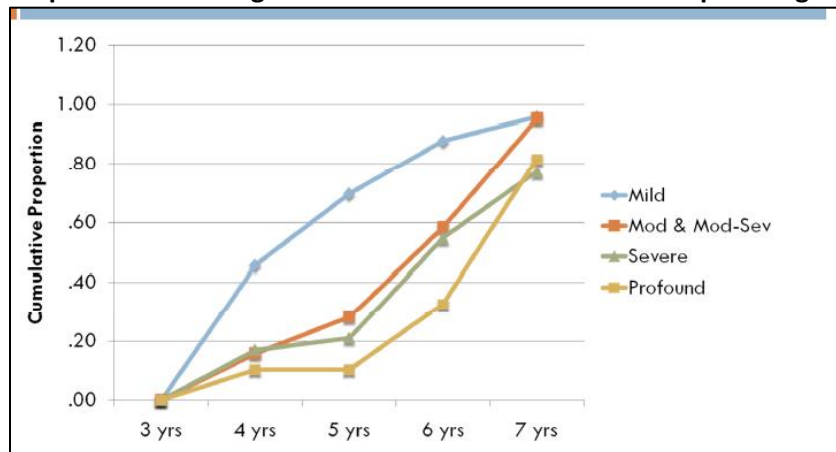
Percentage of Items Mastered by Age for Normal Hearing and Hearing Loss Groups



Items Not Mastered by Children with Hearing Loss by Age 7 Years

- ▶ Provides information on request
- ▶ Repairs incomplete sentences
- ▶ Ends conversations
- ▶ Interjects
- ▶ Apologies
- ▶ Request clarification
- ▶ Makes promises
- ▶ Ask questions to problem solve
- ▶ Asks questions to make predictions
- ▶ Retells a story
- ▶ Tells 4-6 picture story in right order
- ▶ Creates original story
- ▶ Explains relationships between objects-action-situations
- ▶ Compares and contrasts

Proportion Achieving 50% or more of the items with complex language



Summary

Pragmatic language skills are the most abstract and complex of all language skills. Even when the child has age-appropriate vocabulary and syntax skills, she or he may not yet have learned how to use these skills in a socially appropriate manner for specific social purposes. Young children with NH acquire these skills rapidly between 3 and 4 years of age and are able to use these pragmatic language skills using complex language. Children who are DHH acquire these skills much more slowly even with targeted intervention strategies. Without mastery of these skills, children will encounter significant challenges with literacy, written communication, and abstract conversational communication.

Intervention Strategies

Parents often wonder what language skills they can work on in the home. This questionnaire helps parents target specific language skills to model within the home providing natural opportunities for the child to practice them. If the child is in an integrated environment, the teacher questionnaire helps identify some of the strengths and weaknesses of the child's language abilities and the teacher may then optimize language learning in classroom situations where these strategies could be naturally practiced. Teachers frequently judge language skills based upon the speech intelligibility of the child. However, pragmatic language skills are often so subtle that the teacher does not identify specific areas of delay or difficulty. In addition to the analysis of situations in which language becomes difficult, it is also possible to determine whether the student has sufficient vocabulary and grammatical capabilities to communicate his or her needs and wants. If the student lacks specific content knowledge in vocabulary or syntax, these skills can be taught through individualized intervention.

Giving Directions

Most early intervention specialists and speech-language pathologists (SLPs) work on simple commands such as understanding: go get your shoes, put your shoes on, open the door, get in the car. However, teachers and SLPs sometimes overlook having the child give directions to others. There are some pragmatic language skills that are important for giving directions, such as to play a game or to make something. To teach these skills, the SLP/teacher needs to carefully analyze all of the cognitive linguistic steps that must be understood to provide directions to another about playing a game or making something. The child needs to understand what is in the mind of the other individual who must learn a game or learn how to make something (i.e., theory of mind). Can the child explain the steps well enough so that another individual can successfully make something: a picture, a snowman, a peanut butter and jelly sandwich, or an arts and crafts activity?

