

BEYOND SEMANTICS AND SYNTAX: THE DEVELOPMENT OF PRAGMATICS IN CHILDREN WITH HEARING LOSS

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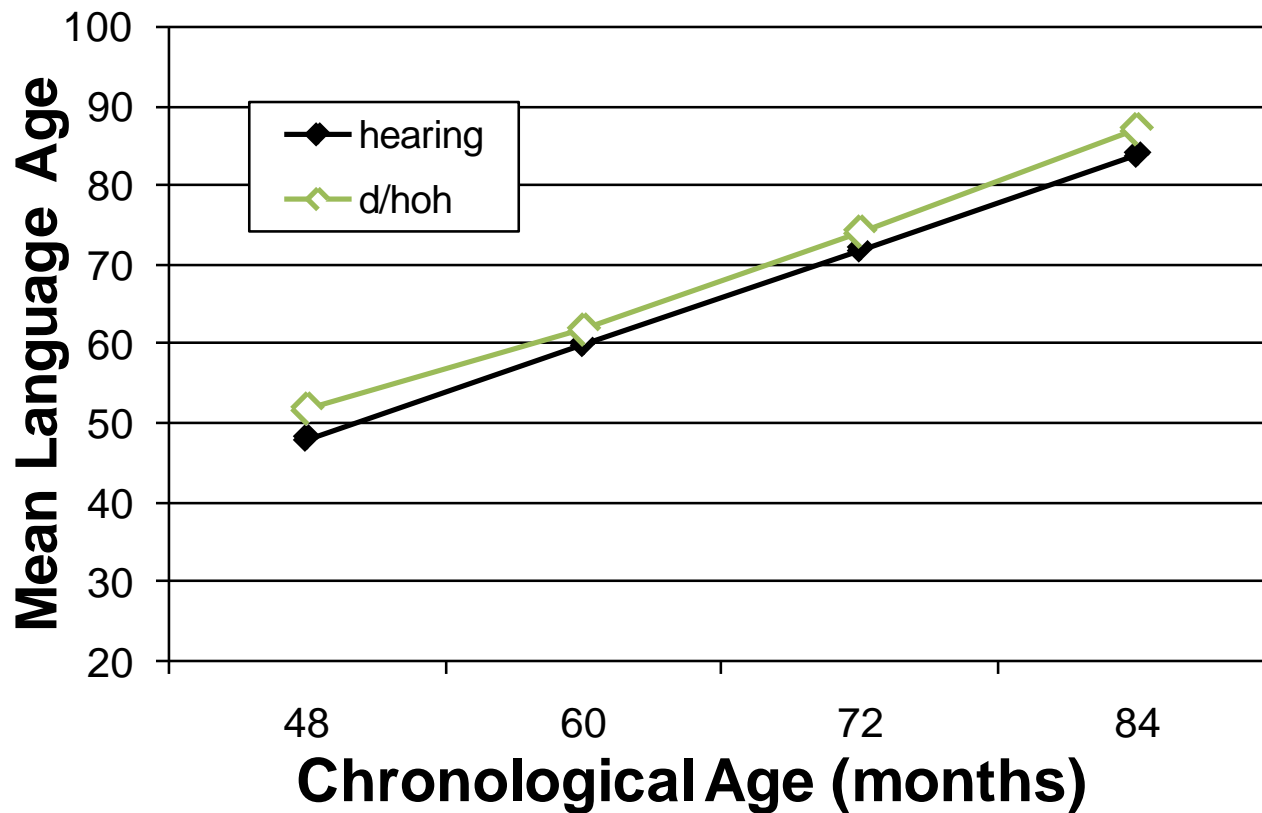


Outcomes of Children who are
**deaf or hard of hearing: 3rd to
12th grade & 4 to 7 year
longitudinal study**
**ONE FOR ONE: ONE YEARS
GROWTH FOR ONE YEAR OF
LIFE**

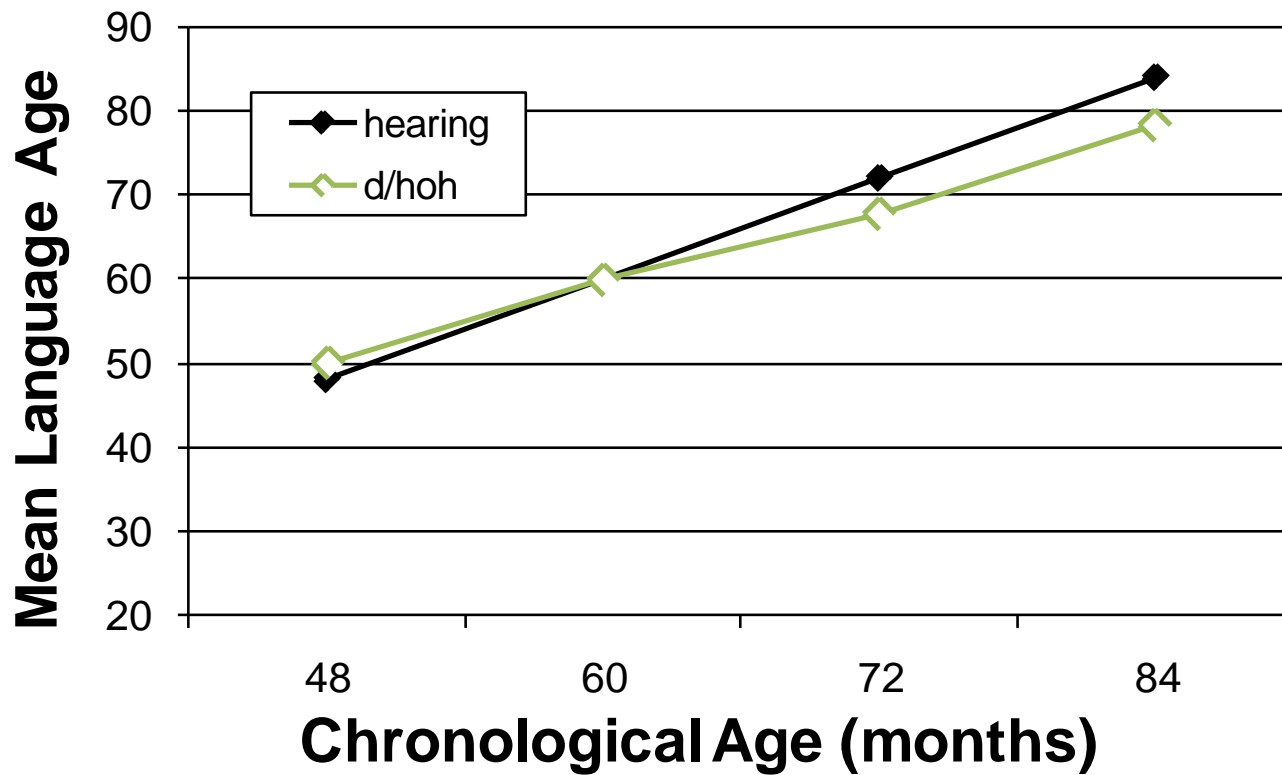
CSAP (Colorado State Assessment Project) Reading Performance Growth 2004 vs 2005

- ▶ **ONE FOR ONE: ONE YEAR FOR ONE YEAR**
- ▶ **Reading grades 3-10**
- ▶ **N=751 students**
- ▶ **Adequate Yearly Progress or 1 years growth in 1 year**
 - ▶ **40% made 1 years growth**
 - ▶ **40.8% made > 1 years growth**
 - ▶ **18.7% made < 1 years growth**

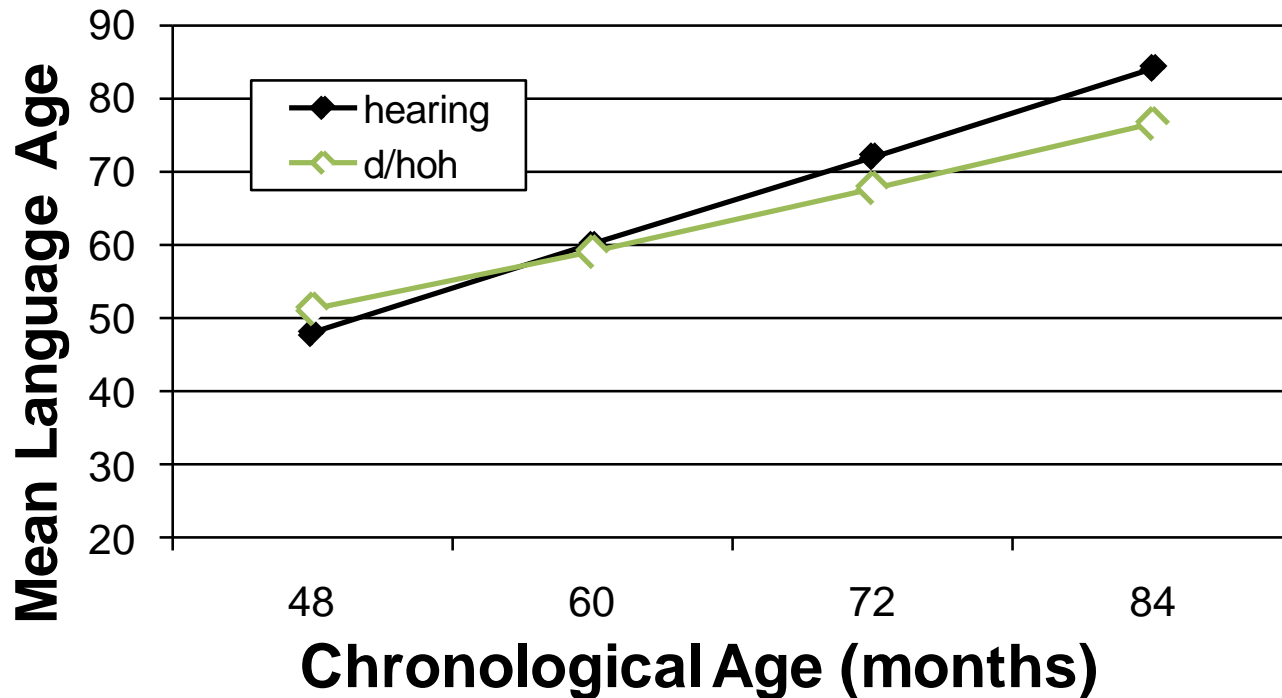
Vocabulary Comprehension (TACL)



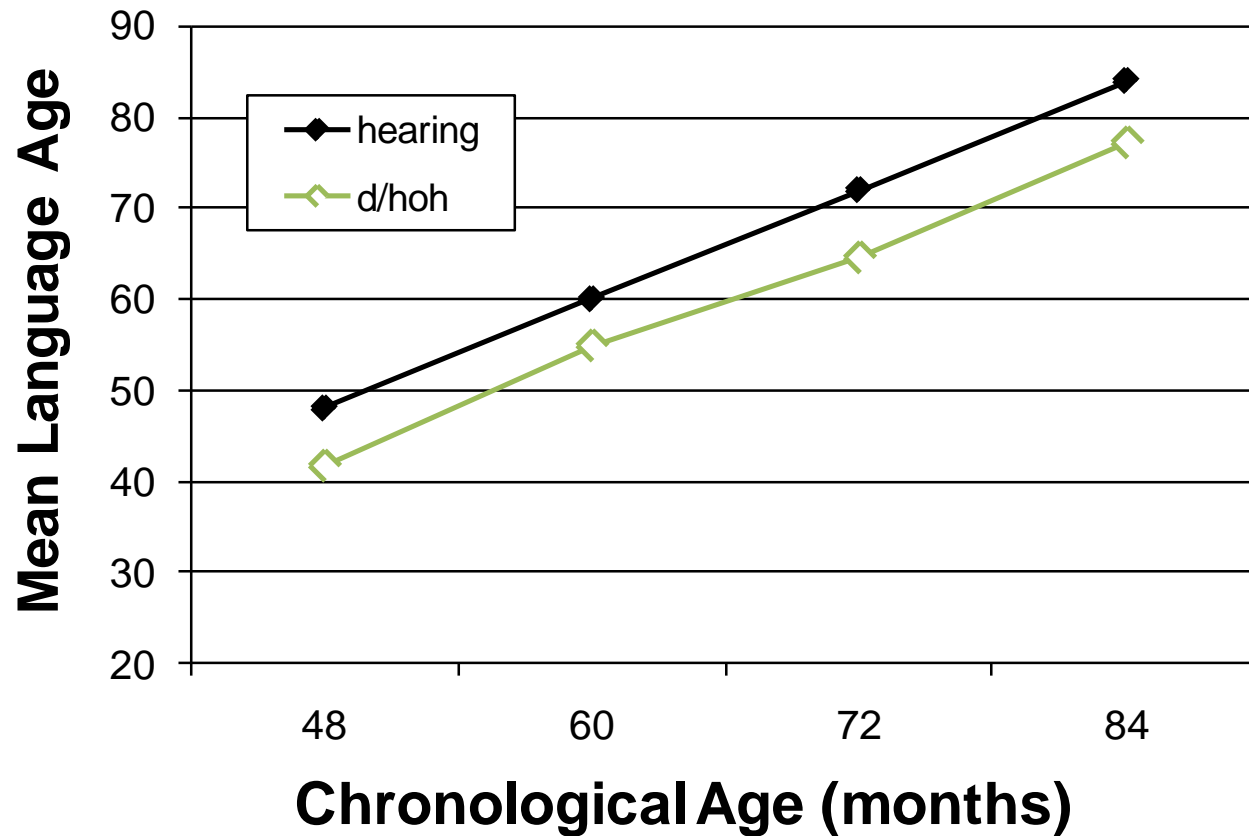
Comprehension of Grammar (TACL)



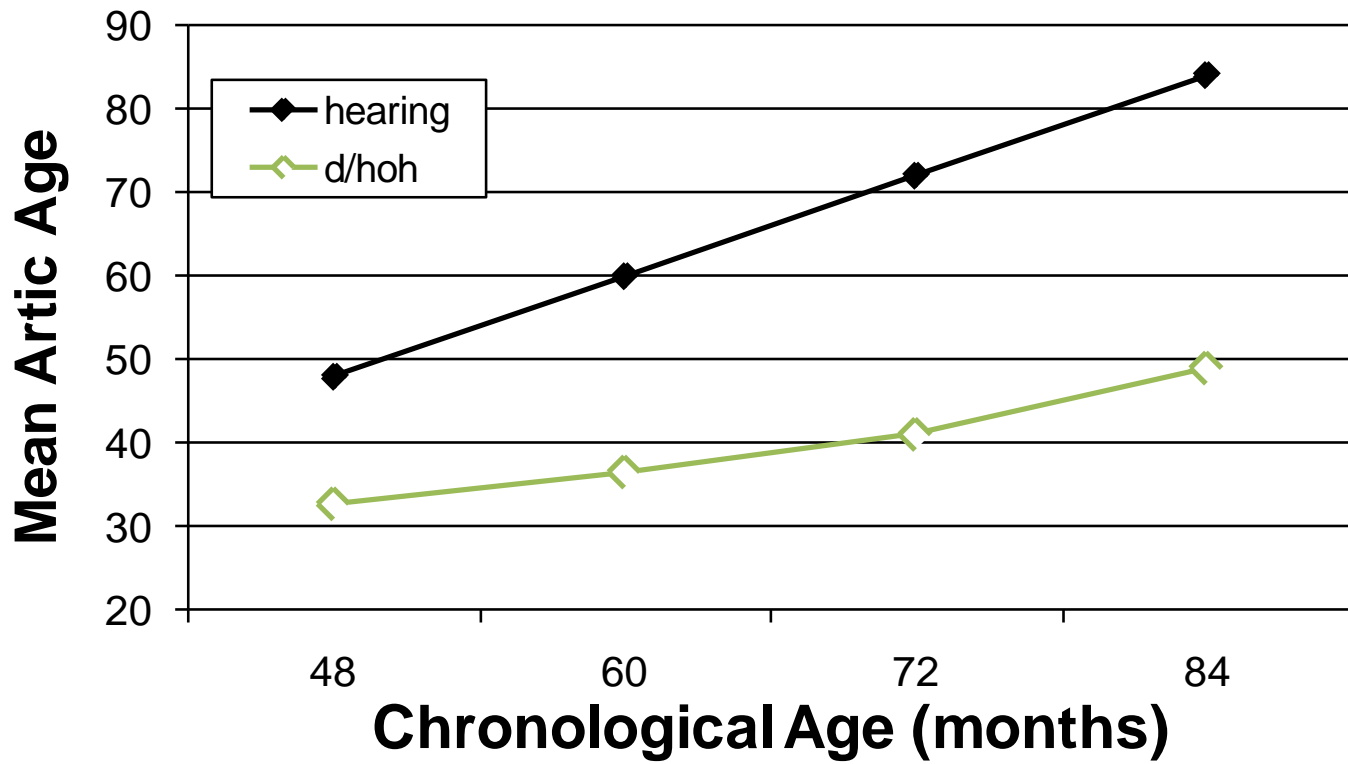
Comprehension of Elaborated Sentences (TACL)

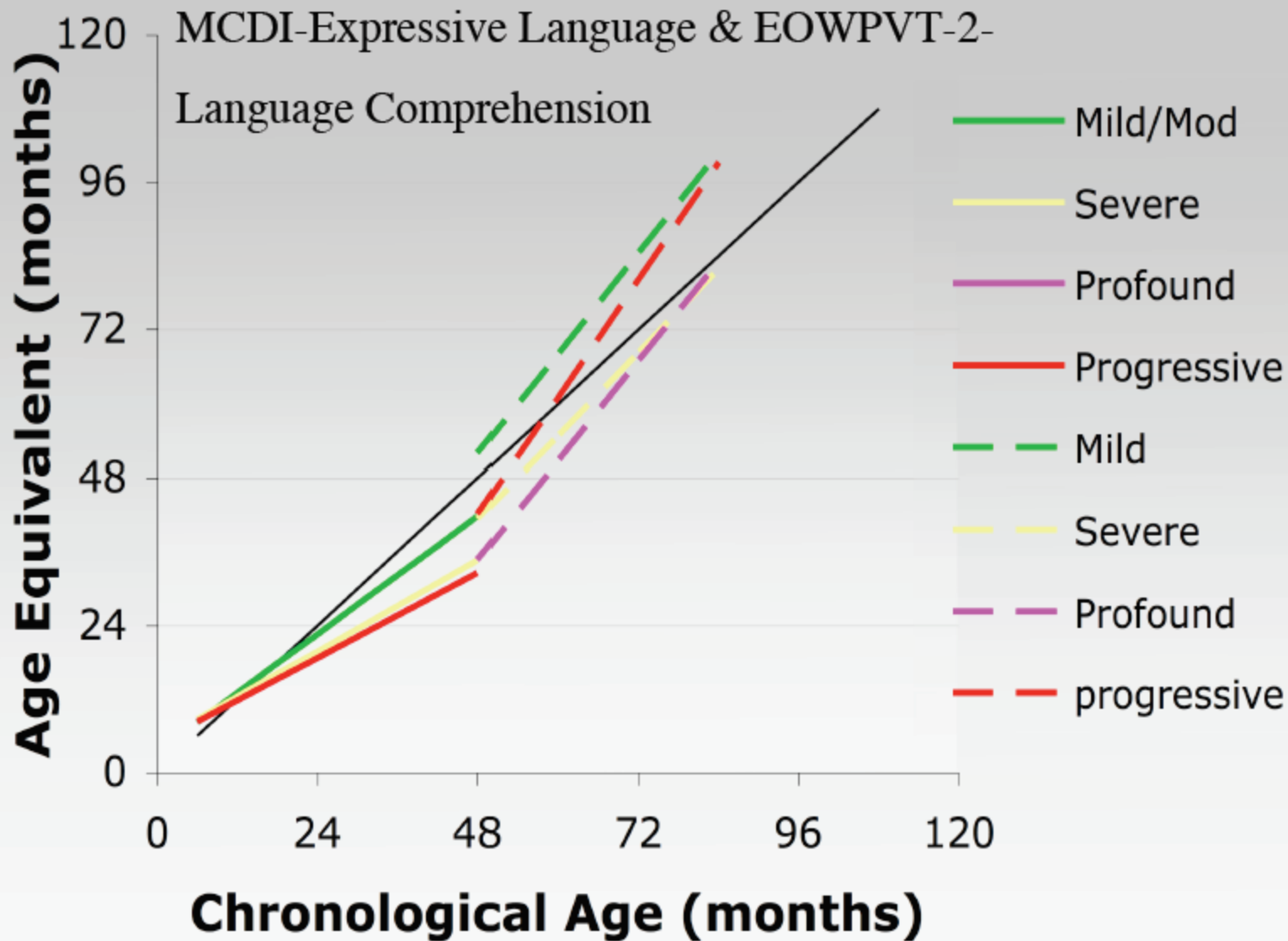


Expressive Vocabulary (EOWPVT)



Speech Articulation (GFTA)







NECAP:

NATIONAL EARLY CHILDHOOD ASSESSMENT PROJECT: DEAF AND HARD OF HEARING

**States collecting outcomes of
children identified through
UNHS/EHDI programs**

NECAP Project Overview

- Collect language outcome data on deaf and hard-of-hearing children birth to 4 across the United States
 - Establish individual state databases
 - Establish national database
 - Explore feasibility of interfacing with existing EHDI databases

NECAP Project Goals

- Support states in assessing outcomes
- Assist states in using results to inform intervention
- Examine feasibility of a national outcomes database
- Determine program, child, and family characteristics related to successful outcomes

Services Provided by Colorado



- Assessments scored
- Profile sheet created
- Written report of results
- Comparison of scores to hearing and deaf/hoh norms
- Database creation and maintenance
- Annual accountability report characterizing state's performance (including subgroups)

Benefits for Programs and States



- Provides statewide and program-specific accountability data
- Examines outcomes in subgroups of children
- Informs personnel preparation needs and areas for program improvement
- Provides networking opportunities with other states

Assessment Components



- Demographic form
- Release of audiologic information
- Minnesota Child Development Inventory
- MacArthur-Bates Communicative Development Inventories
- Additional assessments on request (e.g., play, listening skills, speech intelligibility, etc.)

Participating States

- Arizona – Arizona School for the Deaf and Blind
- California – Fremont School for the Deaf and Blind, LA Unified Public Schools
- Colorado: Colorado State School for the Deaf and Blind
- Idaho: Idaho State School for the Deaf and Blind
- Indiana: Indiana State School for the Deaf and Blind
- Texas: 5 pilot sites
- Wisconsin: state EHDI program
- Wyoming: state EHDI program

Assessments Completed



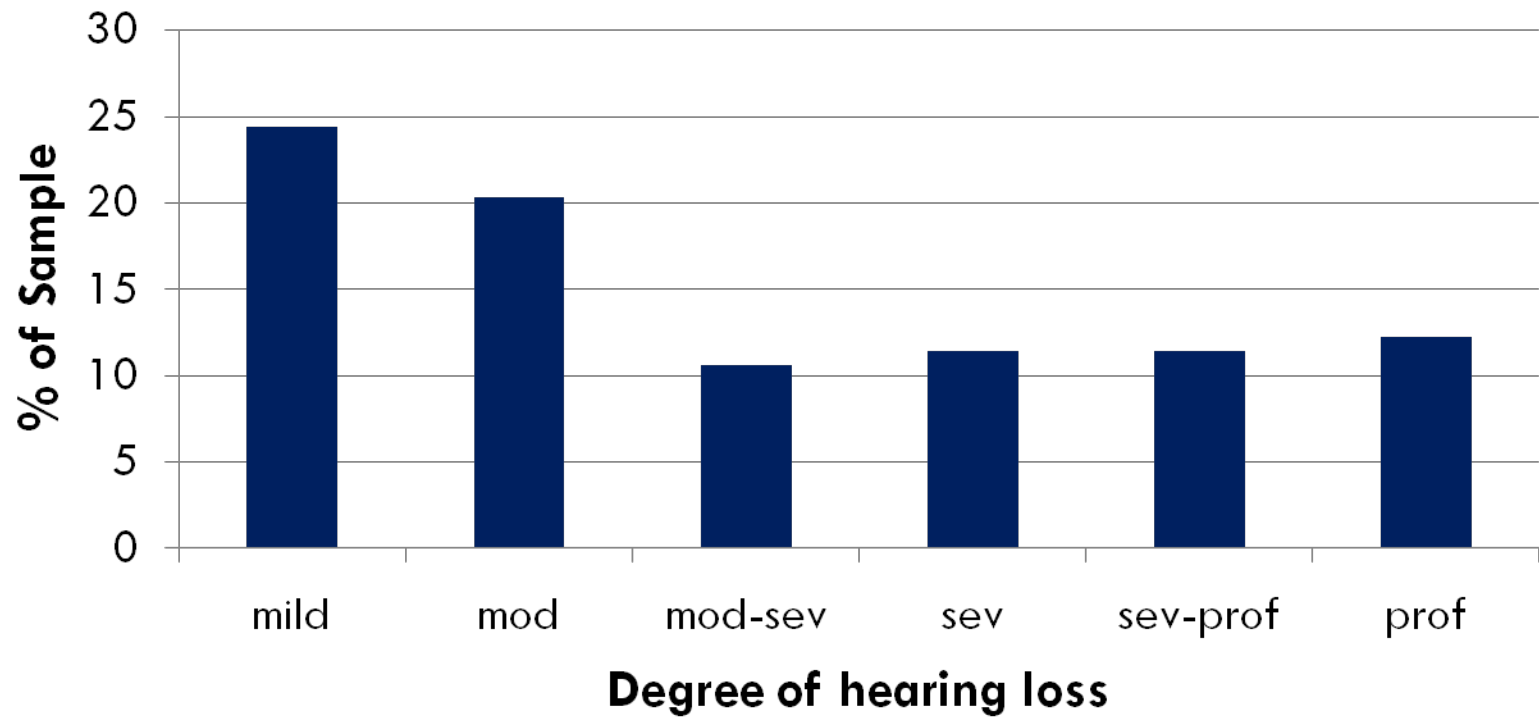
- 259 assessments completed (not including Colorado)
- 162 children assessed 1 to 4 times each
- Colorado: 225 assessments per year

Participant Characteristics (excluding Colorado)



- Bilateral loss = 249;
Unilateral loss = 10
- Auditory Neuropathy = 7
- English-speaking home = 239; Spanish-speaking home = 20
- No additional disabilities = 229; Have additional disabilities = 30
- Boys = 140; girls = 119

Degree of Hearing Loss



Participant Criteria for Language Outcomes Analysis



- Bilateral hearing loss
- English-speaking home
- No other disabilities that would affect speech or language development

States Represented in Current Language Outcomes Analysis



- Arizona
 - Colorado
 - Idaho
 - New Mexico (previous participant)
 - Texas
 - Utah (previous participant)
 - Wisconsin
 - Wyoming
- Note: CA and IN just initiated NECAP; data now being collected

Language Outcomes Analysis: Participant Characteristics

- Chronological age
 - Range = 6 to 40 months
 - Mean = 21 months
- Boys = 130; Girls = 140
- Number of assessments = 270

Assessment 1: Minnesota Child Development Inventory (1992)

- 8 areas of development assessed
 - Language, Motor, Social, Self Help, Pre-Literacy
- Parent report
 - Parents respond “yes” or “no” to a variety of statements about their child
 - Example: “Has a vocabulary of 20 or more words”
- Scales adapted to reflect abilities in both spoken and sign language

Assessment 2: MacArthur-Bates Communicative Dev. Inventories

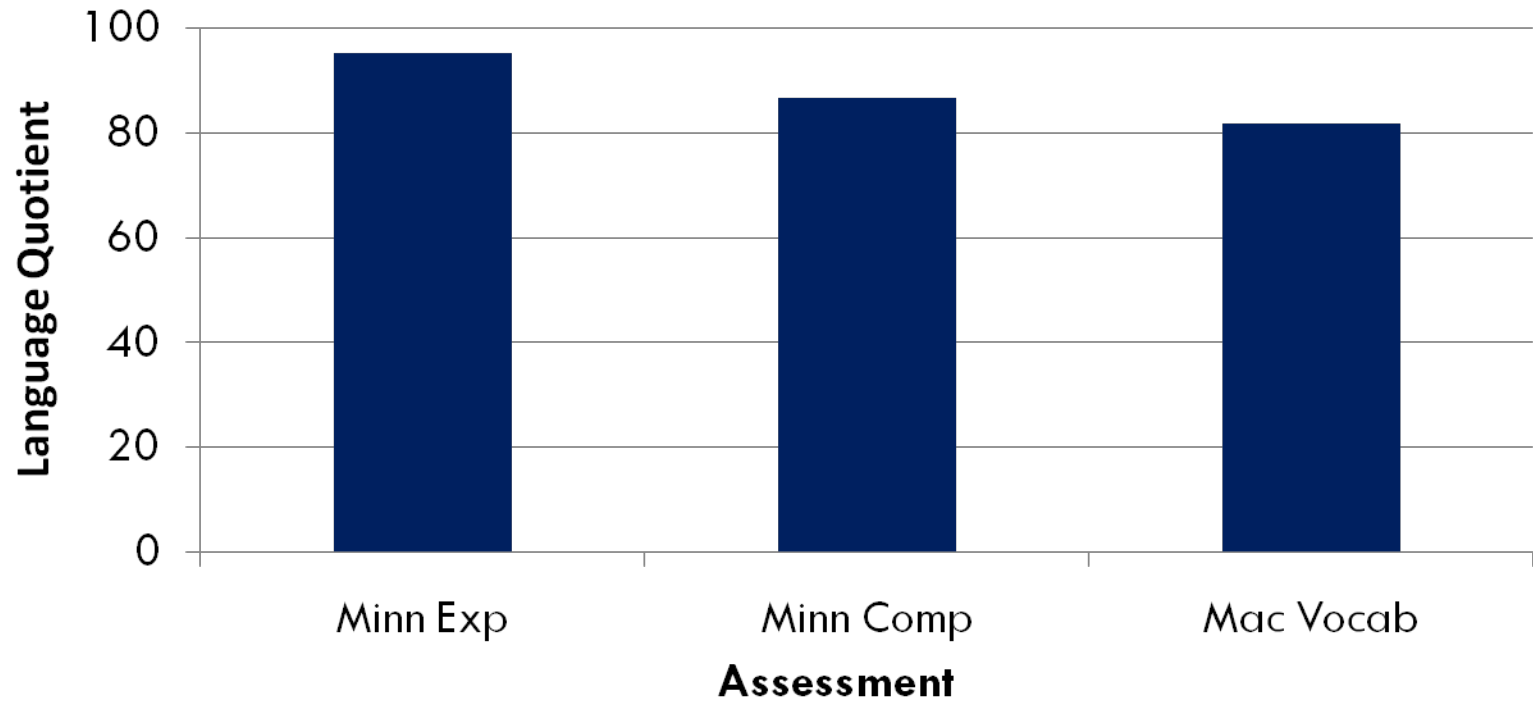
- Assesses spoken and sign vocabulary
 - Expressive and receptive for younger children
 - Expressive vocabulary for older children
- Parent-report instrument

Determining Language Quotient

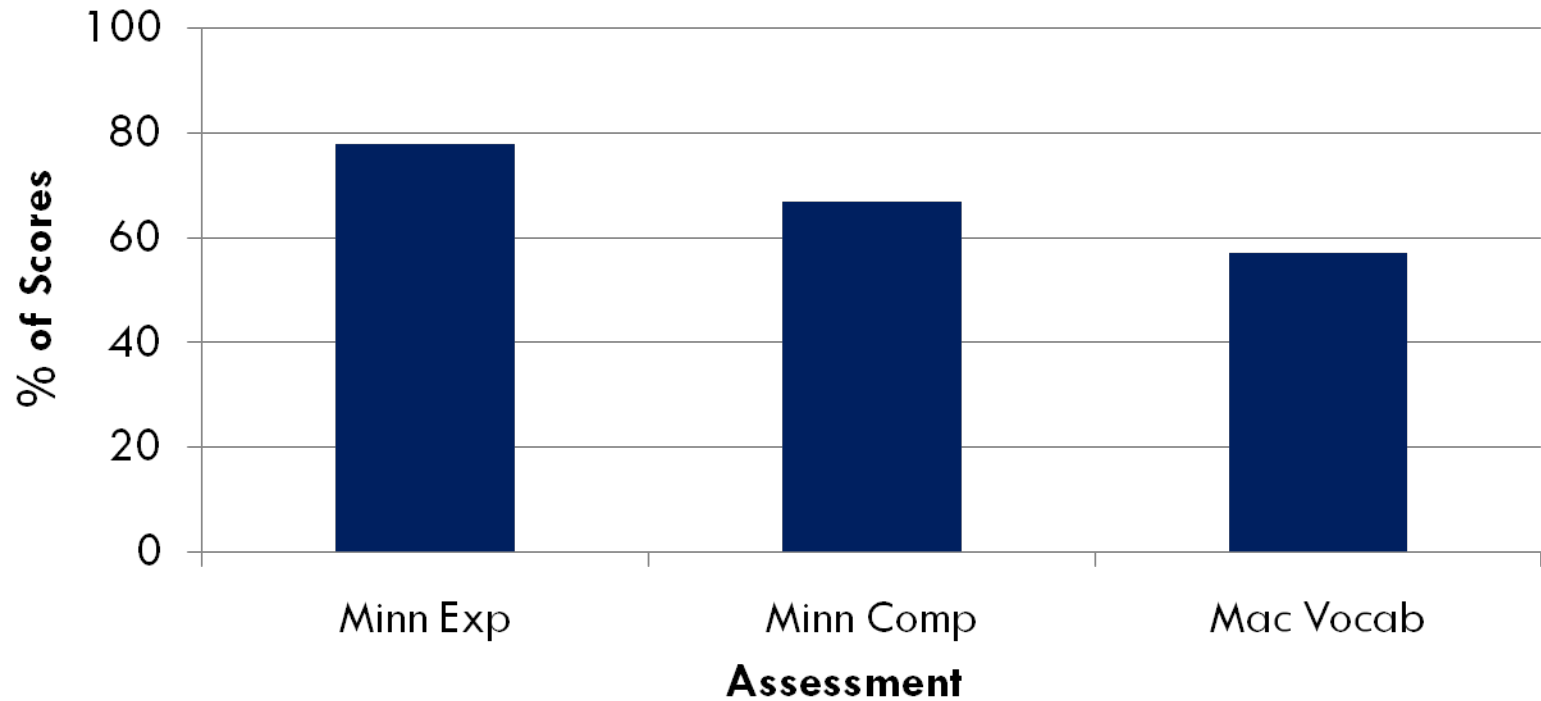
- Language Age/Chronological Age x 100
 - If $LQ = 100$, Language Age = CA
 - If $LQ < 100$, Language Age < CA
 - If $LQ > 100$, Language Age > CA

- LQs of 80+ are within the normal range compared to hearing children

Median Language Quotients

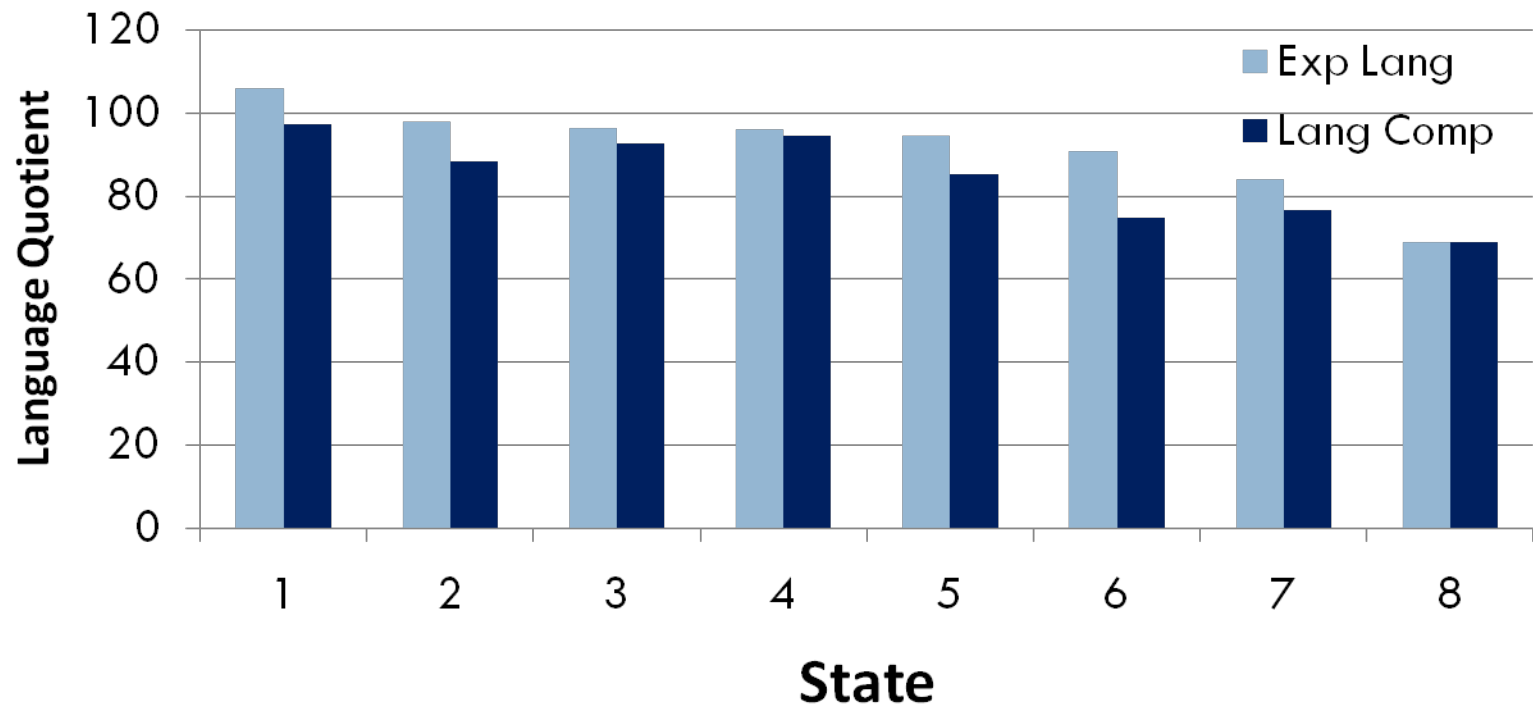


Percent of Scores in the Average Range (LQ = 80+)

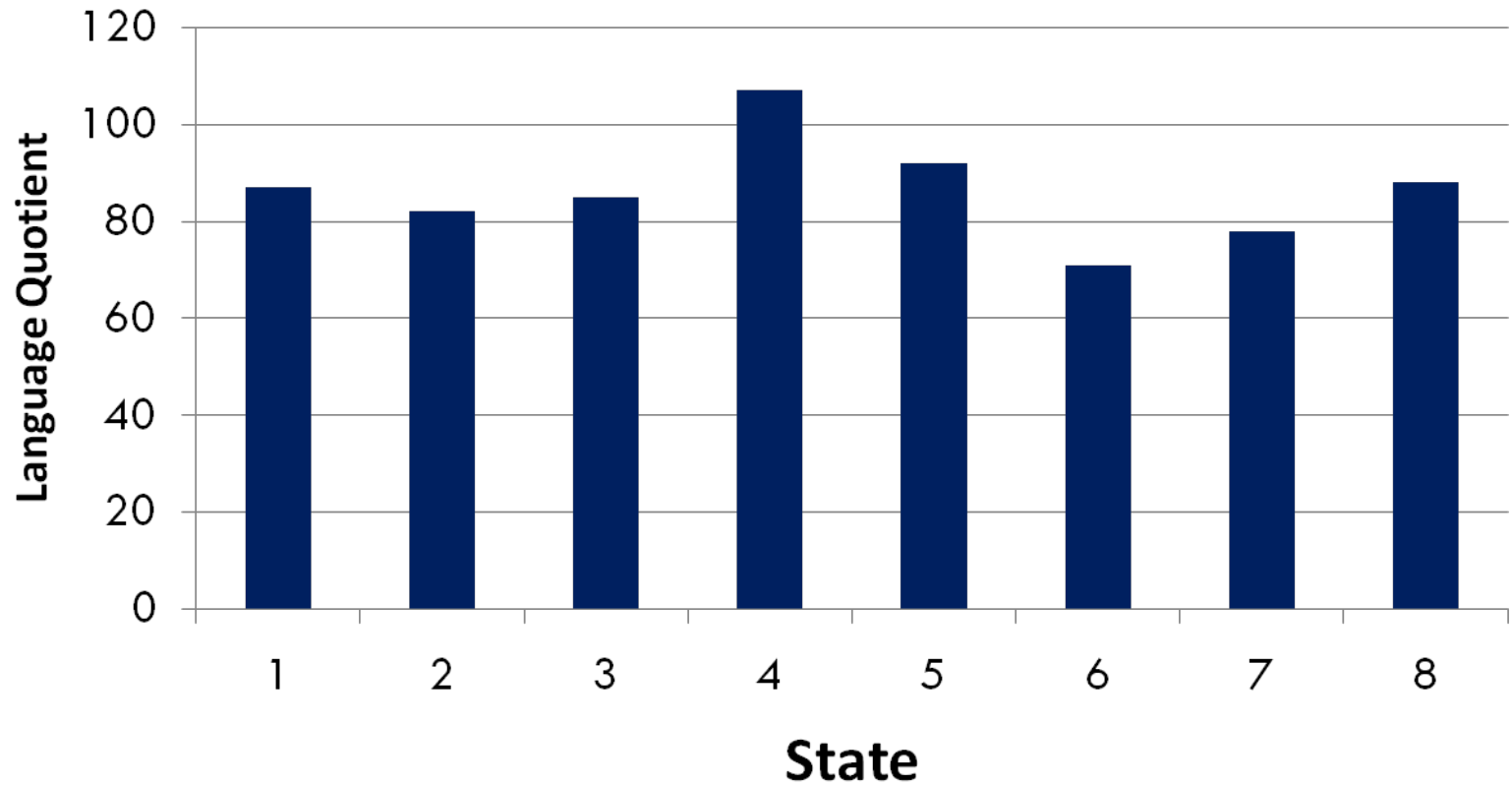


Minnesota CDI:

Median Language Quotients



MacArthur-Bates: Median Vocabulary Production Quotients



Conclusions

- Almost 80% of children scored within the average range on the Minnesota Expressive Language subtest
- On average, children in all states scored more poorly on cognitive-linguistic items (Minn Lang Comp) compared to more superficial language items (Minn Exp Lang)

Conclusions

- Acquiring an age-appropriate lexicon is a challenge for many children with 43% demonstrating significant delays
- Differences in language outcomes are apparent between some states
- As more assessments are collected, factors predictive of better language outcomes will be identified



THE MISSING LINK:

**PRAGMATIC LANGUAGE
DEVELOPMENT**

Pragmatics Checklist

Pragmatic Objective Instrumental	Not Present	Uses No Words Preverbal	Uses 1-3 Words	More Complex Language
States Needs (I want...)				
Makes polite requests				
Makes choices				
Gives description of an object wanted				
Expresses a specific personal need				
Requests help				

Pragmatic Objective Regulatory	Not Present	Uses No Words Preverbal	Uses 1-3 Words	More Complex Language
Gives Commands (Do as I tell you...)				
Gives directions to play a game				
Gives directions to make something				
Changes the style of commands or requests depending on who the child is speaking to and what the child wants.				

Pragmatic Objective Personal	Not Present	Uses No Words Preverbal	Uses 1-3 Words	More Complex Language
Personal (Expresses Feelings...)				
Identifies feelings (I'm happy.)				
Explains feelings (I'm happy because it's my birthday.)				
Provides excuses or reasons				
Offers an opinion with support				
Complains				
Blames others				
Provides pertinent information on request (2 or 3 of the following: name, address, phone number, birth date)				

Pragmatic Objective Interactional	Not Present	Uses No Words Preverbal	Uses 1-3 Words	More Complex Language
Interactional (Me and You...)				
Interact with others in a polite manner				
Uses appropriate social rules such as greetings, farewells, thank you, getting attention				
Attends to the speaker				
Revises/repairs an incomplete message				
Initiates a topic of conversation (doesn't just start talking in the middle of a topic)				
Maintains a conversation (able to keep it going)				
Ends a conversation (doesn't just walk away)				

Interjects appropriately into an already established conversation with others				
Makes apologies or gives explanations of behavior				
Requests clarification				
States a problem				
Criticizes others				
Disagrees with others				
Compliments others				
Makes promises				

Pragmatic Objective Informative & Heuristic	Not Present	Uses No Words Preverbal	Uses 1-3 Words	More Complex Language
Wants Explanations (Tell me Why...)				
Asks questions to get more information				
Ask questions to systematically gather information as in “Twenty Questions”)				
Asks questions because of curiosity				
Asks questions to problem solve (What should I do...?, How do I know...?)				
Asks questions to make predictions (What will happen if...?)				