Making Something

Children also need to learn the sequence of information that they need to tell someone else about how to make something. Even when the child understands the sequence and is capable of making the desired food item, arts and crafts project, or object, the child may be unable to explain to another how to do it. Children do not always understand what basic information is important for another person to know. Remember to teach sequence. For a peanut butter and jelly sandwich, if the child says "peanut butter" and omits specific instructions in the sequence, the teacher/SLP can respond with absurdities such as, "Do I put it in my hand? Where's the bread?" The teacher/SLP needs to identify each of the steps in the sequence. It is often helpful to have pictures that are associated with each step in the sequence. Using a chart with pictures that depict each step in the process, children will cross out each step as they either do it, indicating comprehension, or as they tell another to do it, demonstrating the pragmatic expressive language skill. Then the teacher/SLP puts the items back in the right sequence to review. The order may also be jumbled to demonstrate that the end result will not be correct. The teacher could teach the child the correct sequence with picture cues and written language: (1) get a banana, chocolate, and nuts, (2) peel the banana before cutting, (3) cut the banana, (4) dip the banana into the chocolate, (5) roll the chocolate-covered banana in nuts, (6) freeze the banana. Teaching requires redundancy and repetition. Make sure to let the child make mistakes. If it isn't in order, can the task be completed? Children need to learn that making things typically requires a specific order or sequence of events to accomplish the goal.

Learning How to Play a Game

At very young age levels, the teacher/SLP may want to teach a child to give directions about how to play a simple game, such as Duck Duck Goose. First, the child must consider the number of steps. Children must sit in a circle. There is a chosen child, the goose. How is the child chosen? Does the teacher pick the child, or does the child who suggests the game pick the chosen child? The chosen child walks around the outside of the circle. The child taps each child and says "duck" as he or she taps. The child must choose a child to be the goose. When a child is chosen as the goose, this child must get up quickly and run around the circle. The child who has chosen the child to be the goose also begins to run around the circle and whoever reaches the empty spot first and sits down, is no longer the goose. The chosen child who is the new goose must think about whom she or he will choose. The child must not show by eye gaze or pointing or any other hint who the new chosen child will be. If the goose does indicate who she or he will choose too early, then she or he will beat the chosen child to the open spot and the chosen child becomes the new the goose. The child must keep a secret. This is an opportunity to teach what a secret is. The teacher/SLP may start out with a chart. The children take turns explaining how to play the game. The teacher/SLP may scaffold the activity by asking "What's first? What's second? What's third?" If the child simply says, "tap, tap, tap," the teacher/SLP must indicate that there is some missing information. "What's missing? Hmm," the teacher can then give some indication of the thinking process that should be used. It is important for the teacher/parent to teach the child the thought process: "Who should I pick? It's a secret. Don't tell anyone. Don't make eye contact, others will notice. Don't point at the child you pick. If the child knows that you have chosen him or her, he or she will be prepared to run around the circle and you may not get there first." The SLP or teacher may introduce an absurdity. "Can I pick the table? Why not? If I walk around the circle, I need to tap a person. If I tap a chair, the chair cannot get up and run around the circle to try to sit down in the open space first." This is an excellent opportunity for activities at home, such as how to teach games like Concentration, Candy Land, or card games to a sibling or a friend. Other games that can be described besides board games or card games are games with a ball, simple games like Duck Duck Goose, or games with teams.

Teaching Perspective Taking

It is important for children to learn how to understand what is in the minds of others. Teach "why" questions. Teach children how it makes them feel. Ask questions such as, "Does it make you feel angry? Sad? Or disappointed? Why are you upset? Are your feelings hurt? Which is better, Grab it or ask politely? If I take it from you, how does it feel?"

Teach about Choices and What the Consequences Are for Each Choice

With children who have high language skills, it is important to teach verbal mediation skills and the language appropriate for these pragmatic skills. For children with lower language skills, the teacher/SLP may want to use pantomime and pictures.