Pragmatic Objective Imaginative	Not Present	Uses No Words Preverbal	Uses 1-3 Words	More Complex Language
Shares Knowledge and Imaginations (I've got something to tell you...)				
Role plays as/with different characters				
Role plays with props (banana as a phone)				
Provides a description of a situation which describes the main events				
Correctly re-tells a story which has been told to them				

Relates the content of a 4-6 frame picture story using correct events for each frame				
Creates an original story with a beginning, several logical events, and an end				
Explains the relationship between two objects, actions or situations				
Compares and contrasts qualities of two objects, actions or situations				
Tells a lie				
Expresses humor/sarcasm				

Presentation Overview

- Background
 - ▣ Pragmatic skill development
 - ▣ Methods
- Results
 - ▣ Normal hearing data
 - ▣ Compare pragmatic skills of children with and without hearing loss
- Conclusions
- Future Directions

Research Questions

- When do children with hearing loss master specific pragmatic skills in comparison to their peers with normal hearing?
- How does development differ based on degree of hearing loss?

Pragmatics – Social Language Use

- ASHA Website:
 - ▣ Using language for different purposes
 - ▣ Changing language according to the needs of a listener or situation
 - ▣ Following rules for conversations and storytelling

Pragmatics

- Pragmatic language difficulties increase risk for victimization (Conti-Ramsden & Botting, 2004).
- Pragmatic difficulties increase risk for social and emotional deficits (Ketelaars, et al., 2009)

Hearing Loss and Pragmatics

- Children who are deaf or hard of hearing use more directive and less informative communicative functions than their normally hearing age-matched peers (Day, 1986; Nicholas, 2000; Nicholas & Geers, 1997)

Normal Hearing Group: Data Collection

- Pragmatics Checklist
 - ▣ Goberis, D., 1999, adapted from work done by Simon, C.S., 1984.
- Online version of Pragmatics Checklist created on SurveyMonkey
- Solicited participants:
 - ▣ Posted on Hand and Voices website
 - ▣ Through E-mail

Hearing Loss Group: Data Collection

- U.S. Dept. of Education
 - Office of Education #H325D030031A, H324C030074 supported research project on language acquisition of children with hearing loss
 - Parents completed a printed version of the Pragmatics Checklist
 - Children were re-assessed annually

The Pragmatic Checklist (Goberis, D., 1999)

- 45 items
- Parents are asked to indicate whether or not a skill is present by selecting from the following choices:
 - ▣ Not present
 - ▣ Preverbal
 - ▣ 1-3 words
 - ▣ Complex language

Study Participants

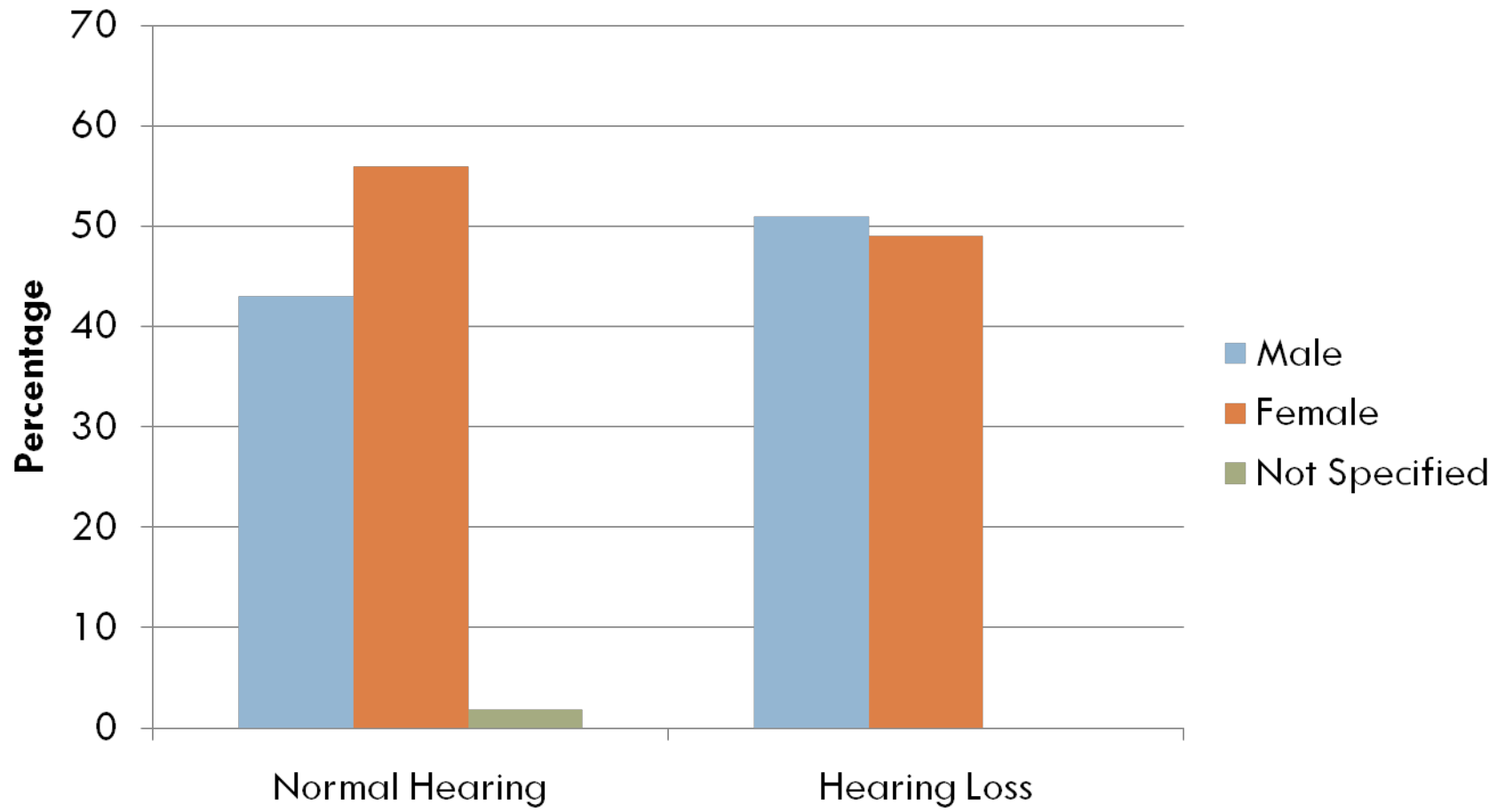
- Normal Hearing Group
 - N=109
 - Age Range: 2-7 years
 - Normal hearing and cognition

- Hearing Loss Group
 - N=126
 - Age Range: 3-7 years
 - All Levels of hearing loss
 - Normal cognition

Study Participants

- Children in both groups were determined to have normal cognition
 - ▣ Normal hearing group: based on parent report
 - ▣ Hearing loss group: IQ ≥ 70 on the Leiter non-verbal intelligence test

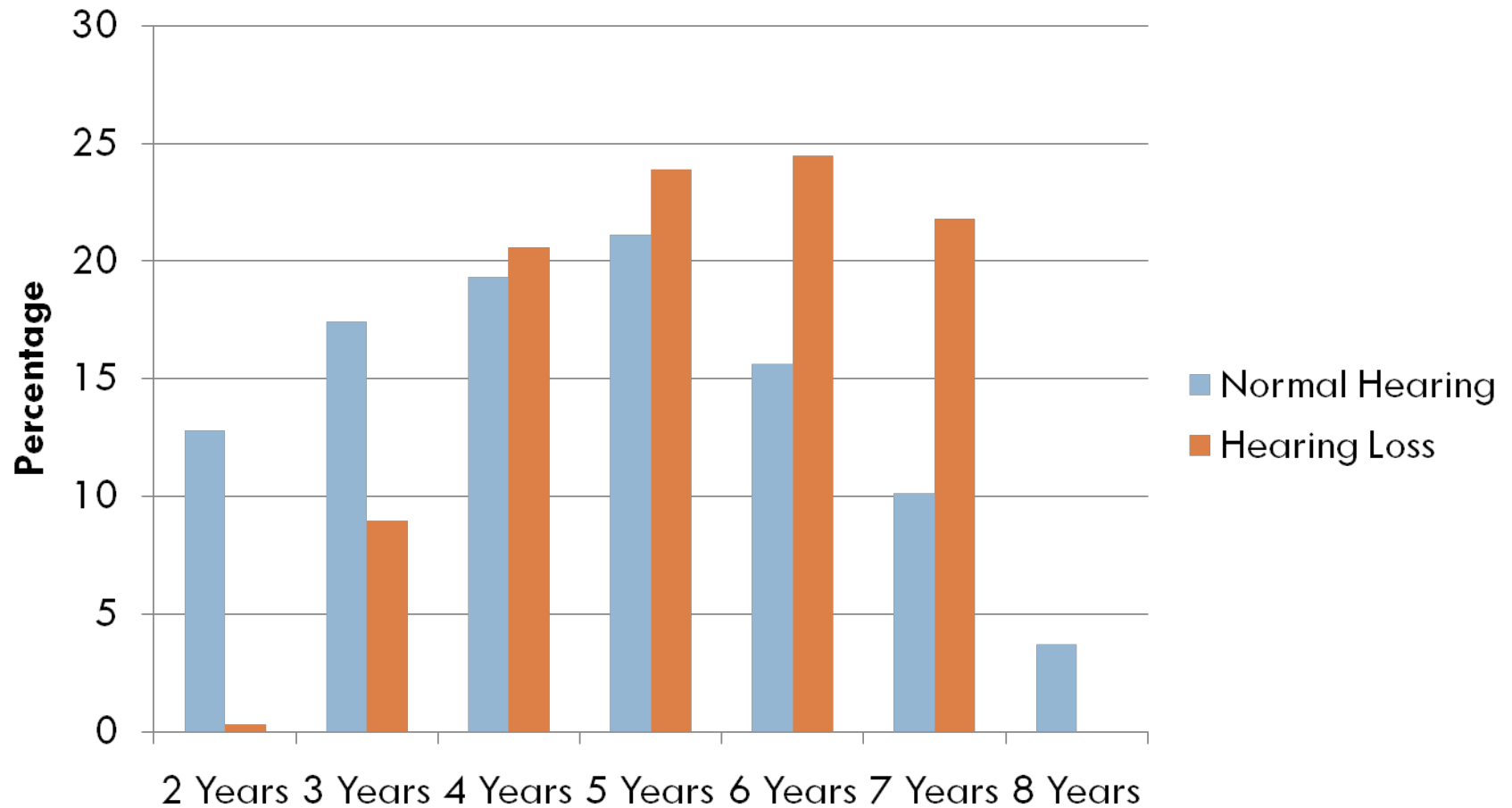
Demographics: Gender



Age

Years	Age Range (Months)
2 Years	1;6-2;5 years (18-29 months)
3 Years	2;6-3;5 years (30-41 months)
4 years	3;6-4;5 years (42-53 months)
5 years	4;6-5;5 years (54-65 months)
6 years	5;6-6;5 years (66-77 months)
7 years	6;6-7;5 years (78-89 months)
8 years	7;6 + years (90+ months)

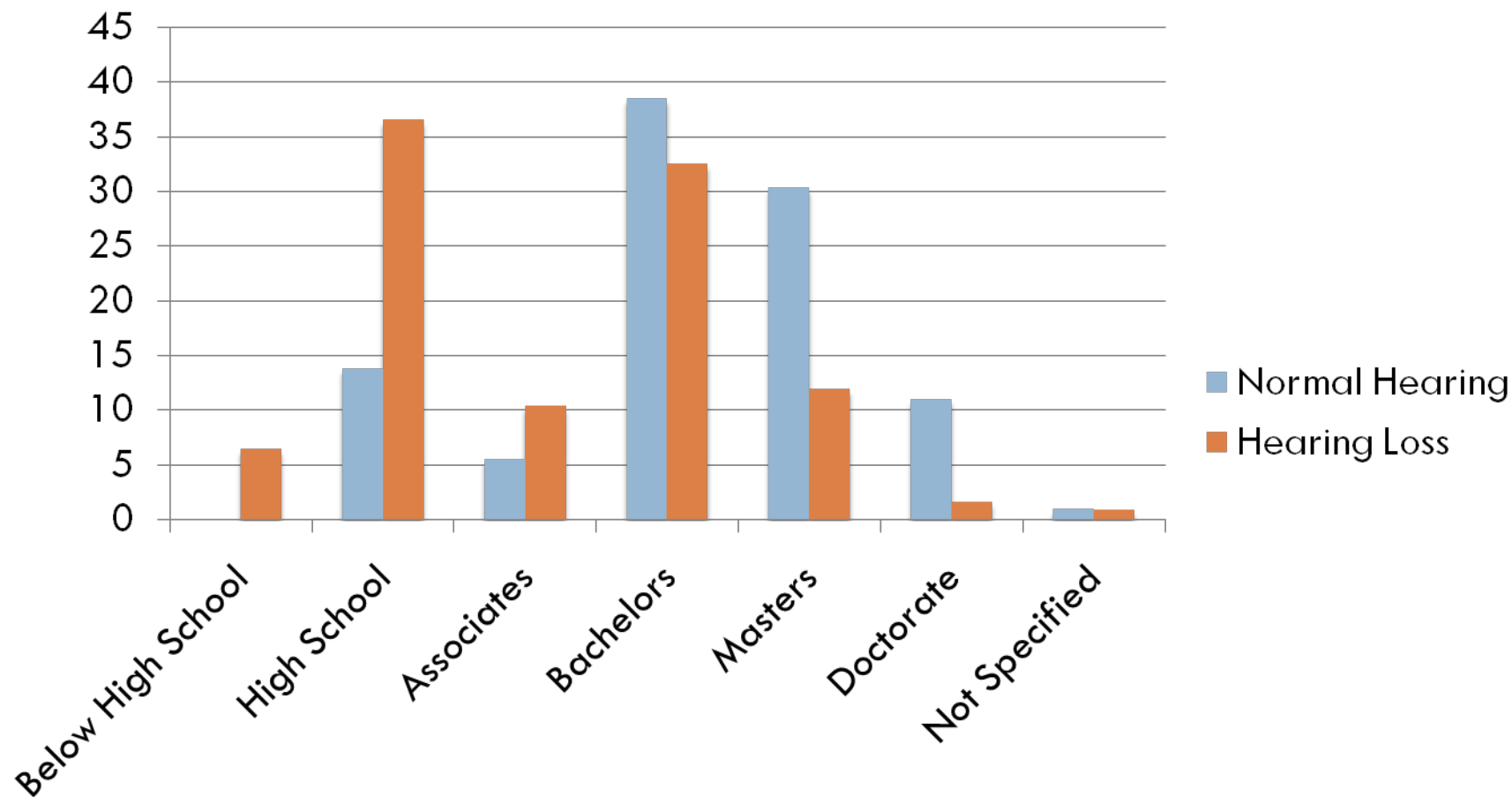
Demographics: Age



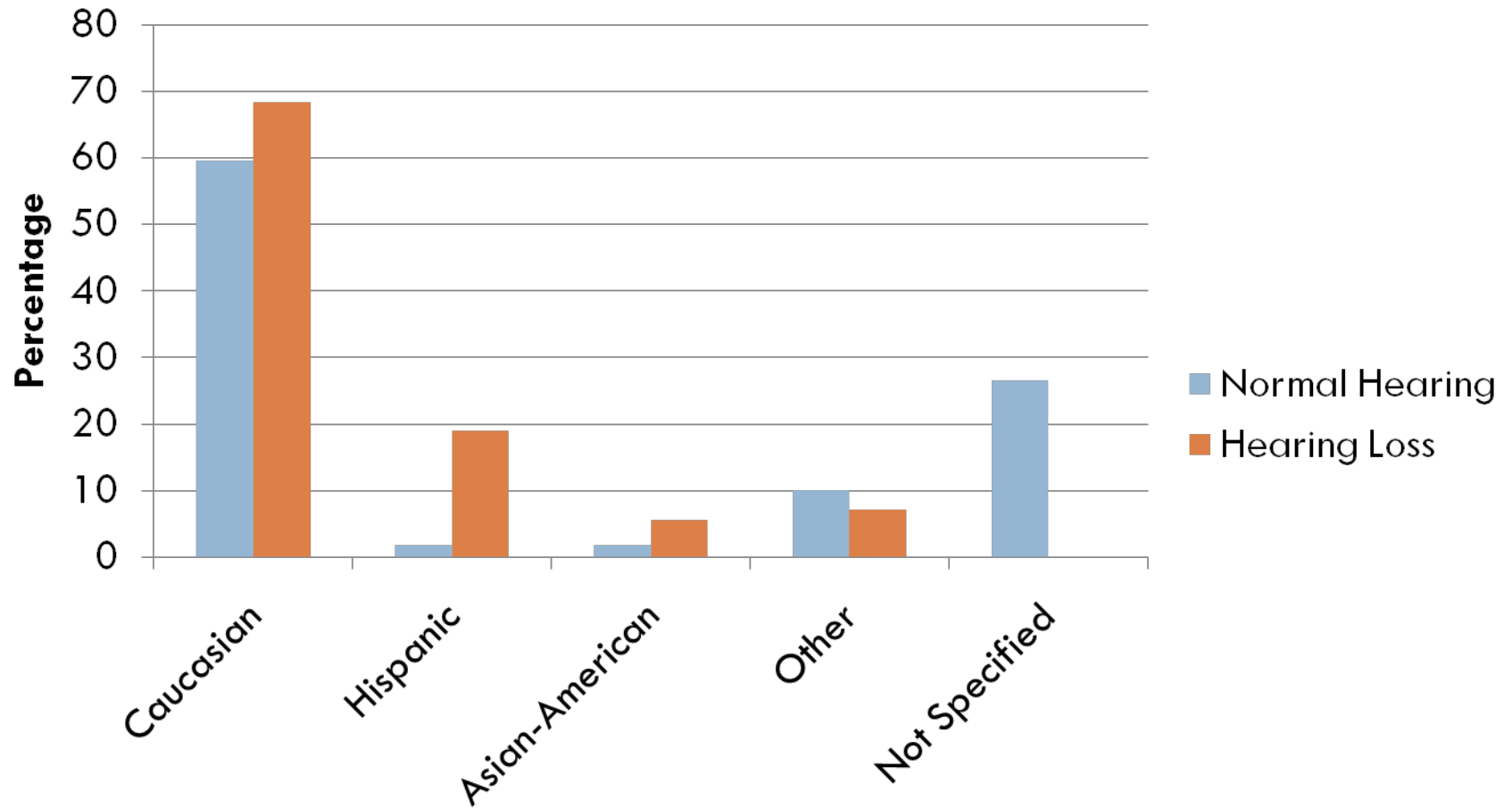


Demographics:

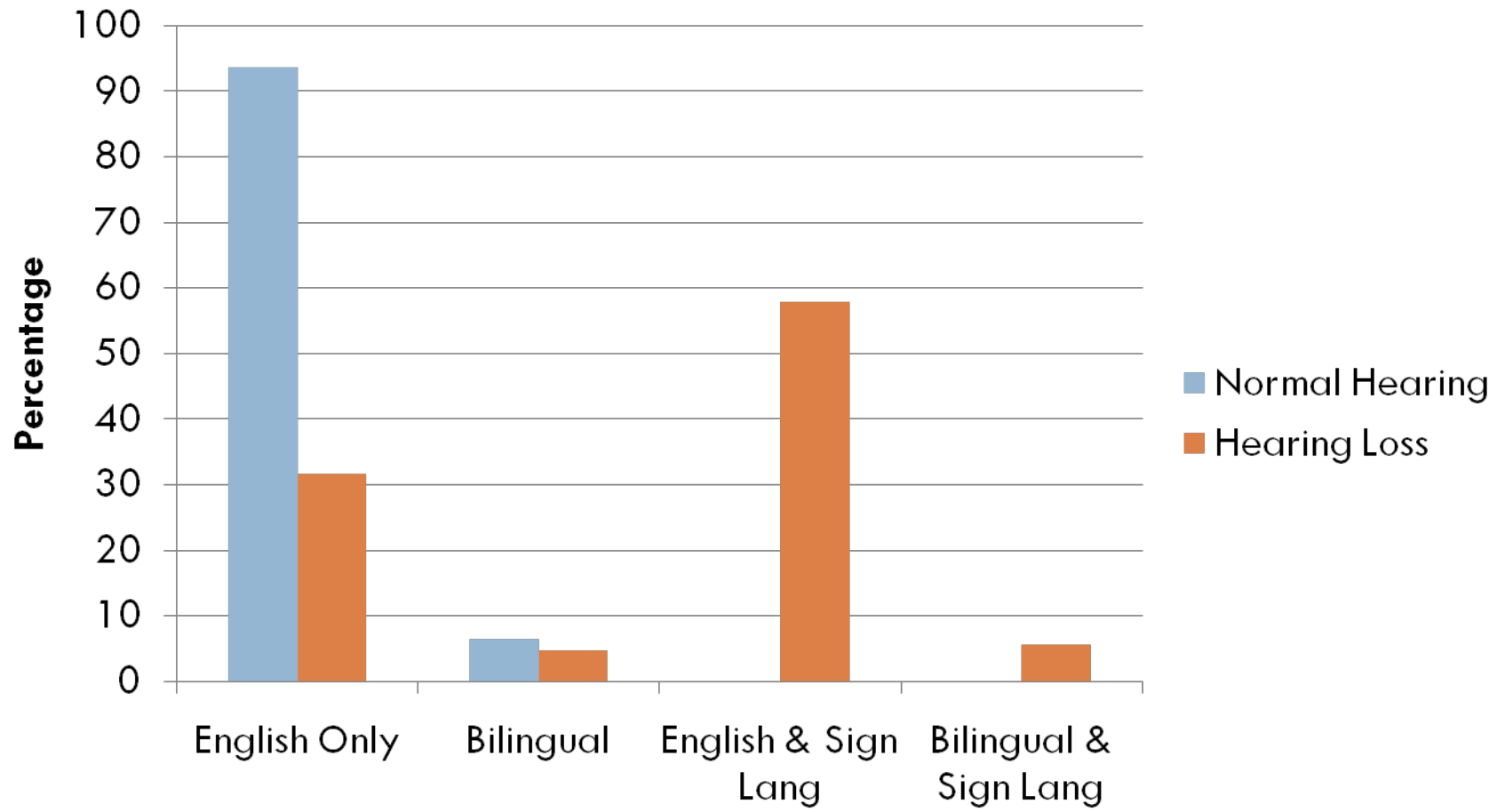
Maternal Level of Education



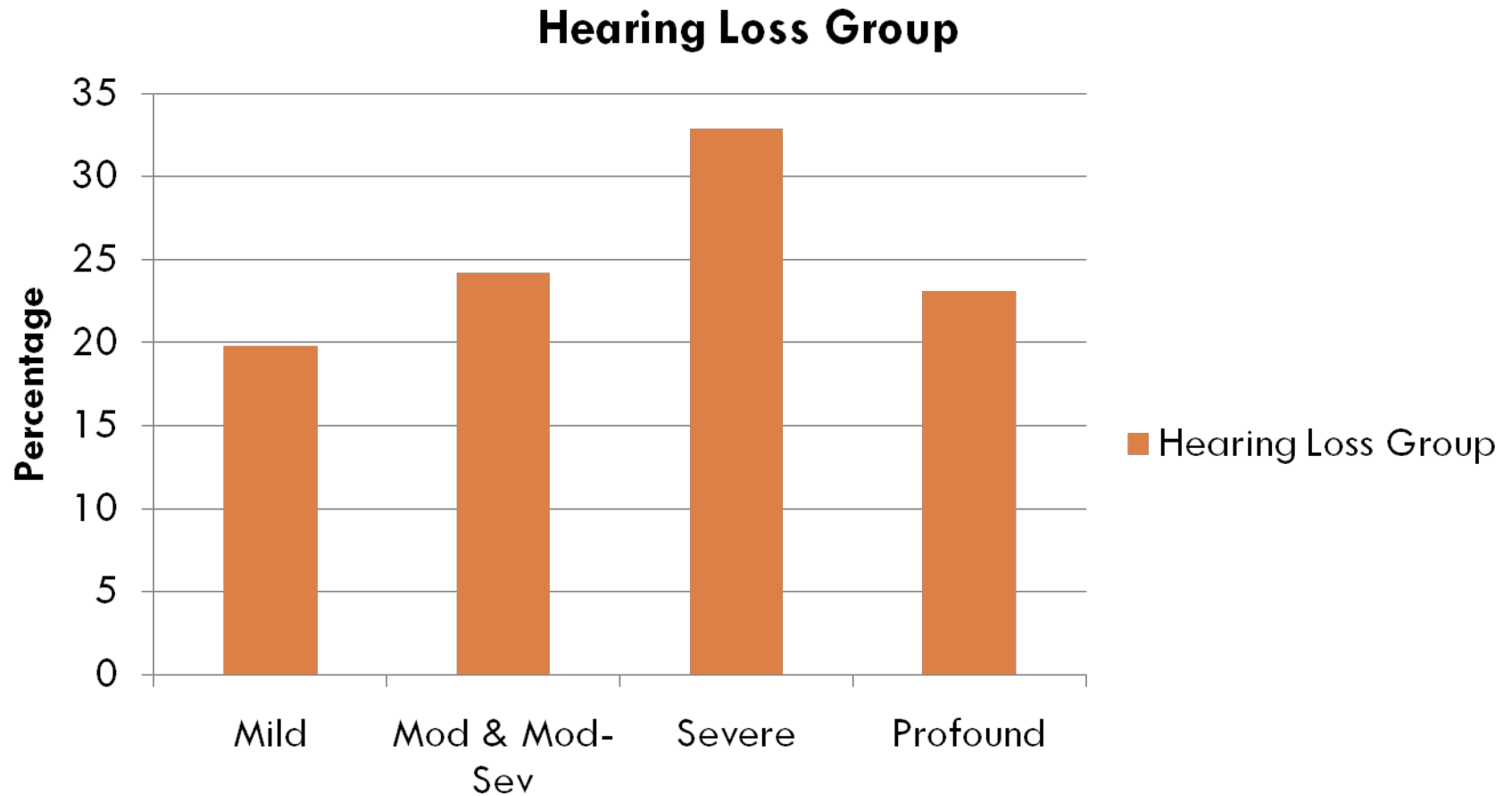
Demographics: Ethnicity



Demographics: Languages Spoken



Demographics: Degree of Hearing Loss



Mastery Criterion

- Children in age groups were determined to have “mastered” a skill with use of complex language when 75% of the children achieved the skill.



Children with Normal Hearing

- 44% (20 of 45) of the items were mastered using complex language by 3 years of age
- 95.5% (43 of 45) of the items were mastered by 4 years of age
- 98% by 5 years
- 100% by 6 years

Final Items to Master for NH group

- Provides information on request
 - ▣ Name, date of birth, address (2 of 3 items)
- Makes promises

Children with Hearing Loss



- 6.6% (3 of 45) of the items were mastered with complex language by six years of age
- 69% (31 of 45) of the items were mastered by 7 years of age

Earliest Items to Master (HL Group)

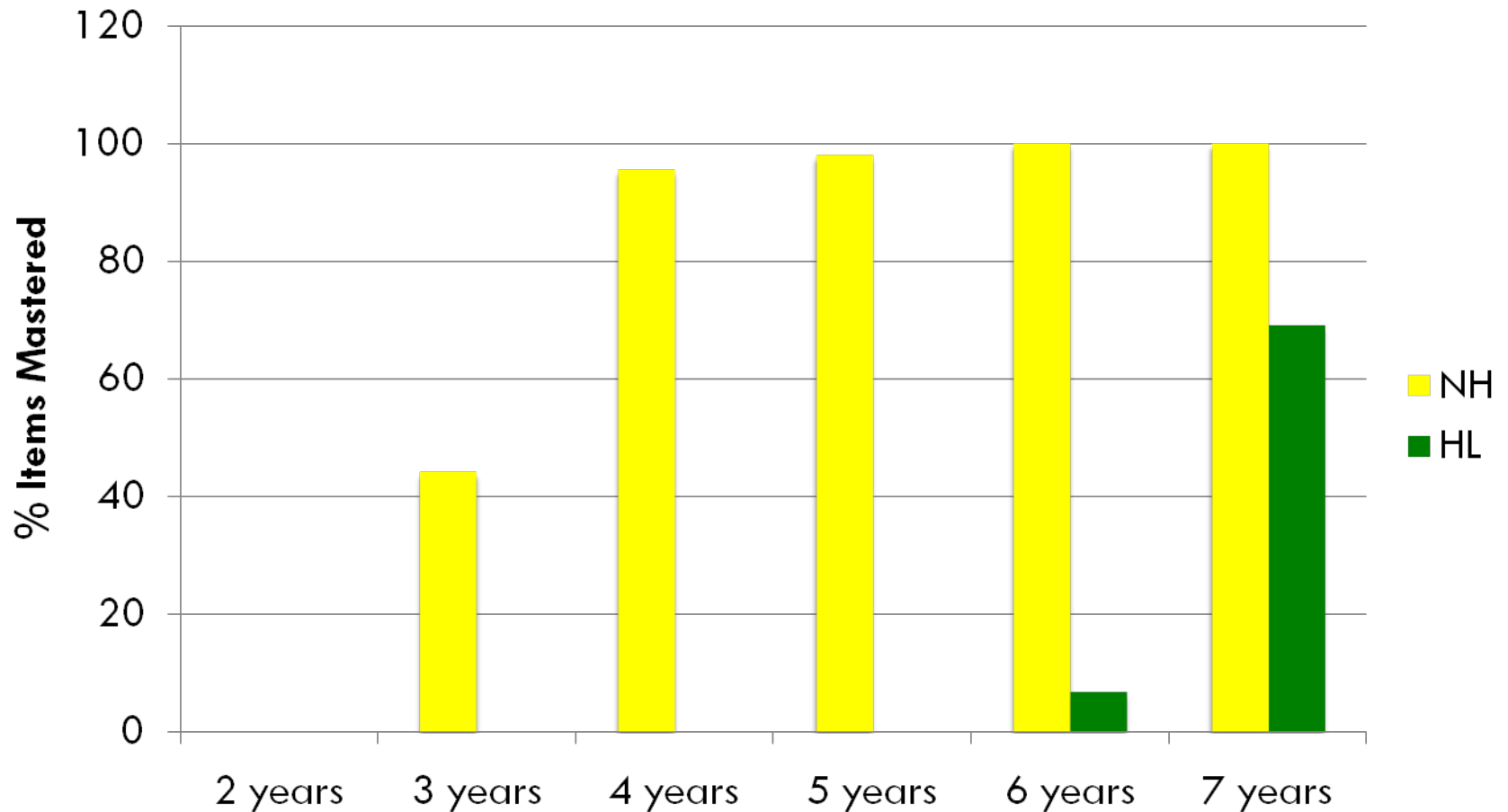


- Makes polite requests
 - ▣ Uses words: please, thank you.
- Expresses needs
- Role plays with props

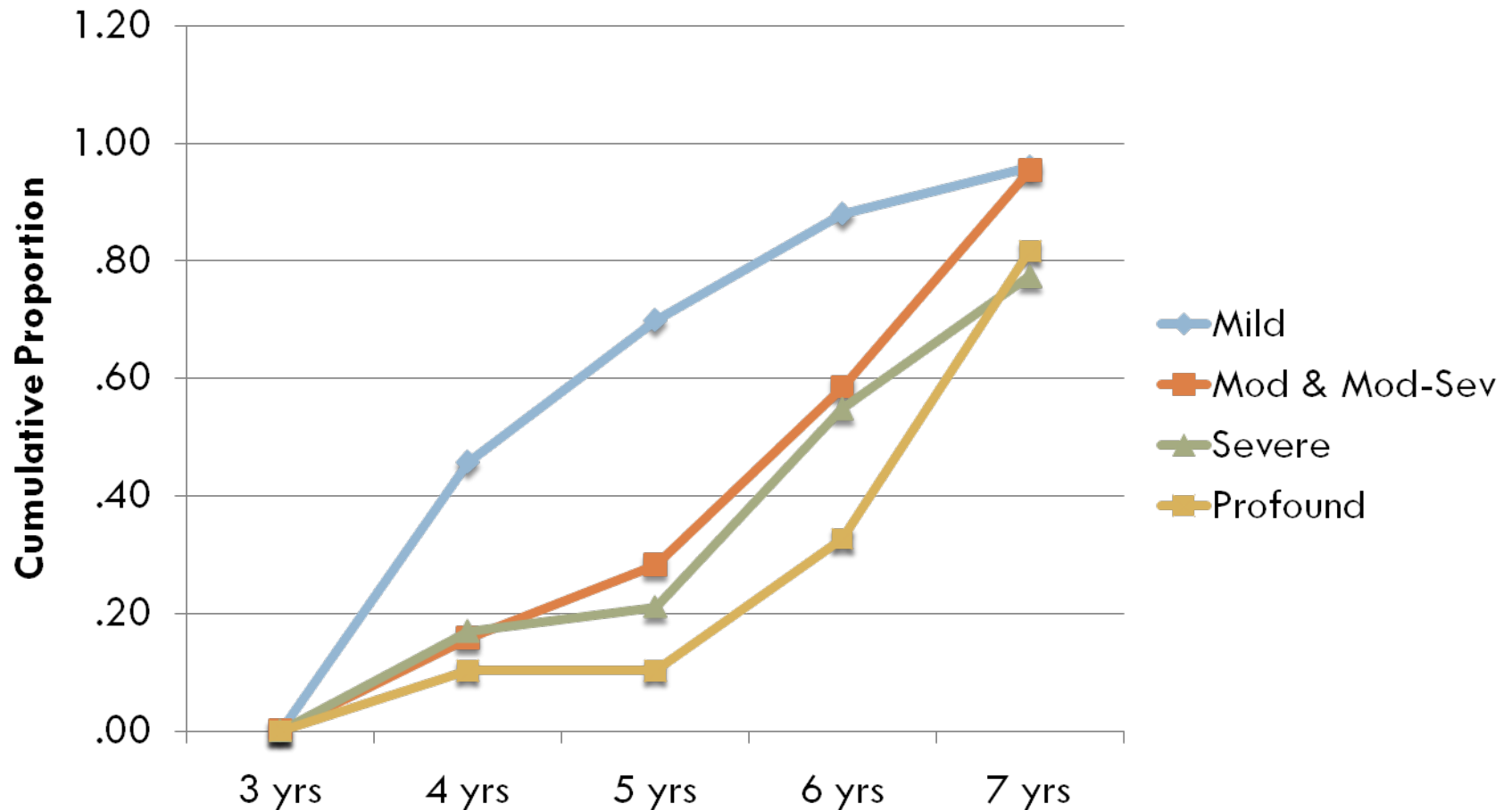
Items not Mastered by 7yrs (HL Group)

- 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

Percentage of Items Mastered by Age for NH and HL groups



The proportion achieving 50% or more of the items with complex language



Conclusion

- Children who are deaf or hard of hearing begin to master pragmatic skills at 6 years of age; 3-year-old peers with normal hearing have already mastered nearly half of the checklist skills.
- By age 7, children who are deaf or hard of hearing have mastered approximately 2/3 of the checklist skills; almost all of the skills are mastered by hearing children by age 4.

Future Directions

- ▣ Larger sample of normal hearing with better matched experimental and control groups
 - Maternal level of education
 - Age
- ▣ Need to support pragmatic skill development in children with hearing loss to reduce risk for socio-emotional deficits and victimization.

Pragmatics

- Children with hearing loss use a lot of resources to simply access information.
- Using language in a socially appropriate manner is the highest level of language functioning and the most difficult
- Most of our children require specific instruction in these issues

Strategies



- I don't understand
- I need more information
- I didn't get all of the information
- I can't remember what to do next
- Rehearsal strategies

Parents

- Don't forget about the parents
- Parents who have been in infant intervention programs are used to focusing on a specific target
- They are eager to know how they can supplement the educational goals

7 Pragmatic Categories

- Instrumental-Request for action/object
- Regulatory-Command
- Interactional-Social rules/poise/politeness
- Personal-Expression of Feelings
- Heuristic-Questions to obtain information
- Imaginative-Pretending
- Informative-Cause and effect, compare/contrast, evaluation

Relationship of Pragmatic Checklist to other language

- Relationships with Minnesota Child Development Inventory subtest ($r=.45$ to $r=.84$)
- MacArthur subscales, $r=.55$ - $r=.84$ (4 year level) (Relationship NS at 3 year level)
- Personal-Social subscale ($r=.49$ to $.81$) at four year level

Relationship of Pragmatic Checklist to other language

- Personal-Social had significant relationships to Instrumental ($r=.45$), Heuristic ($r=.59$) and Imaginative ($r=.58$) at the three year age level
- The relationship between personal-social skills and pragmatic language is stronger at 4 years than 3 years as is the relationship between pragmatics and vocabulary.

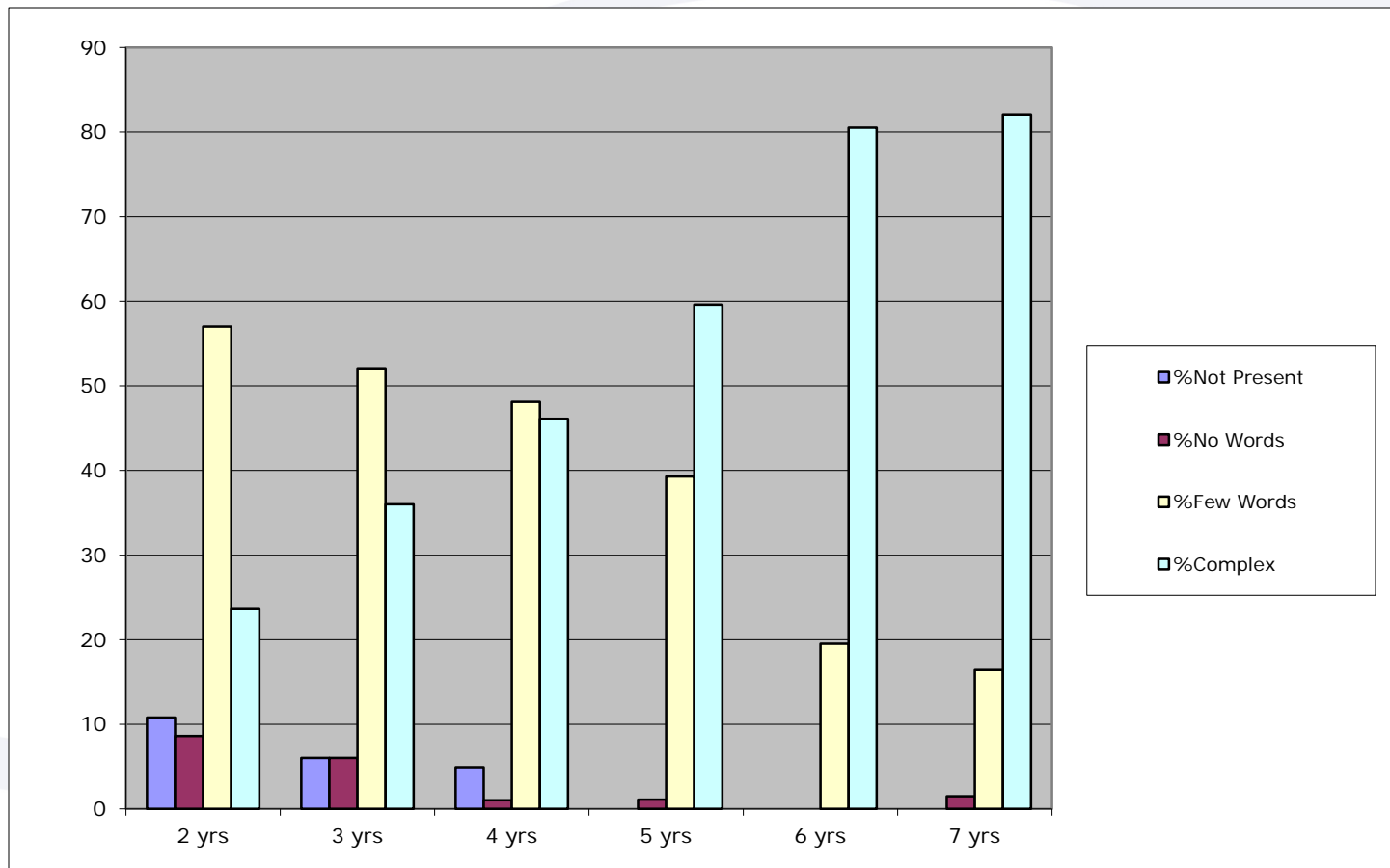
Study 2: Number of Participants

- Age 2: N=93
- Age 3: N=50
- Age 4: N=102
- Age 5: N=89
- Age 6: N=82
- Age 7: N=67
- Total: 483

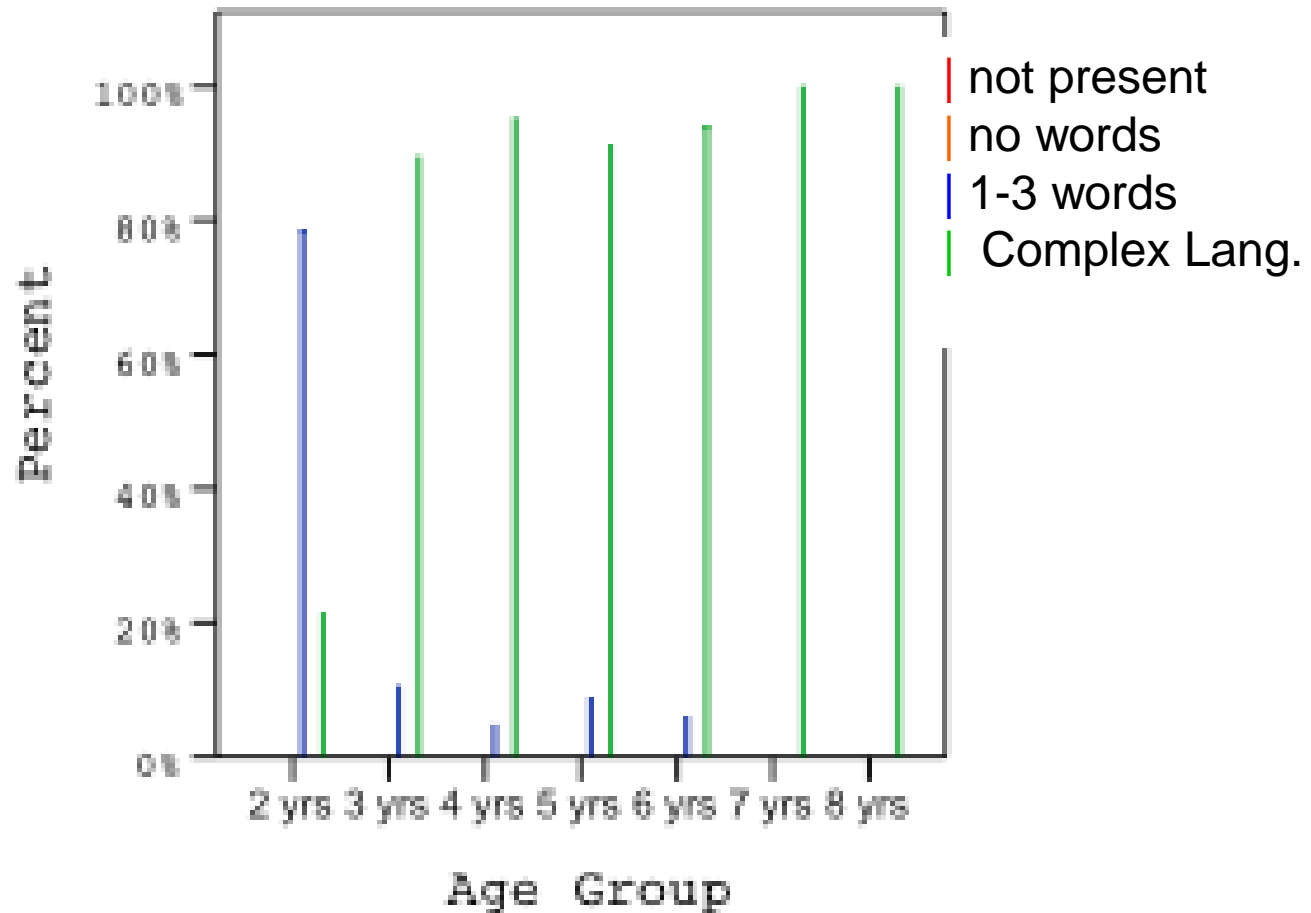
Instrumental

- “I want”
- Requests for objects or actions

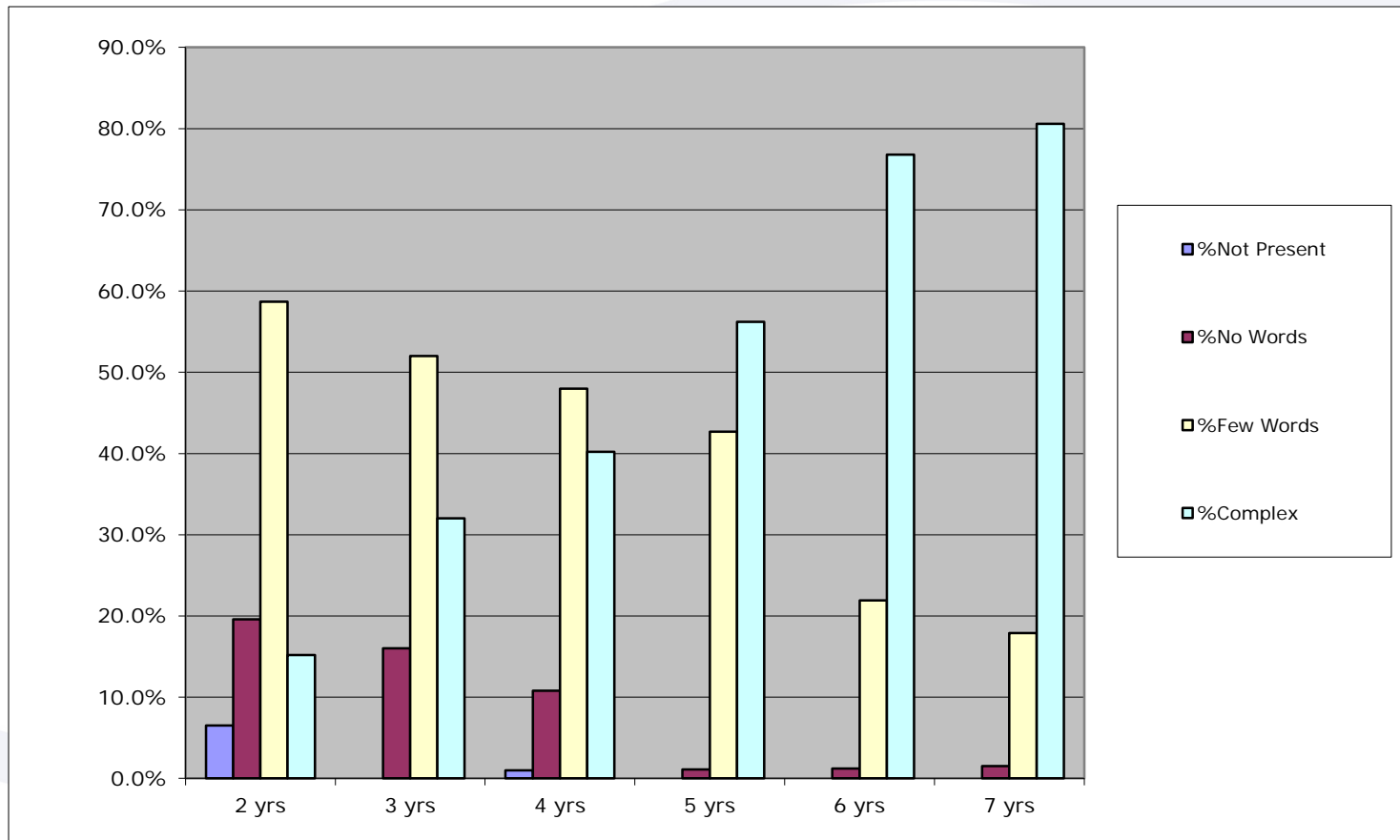
Makes Polite Requests



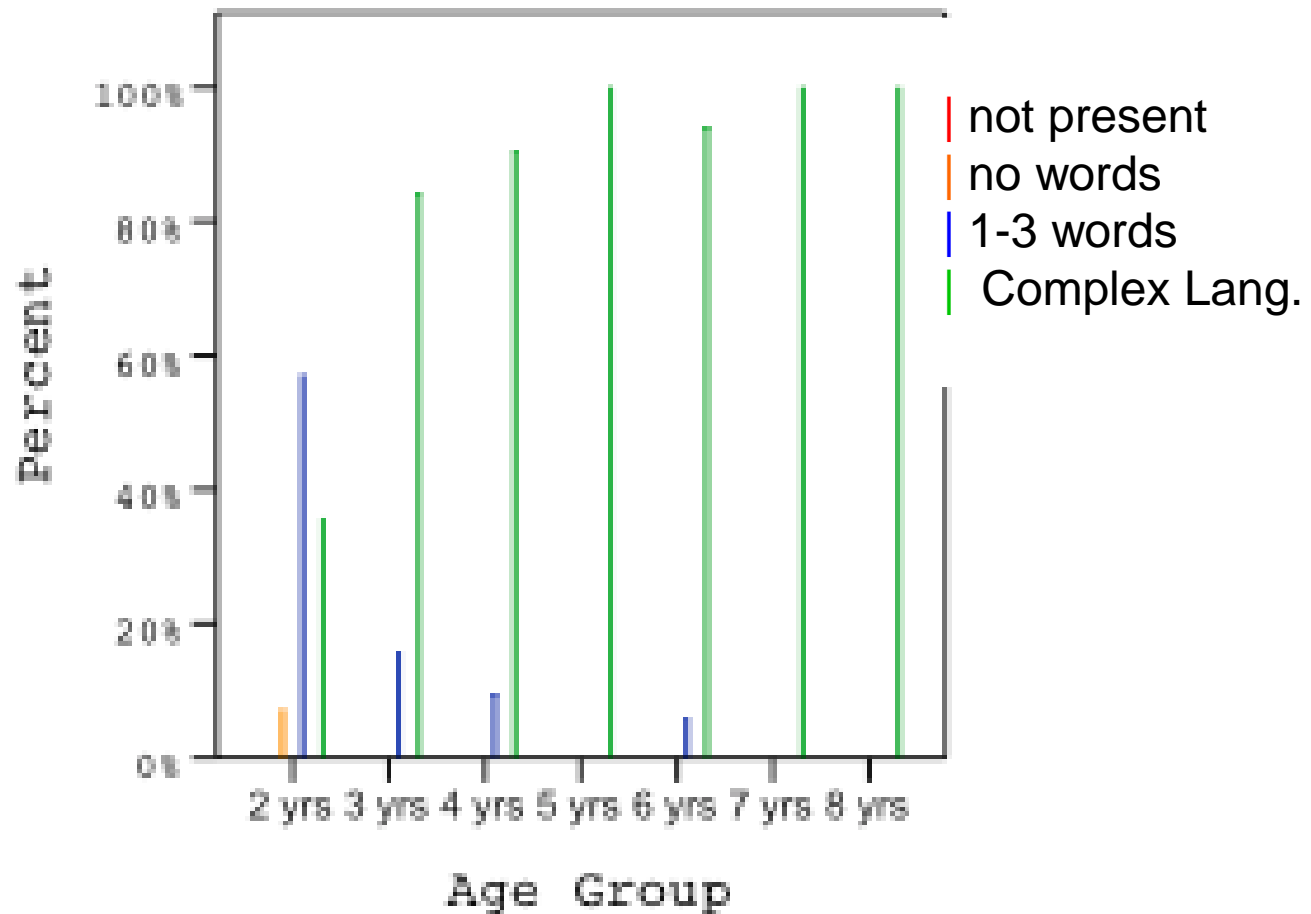
Makes Polite Requests- Hearing



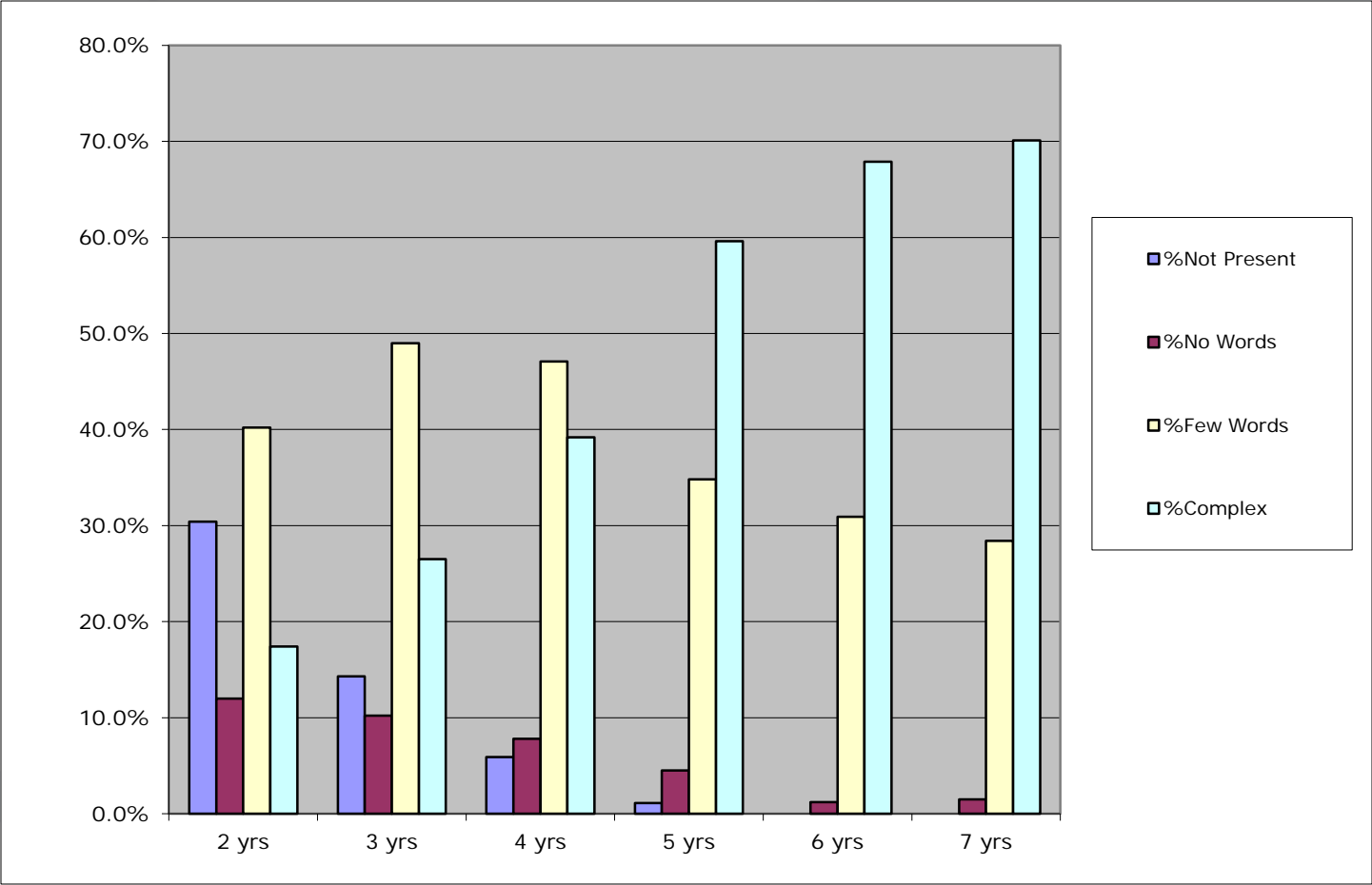
Makes Choices



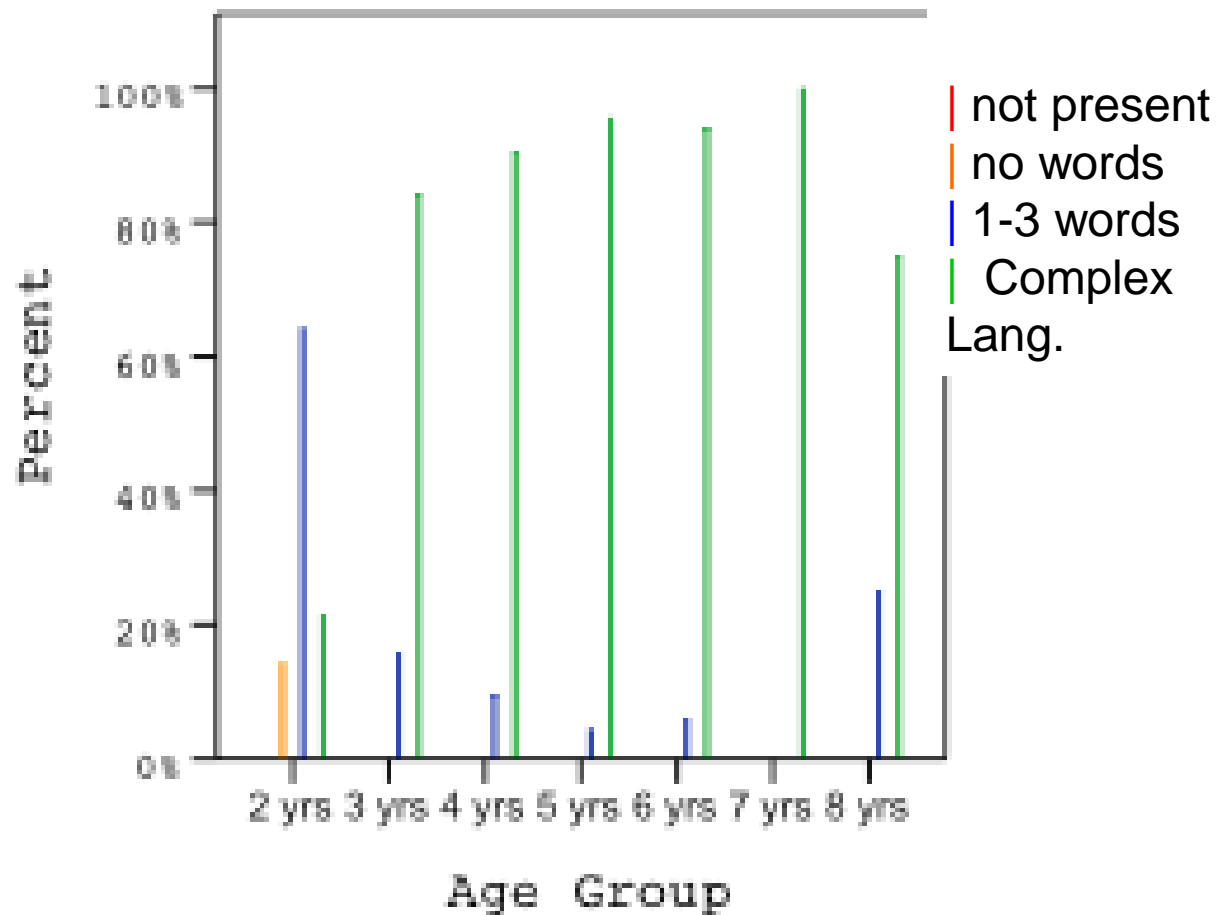
Makes Choices- Hearing



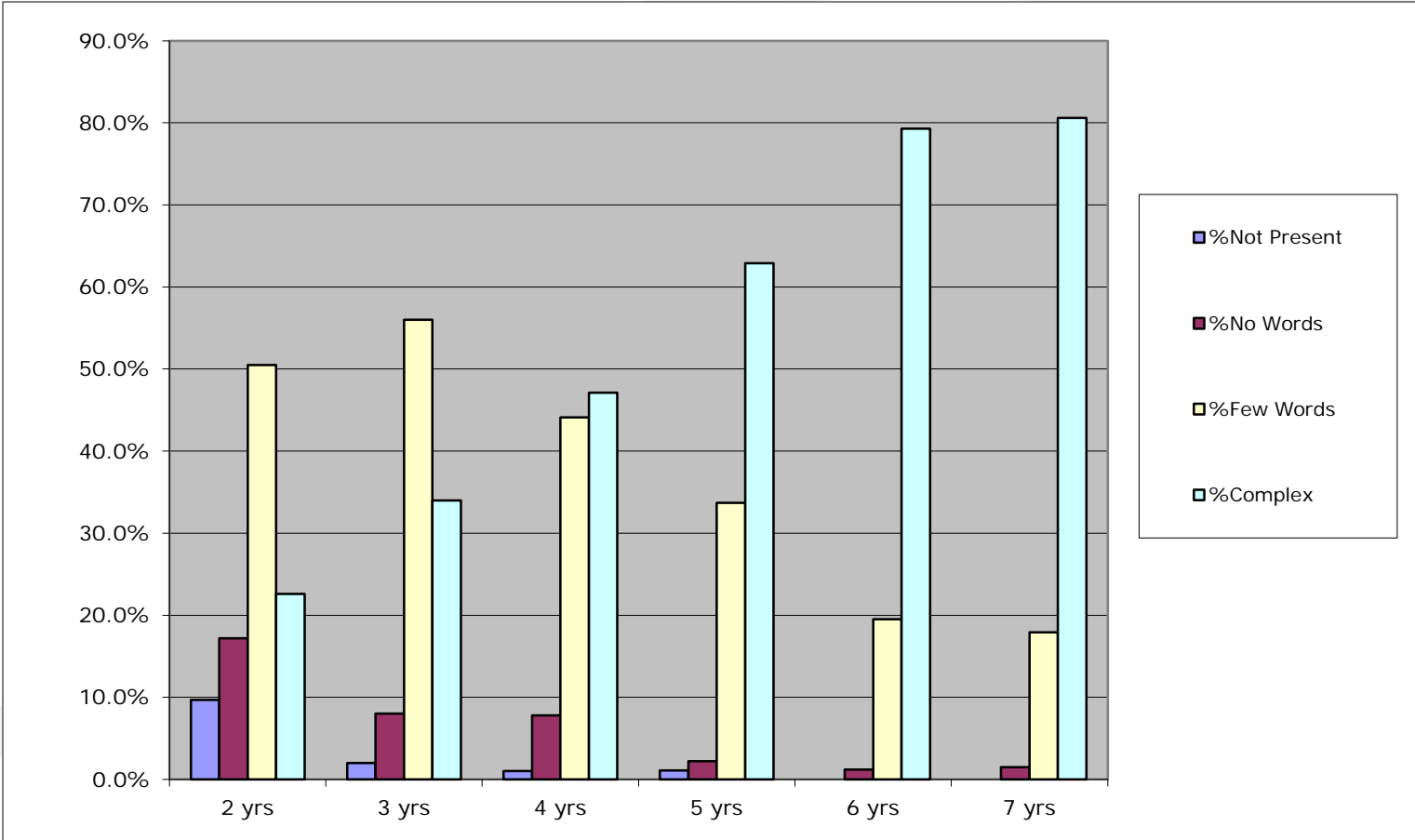
Description of Objects



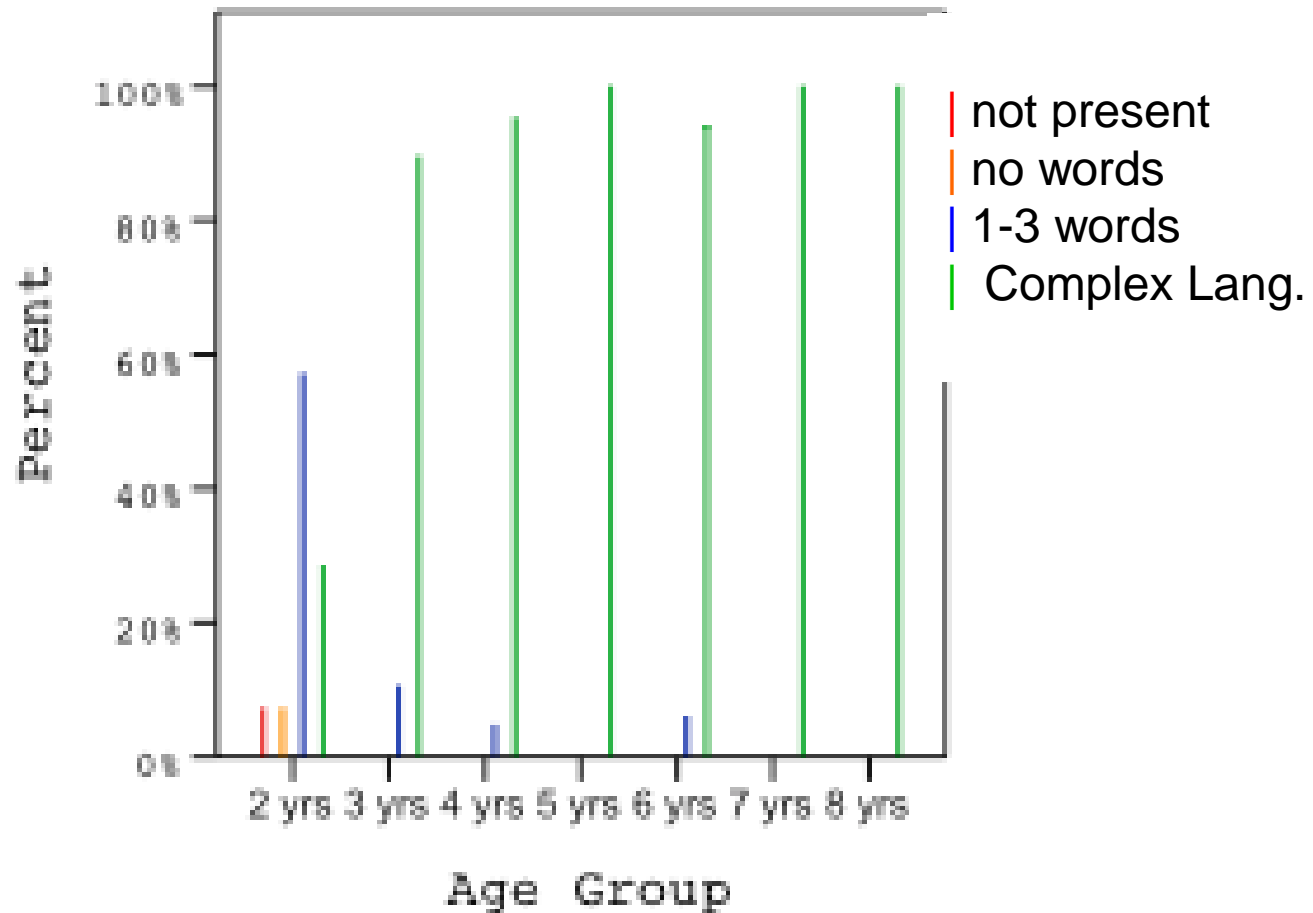
Description of Object - Hearing



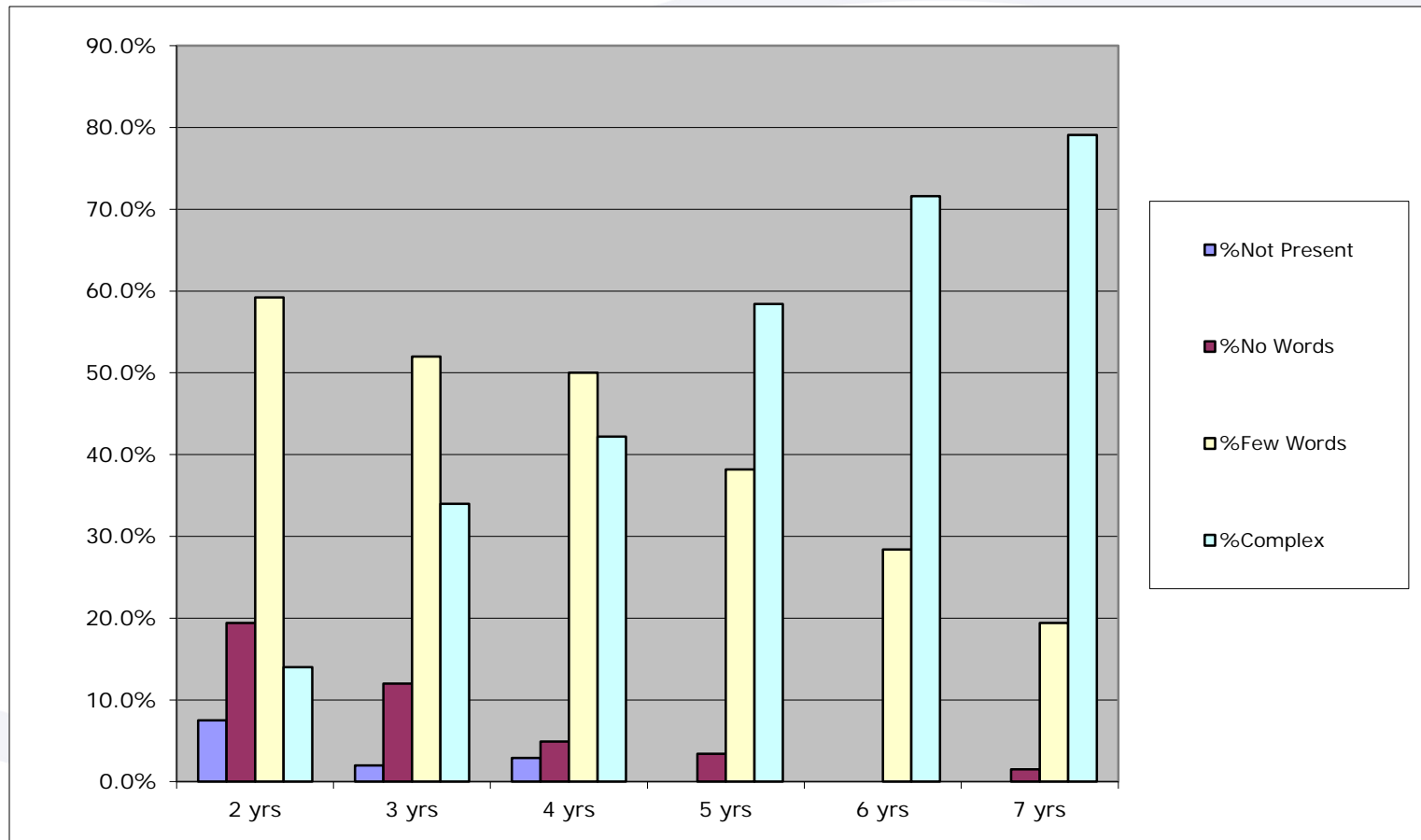
Expresses Specific Need



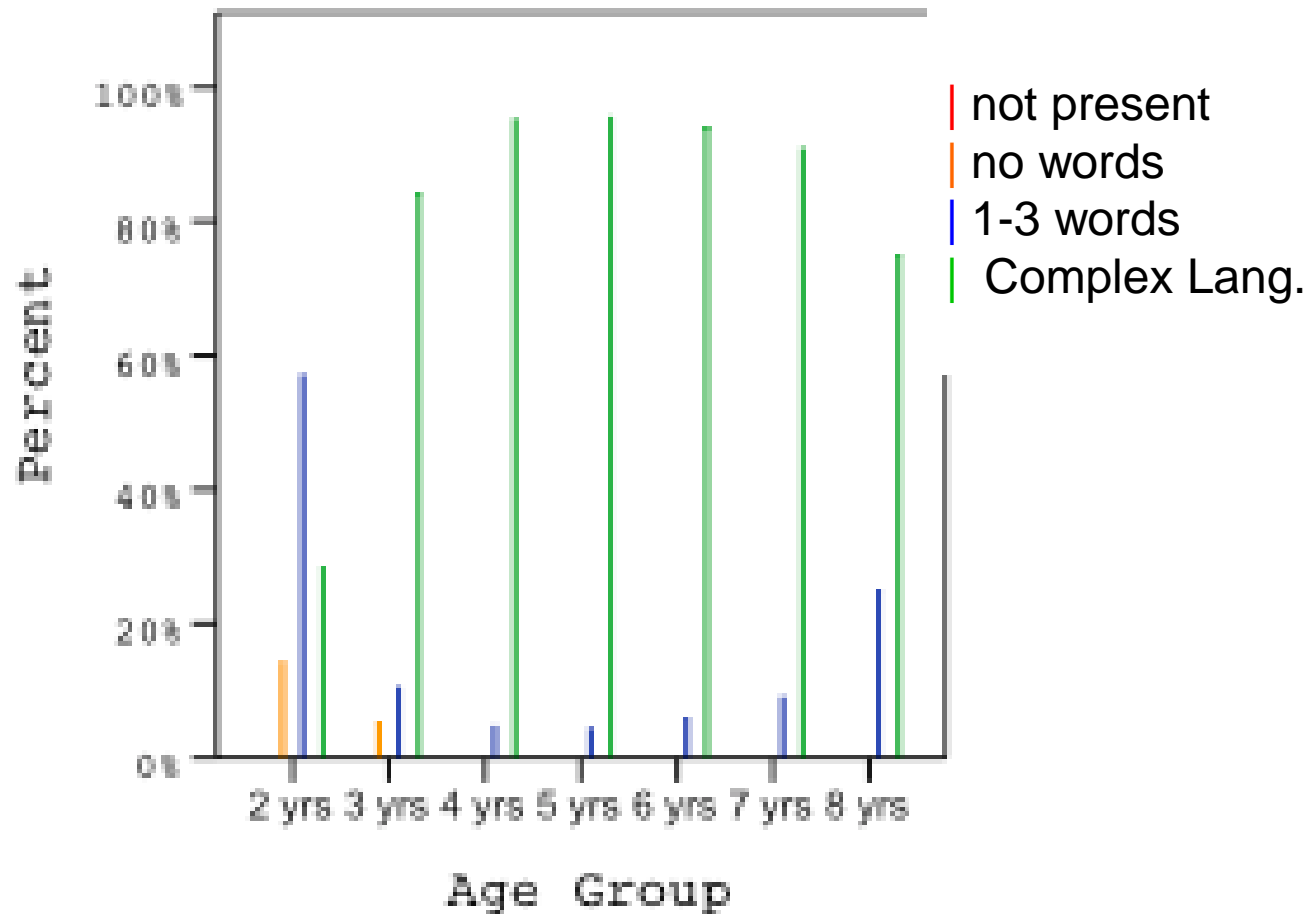
Expresses Specific Need - Hearing



Requests Help



Request help - Hearing



Regulatory

- “Do as I tell you..”
- polite commands
- giving directions

Arrangement of objects

- Manipulating Objects – Games that require arrangement of objects in a specific sequence
- Spatial: above, under, inside

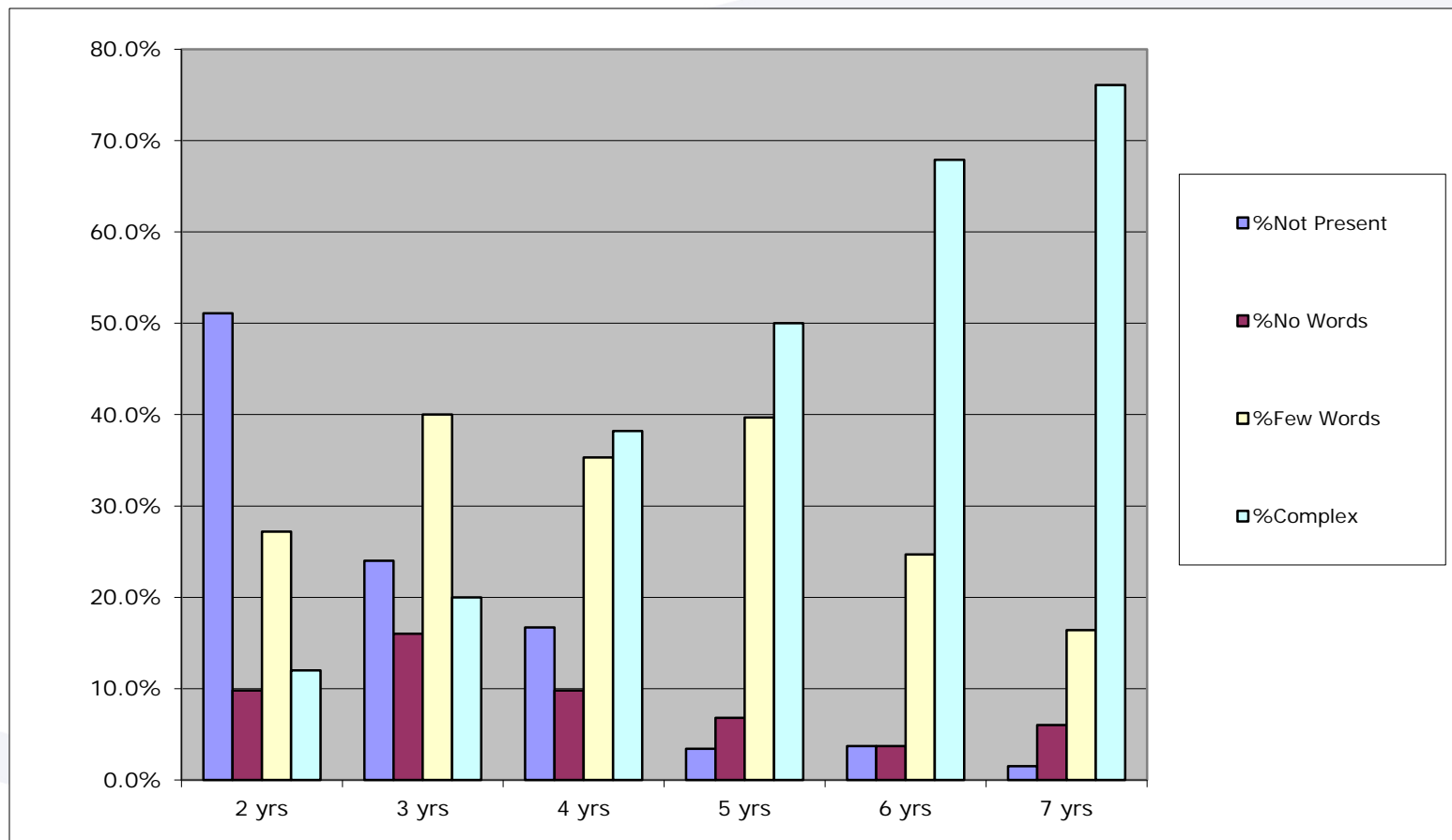
Gives Directions

- Go get your shoes
- Put the shoes on
- Open the door
- Go to the car
- Open the car door
- Get in the car

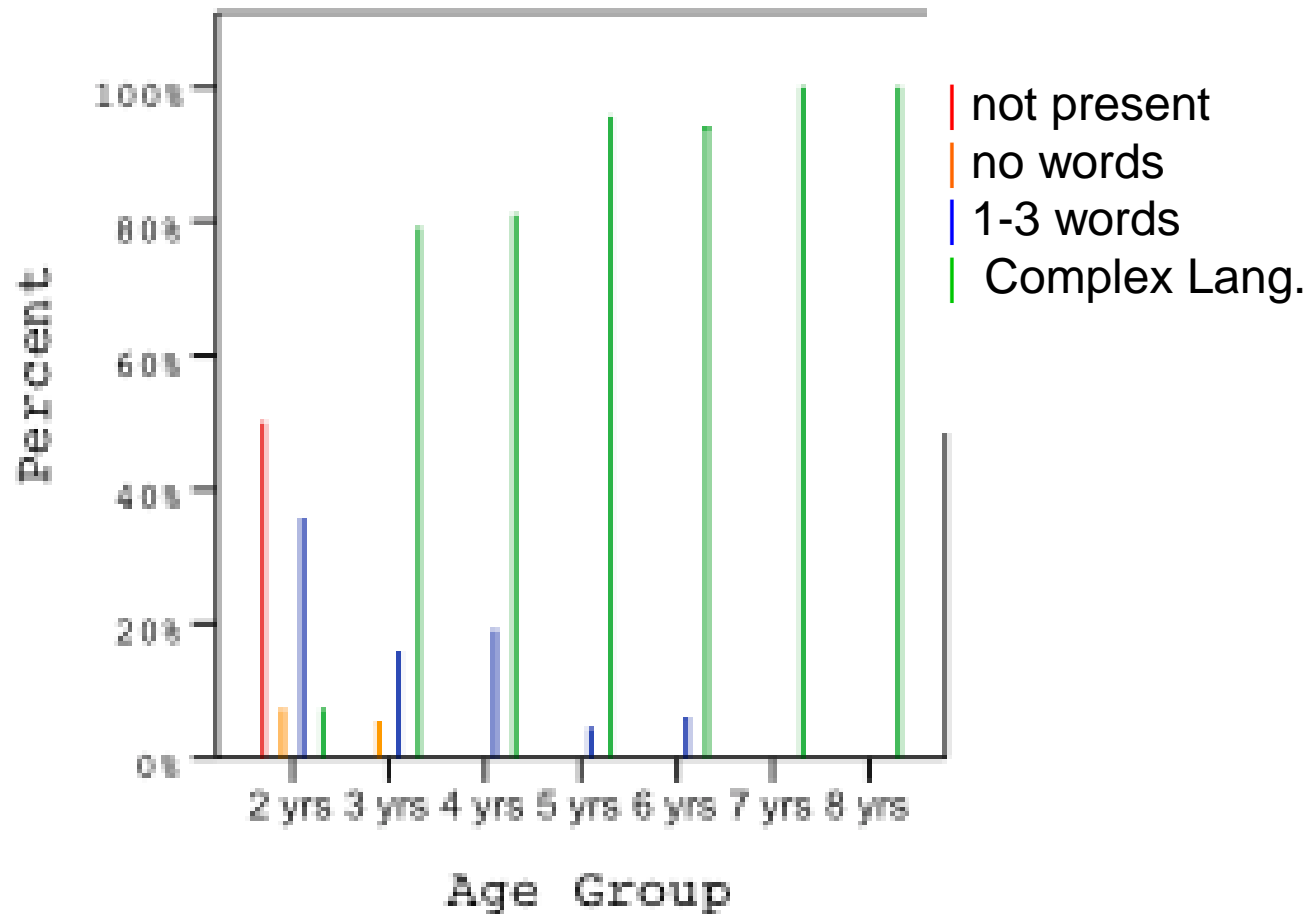
Gives Directions

- To play a game
- To make something
 - ▣ Cooking activity
 - ▣ Steps are listed
 - ▣ Pictures to represent
 - ▣ Left to right – Chart that says: here's what it is
 - ▣ Cross out each step as you do it