Playing 20 Questions

Although children with NH learn how to play the game 20 questions without having to learn the steps, children who are DHH often need specific instructions. How do you select the question to be asked? Which type of question is better, "Is it a dog? Is it alive? Is it an animal?" When the question is answered, what should the child do with the answer? Does the child eliminate any possibilities? It is easiest to learn how to play the game if the options are limited? With pictures of the possible answers, after the question is answered, it is possible to eliminate some of the pictures. Can the child explain why these answers would be eliminated? The child should cross out the pictures of answers that cannot be the chosen one because of the answer given to the previous question. Then the child needs to look at the remaining pictures and formulate a question that will either provide the information about which one is the chosen answer or eliminate more of the potential answers. The SLP may need to teach the child what questions might yield the best ability to eliminate answers. These questions are frequently category questions, such as "Is it alive?" or "Is it an animal?" The child must learn how to keep information in his or her head to use for formulating the next question. The child must understand how to categorize things. Categorization often begins with visual obvious characteristics, such as the color, "Is it white?" Or the size, "Is it big?" Or, "Is it alive?" Or, "How do animals move? Do they fly? Swim? Walk?"

Recognizing a Falsehood

To survive in this society, it is important that children understand the difference between truth and a lie. Children need to learn when they are being "tricked." They need to understand what it means to be gullible, so that social victimization can be prevented. Role-play can consist of pretending to be a trickster, such as "coyote" in the southwest of America. Should I believe the trickster? Are there any clues provided about tricksters? What strategies can be used to determine whether something is true or something is a lie? How does the child know when to believe someone? A child cannot understand truth without understanding a lie.

Persuasion

Why is it important for children to learn how to be persuasive? What are some real life examples when the child may find it important to persuade someone? A child may want to know how to persuade his or her parents to allow them to do something or get something; permission to do a particular activity, go to a party, go to get ice cream, etc. A child may also want to persuade other children to let him or her play with them. What are some strategies that can be used? How can the child assess whether or not the strategy is successful?

Telling a Story in Sequence

Children who are DHH often need to learn how to relate stories of events so that someone else can understand the story. Notebooks that go back and forth between the SLP/teacher and the home can include information about what events may be of importance to the child that occurred at home or after school. The SLP/teacher can then ask the child to tell them information about what happened. Then it is possible to determine whether the child is capable of telling a story or event in a logical order with sufficient information for others to understand. A parent will also know if something significant or important occurred that day—so that if the child begins to talk about an event, the parent will be knowledgeable enough to help support the child in learning how to relate information to another person. Because the teacher/SLP knows the event, she or he is also able to determine what information has been omitted or is incomplete. The teacher/SLP will want to determine if there is understanding of cause and effect. Information about comparing and contrasting may also be important when relating the information. Storytelling should improve if both the teacher/SLP and parent(s) provide appropriate modeling with emphasis on the components omitted by the child.

Defense in the Face of False Accusation

Is the child able to use language that provides defense in the face of a false accusation? Does the child understand the situation sufficiently to identify what defense would prove his or her innocence? Statements (e.g., "He took the toy. I didn't take the toy. I didn't want the toy. I wasn't in the vicinity. I don't have the toy. I didn't want the toy.") that provide evidence that the accusation is false could include a variety of perspectives.

Alternate Points of View

The child does not have to have the same point of view as another (e.g., "I like this book or song"). The child does not have to like the book or song (e.g., "He hates this book"). Questions that could stimulate thinking about alternative points of view could assist the child in thinking about another's perspective: "Why did you like this book? What was your favorite part? What is another student's favorite part? Does everyone like the book?"

Revision of Unclear Message

First the child must be able to identify when the message was unclear to another person. If they can identify miscommunication, then they can supply options. The teacher/SLP should model for the child. If the child says, "boat," the SLP/teacher could question, "Do I want the boat? Do I want to eat the boat? Do you want to get on the boat? Is it a blue boat?"

Ability to Answer Questions

A response needs to be appropriate, not just a response. Imitation is not a response to a question. The SLP/teacher needs to model both correct and incorrect, or model an absurd response.

Maintaining a Topic

Sample questions might include "Tell me three things about what you did last night. What kind of things did you see? Hear? Can you picture that in your head? Can you picture what would happen in the restaurant? Can you picture what would happen in a store?"

Theory of Mind

Children often need to be explicitly taught how to think about predicting what is in the mind of another person. Children who are DHH often think that what they know, others also know. They need to be taught that a person knows what they have experienced and if they have not had access to specific information, they will make mistakes.

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