 - ▣ Put it back in the right sequence – after they actually have the experience

Gives directions to make something



Directions to make object - Hearing



Making something

- Explaining how to make something
- Can the child explain things enough for someone else to make it
 - ▣ A picture
 - ▣ A snowman
 - ▣ A peanut butter and jelly sandwich
 - ▣ An arts and crafts activity

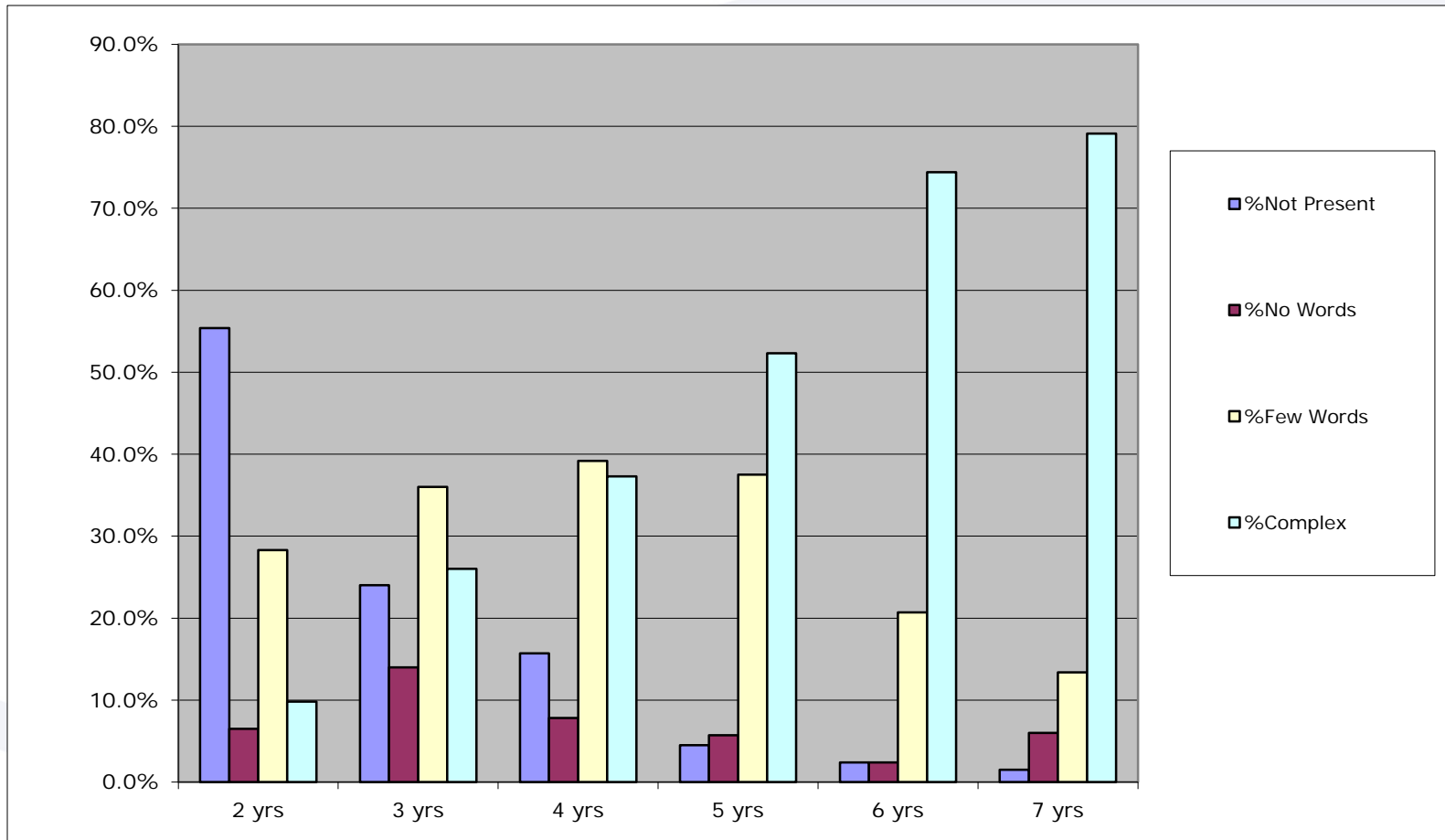
Directions to make something

- Kids tell what to do next
- Plan to do something but students need to show another student how to do something in sequence – easier to do with art project
- Visual Schedule – then have them tell what the schedule will be today

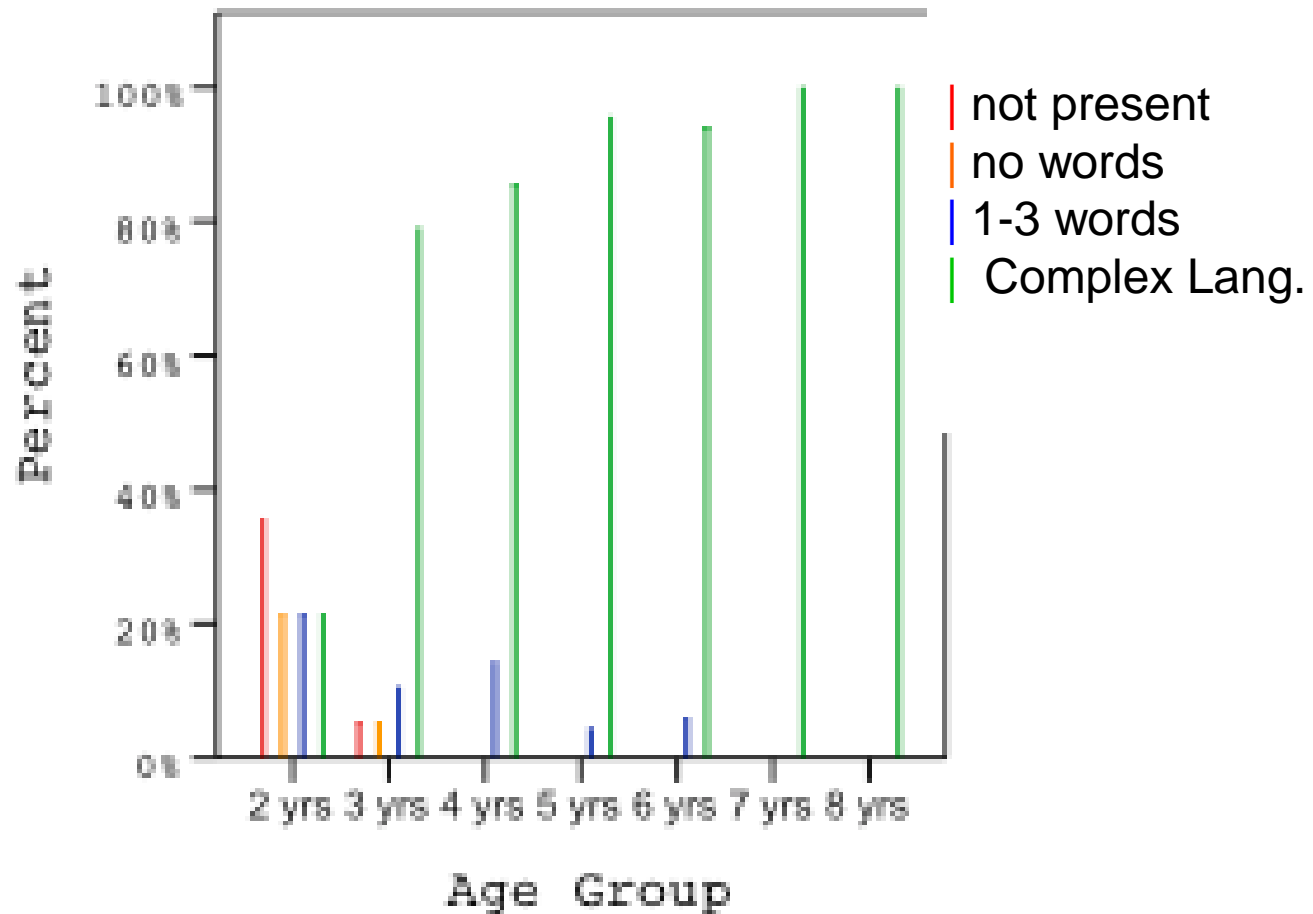
Sequential Activities-Making Something

- Making peanut butter and jelly sandwiches
 - Child: Peanut butter
 - Do I put it in my hand? Where's the bread?
- Cooking activities
 - Peeling the banana before cutting
 - Dip in Chocolate
 - Roll in Nuts
 - Freeze

Gives directions to play games



Gives directions to play a game - Hearing



Learning a game

- Duck duck goose
- Everyone sits in a circle
- Chosen child walks around the outside of the circle.
- Child taps each child and says “duck”, “duck”, “duck”
- Child must choose a child to be “goose”
- Child must think about the choice and not tell – it’s a secret. What’s a secret?

Directions to play a game

- Duck Duck Goose or Concentration
- Start out with a chart
- Kids take turns explaining how to play the game.
- Scaffold with questions:
 - ▣ What's first
 - ▣ What's second
 - ▣ What's next

Missing information

- Child description: Tap, Tap, Tap (not enough information for Duck Duck Goose)
- Thinking Process – Hmmmm
- Who do I want to pick? It 's a secret. Don't tell
- Need more information –
 - ▣ Who?
 - Eye Contact

Missing Information

- Absurdity –Duck Duck Goose – Need to pick a person not an object
 - ▣ Tap, Tap, Tap, Table
 - ▣ Tap, Tap, Tap, Person
- Excellent opportunity for parent activities in the home (Concentration, Candyland, Card games, Tag)
- Other preschool games
 - ▣ Doggy Doggy Where's Your Bone – Someone stole it from my home? Do you have my bone? (ask 3 kids)

Cueing differs by degree of hearing loss

- **Profound hearing loss**
 - **Pictures**
 - **Drawings**
 - **Written**
- **Mild to Severe hearing loss**
 - **Picture relationship**
 - **Pre-literacy vocal/verbal**
 - **Written**

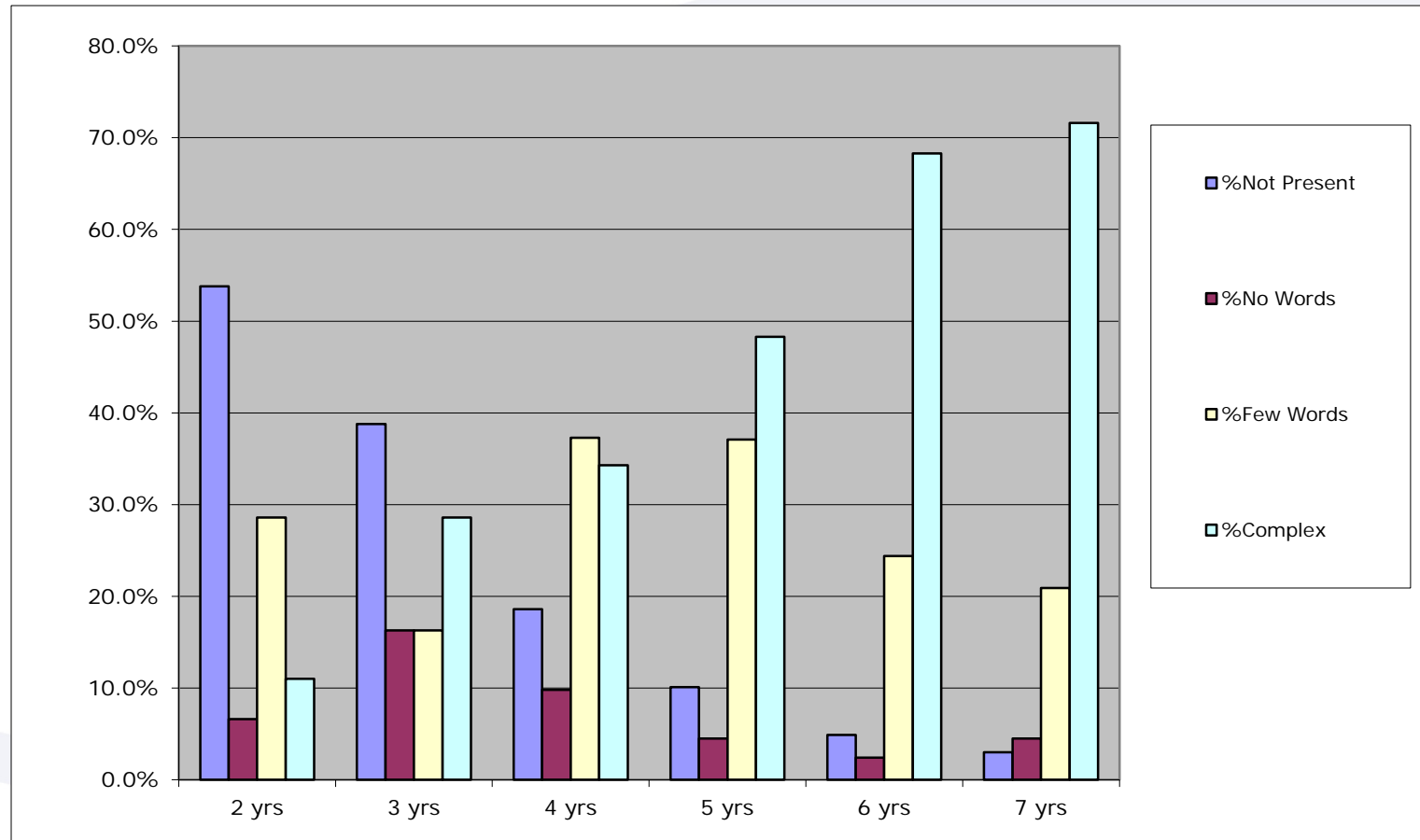
Telling another child how to play a game

- A board game
- A card game
- A game with a ball
- A simple game – like duck duck goose
- A game with teams

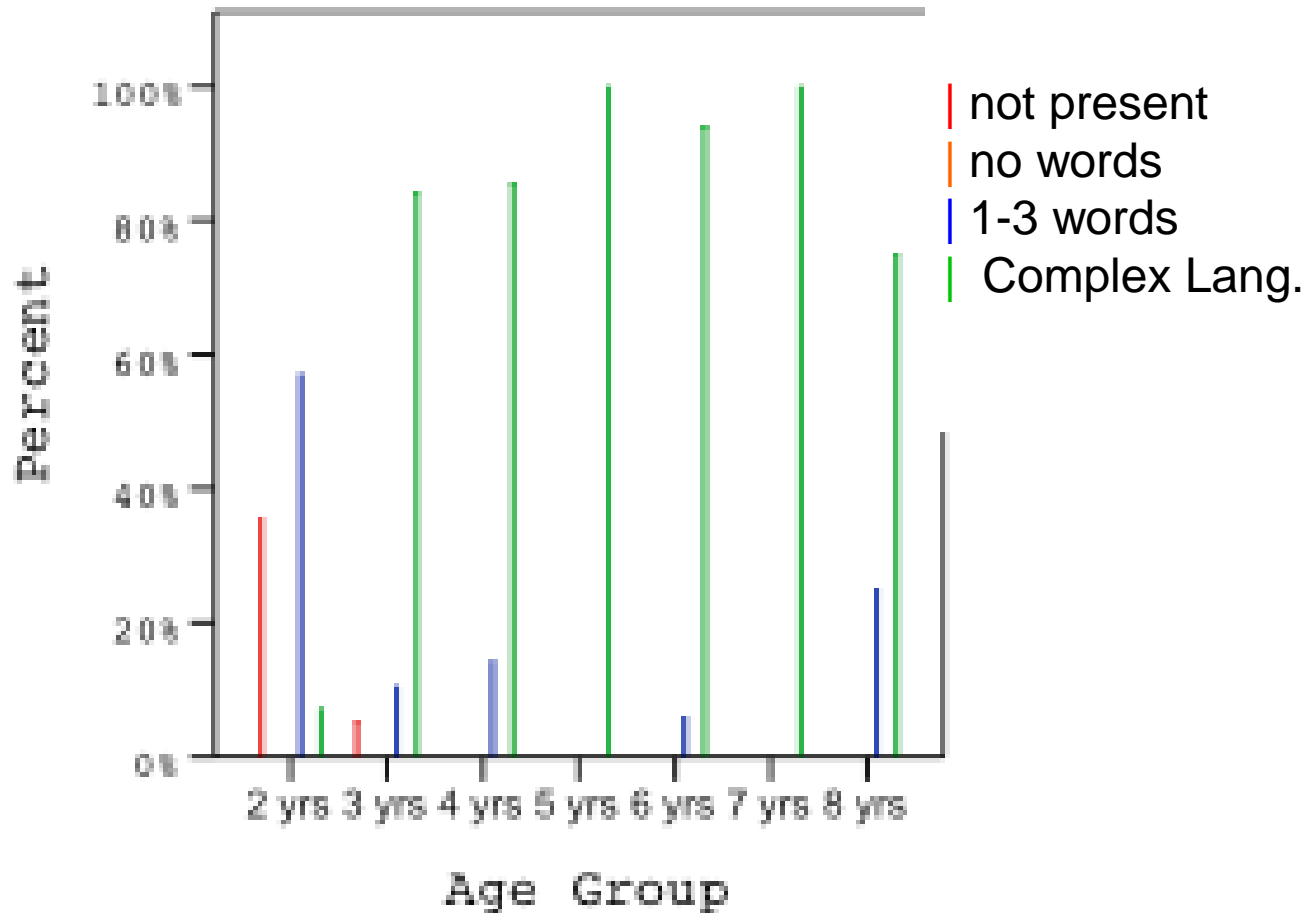
Scaffolding

- Redundancy – Repetition
- Letting them make mistakes – if it isn't in order – they can't finish it- projects need to require an order

Changes Style of Commands



Changes Style of Commands - Hearing



Interactional

- “me and you...”
- conversational strategies

Contrasts – Body Switching, Perspective Taking - Options

- Why questions
- How did it make them feel
- Options: Does it make you feel angry?
- Does it make you feel sad?
- Does it make you feel disappointed?
- Why is he upset? Are his feelings hurt?
- Which is better – grab it or
- Perspective taking – If I take it from you – how do you feel

Choices - Consequences

- What are the choices?
- What are the consequences?
- Children with highest language levels – learn verbal mediation skills
- Children with lower language levels – pantomime and pictures

Transition from infant/toddler to preschool

- Children demonstrate initiation of topic with parent about here and now
- Transition to social situations
 - ▣ Compete with other children
 - ▣ Turn-take with the teacher and with other children
 - ▣ Personality probably plays

Notebooks that go back and forth

- Telling things that happen at home
- Telling things that happen at school
- Sharing knowledge between parents and teacher
- If child doesn't initiate the topic for discussion, teacher can question.
- Students can share in a "Show and Tell"
- Can bring an object

Pictures to elicit elaboration

- McDonalds, Kentucky Fried Chicken
- Supermarket
- Gas Station
- Mall
- We went shopping

Problems

- Interruptions
- Changing Topics
- Reminder: What's the Topic
- Keep that idea in mind
 - ▣ Not Yet
 - ▣ Later
 - ▣ When's a better time to tell me
- Semantics and Syntax is at age level
- Frequently have topic shifts

Problems maintaining topic

- Tell me at least three things about playing outside last night.
- What kinds of things would I see
- What kinds of things would I hear
- Can you picture that in your head
- In a restaurant
- At the store

Predictions – Stories

- On the Farm
- What would we expect to see
- Absurdities
- Is it real or is it made up
- True or False
- Imagination – pretend or real

Conversational Turn

- Eye Contact
- Signing and Speaking behind someone's back is usually not productive
- Children get confused, because adults sometimes talk when they are behind the child

Interactive Conversations

- Too much imitation
- Rote memorized knowledge
- Therapized
- Transitions to spontaneous conversations
- My turn
- Now its your turn
- Block passed between partners

Mark when child needs to respond

- Facial and Body language exaggerated
- You are expected to take a turn
- What did you do?
- Underlying piece – Can make choices
- Do you want this or do you want this?

Relevant Answers to Questions

- More than just a response
- Response has to be relevant
- Imitation is not a response to a question
- Modeling both correct and incorrect or absurd responses

Revision of unclear message

- Identify that the message was unclear to conversational partner
- If they identify miscommunication – then you can supply options
- Model – unclear messages
 - Boat
 - 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?

Alternative points of view

- I like this book
- You don't like this book
- He hates this book
- Why did you like this book – what was your favorite part
- What was my favorite part
- You don't have to copy mine

What is the other person thinking

- Understanding what is in the mind of the other person
 - Theory of mind activities
 - When you see something happen – but you don't see the whole thing and something else changes
 - You put something somewhere but while you are not looking – someone moves it
 - One child sees it being moved
 - Where does the first child think the object is?

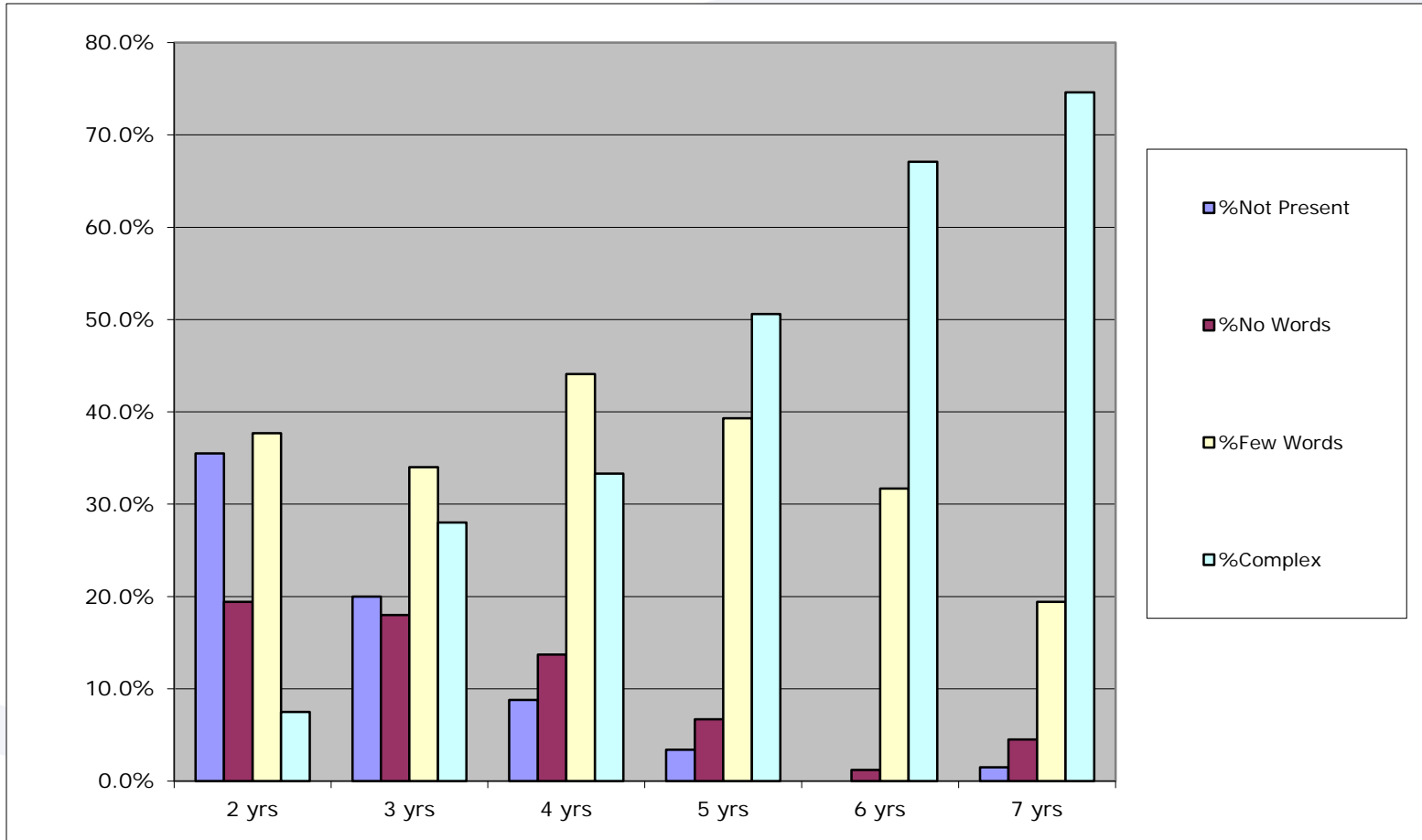
Activities which surprise

- What's inside the box
- Crayon boxes with cars instead of crayons
- Surprise endings
 - ▣ Johnny thinks everyone has forgotten his birthday
 - ▣ But – there's a surprise party

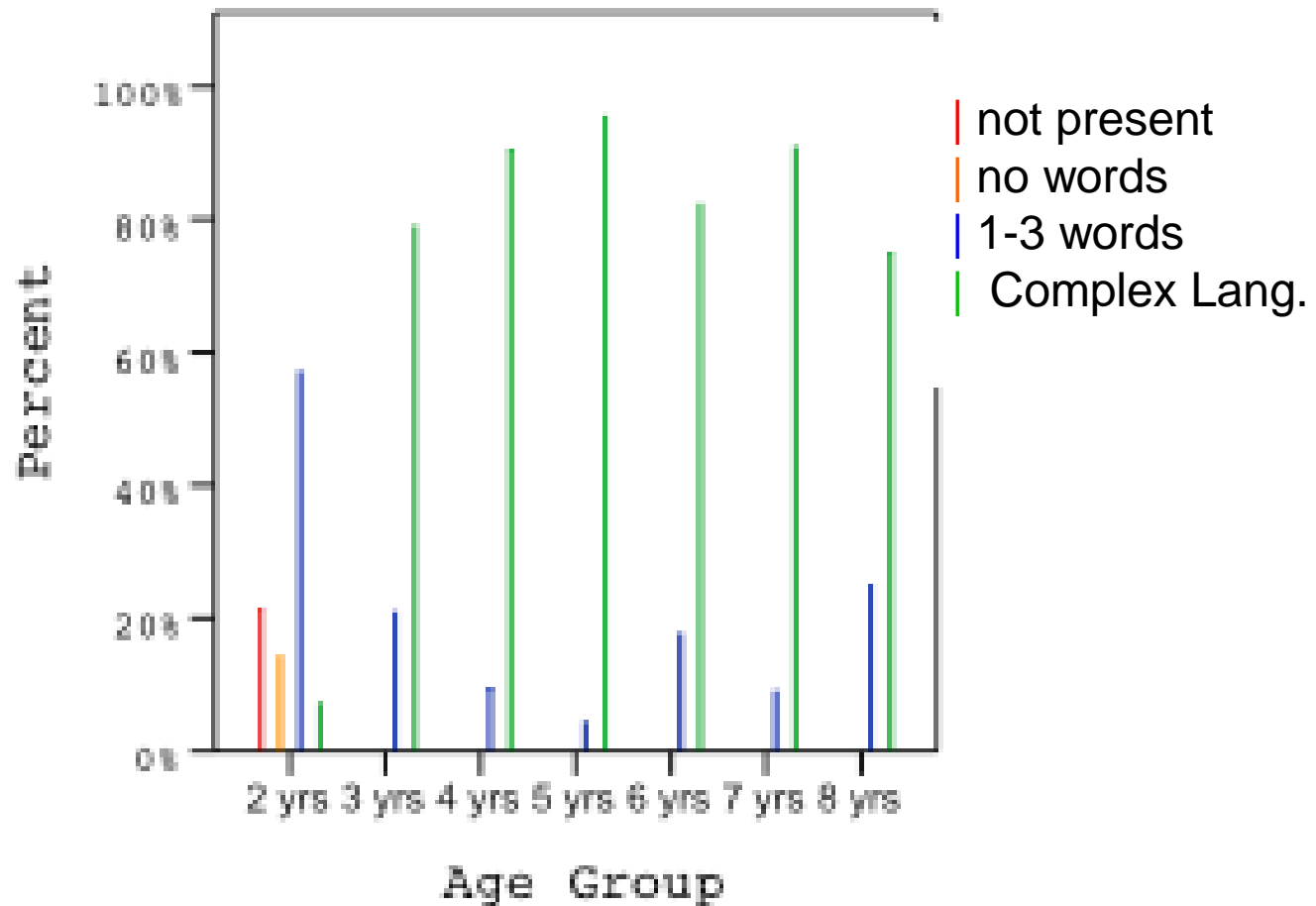
Personal

- “Here I come...”
- expressions of a state of mind/health/attitude
- expressions of feelings
- explanation of feelings
- offer an opinion
- supply basic identification information

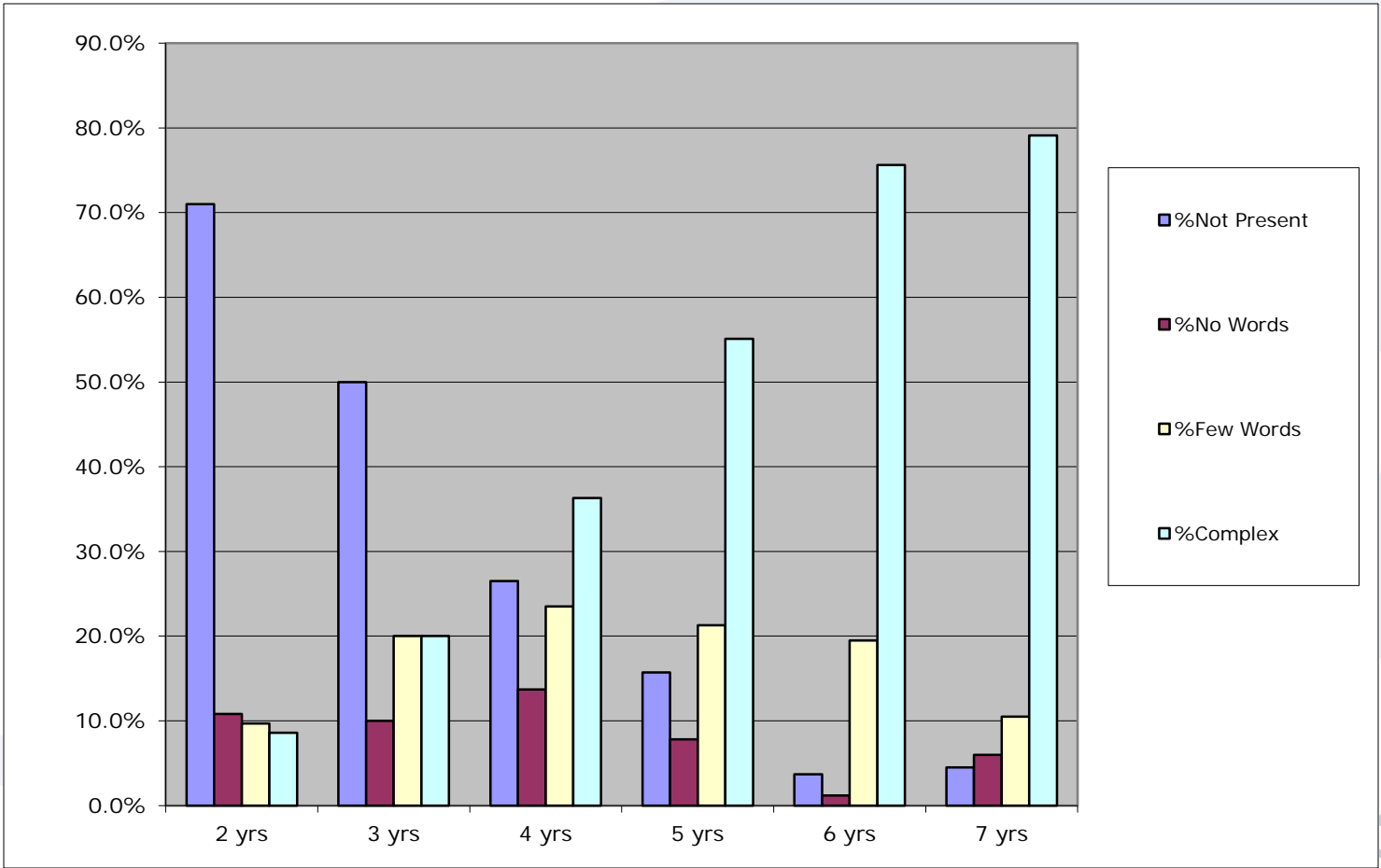
Identifies Feelings



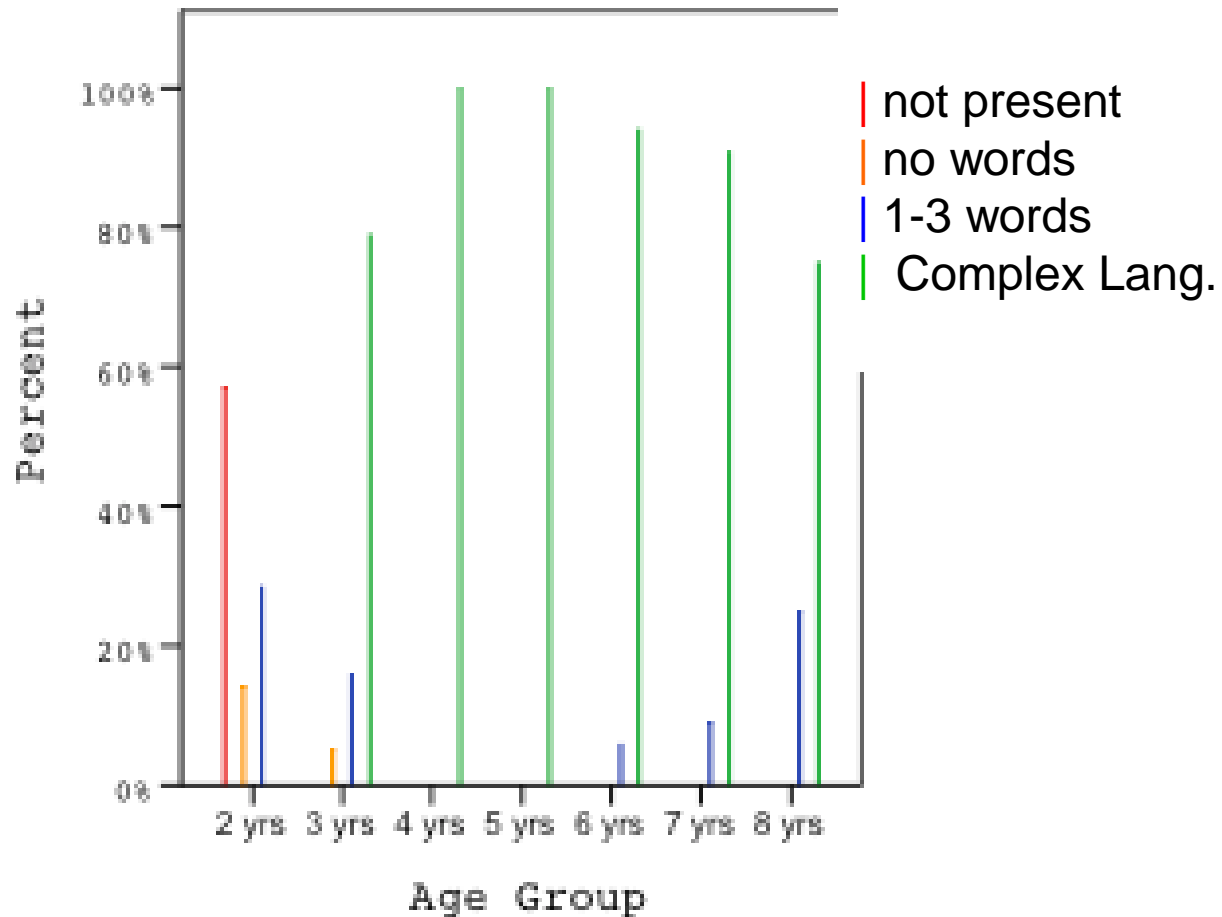
Identifies Feelings - Hearing



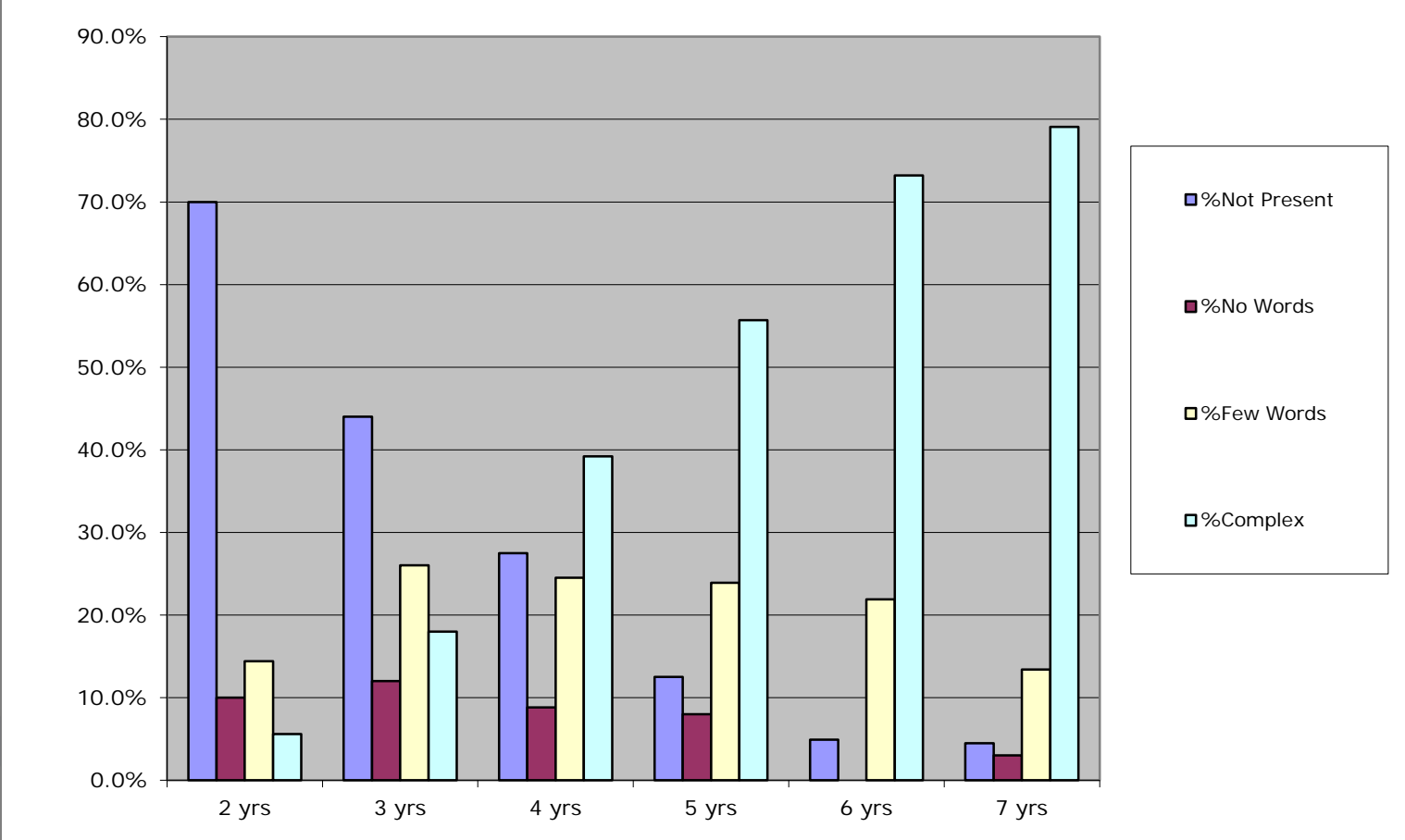
Explains feelings



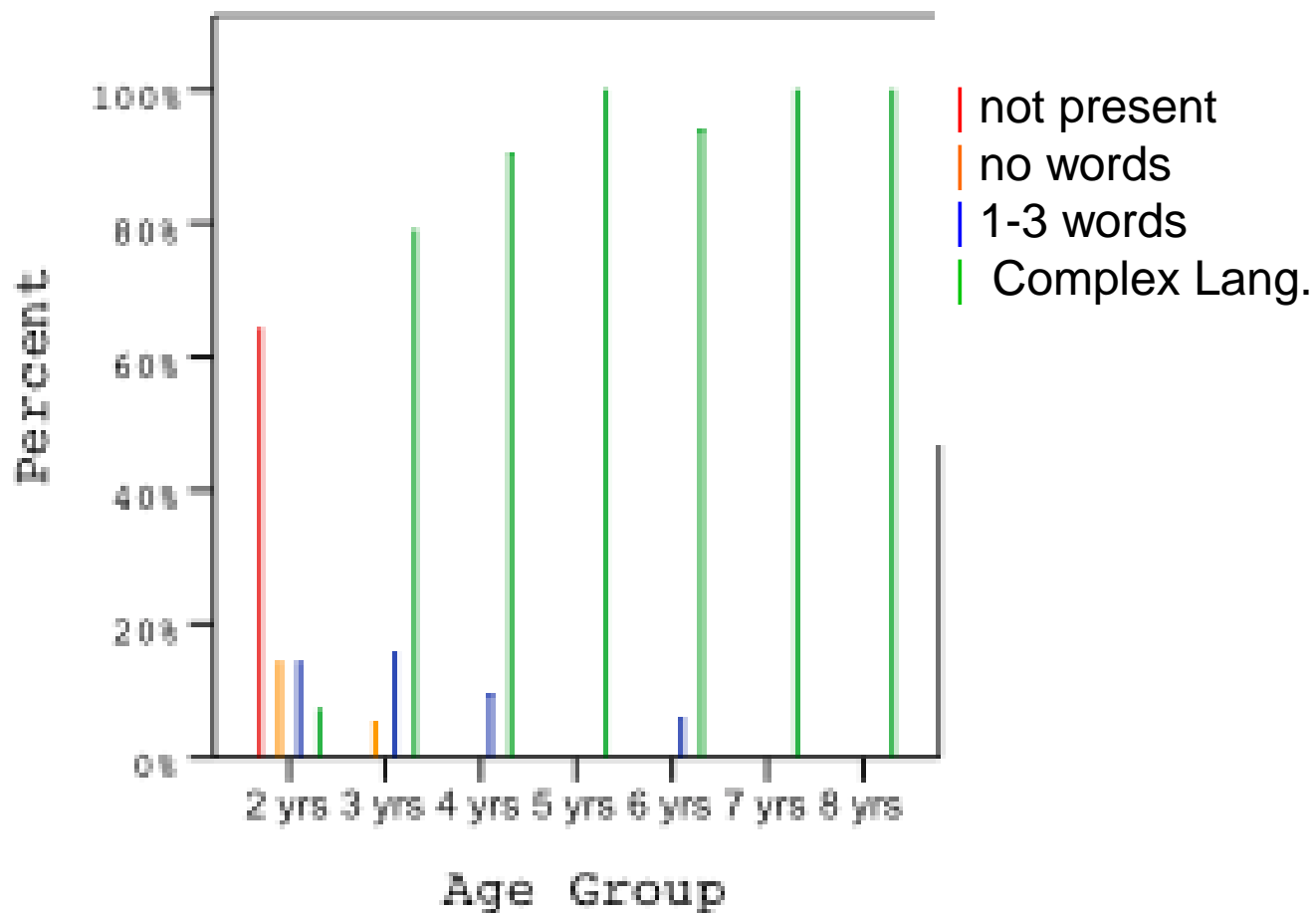
Explains feelings - Hearing



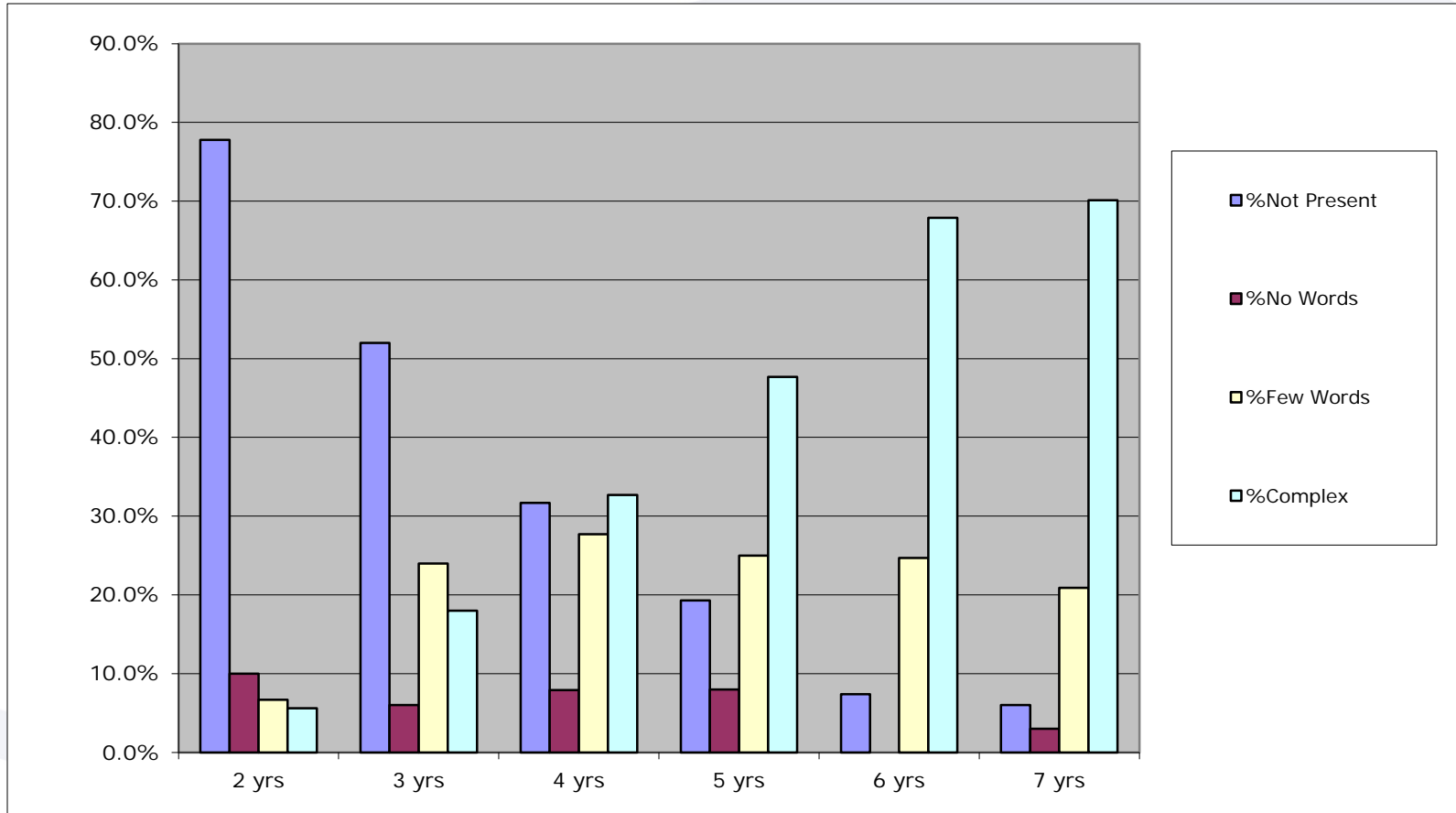
Provides Excuses/Reasons



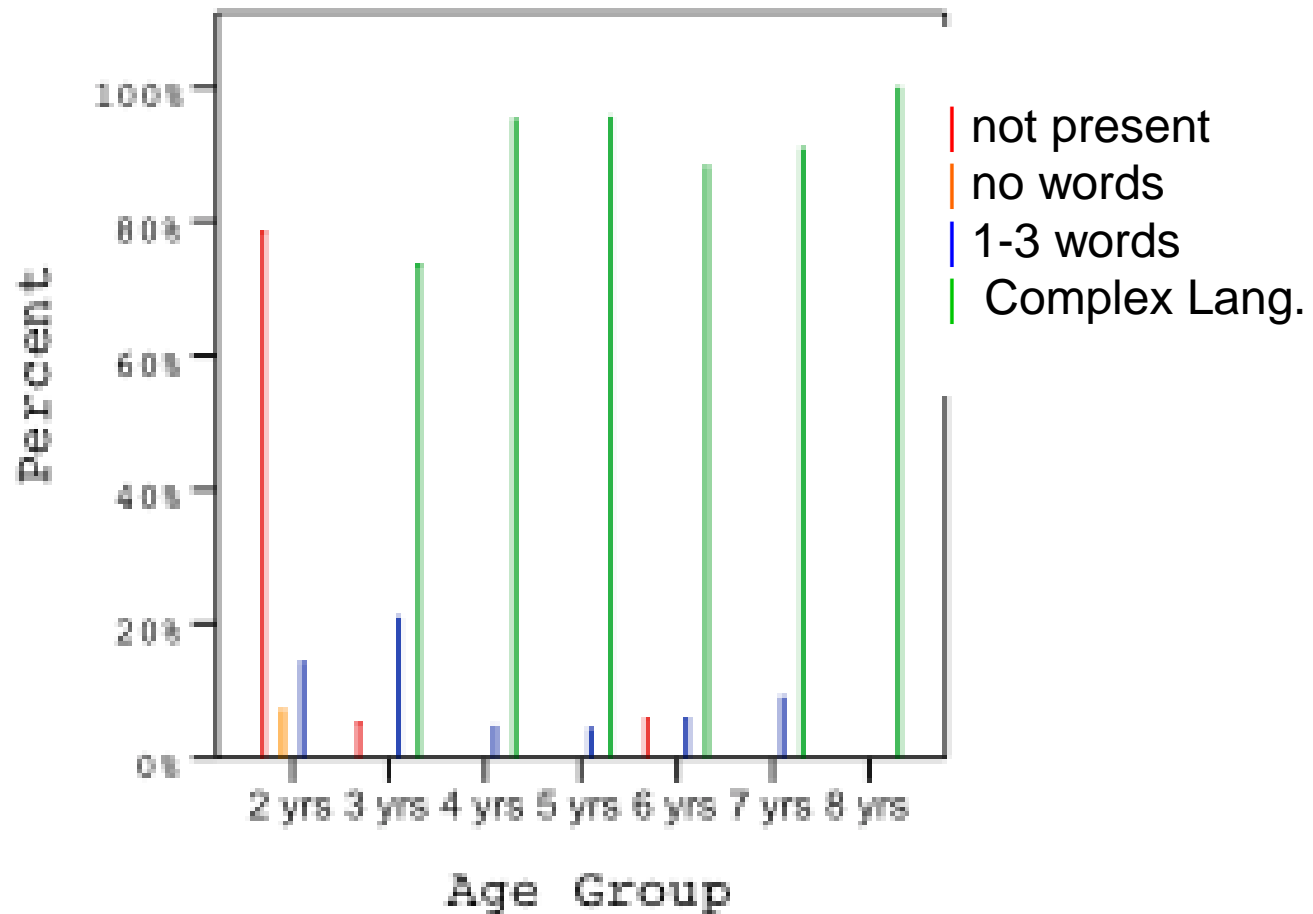
Provides excuses/reasons - Hearing



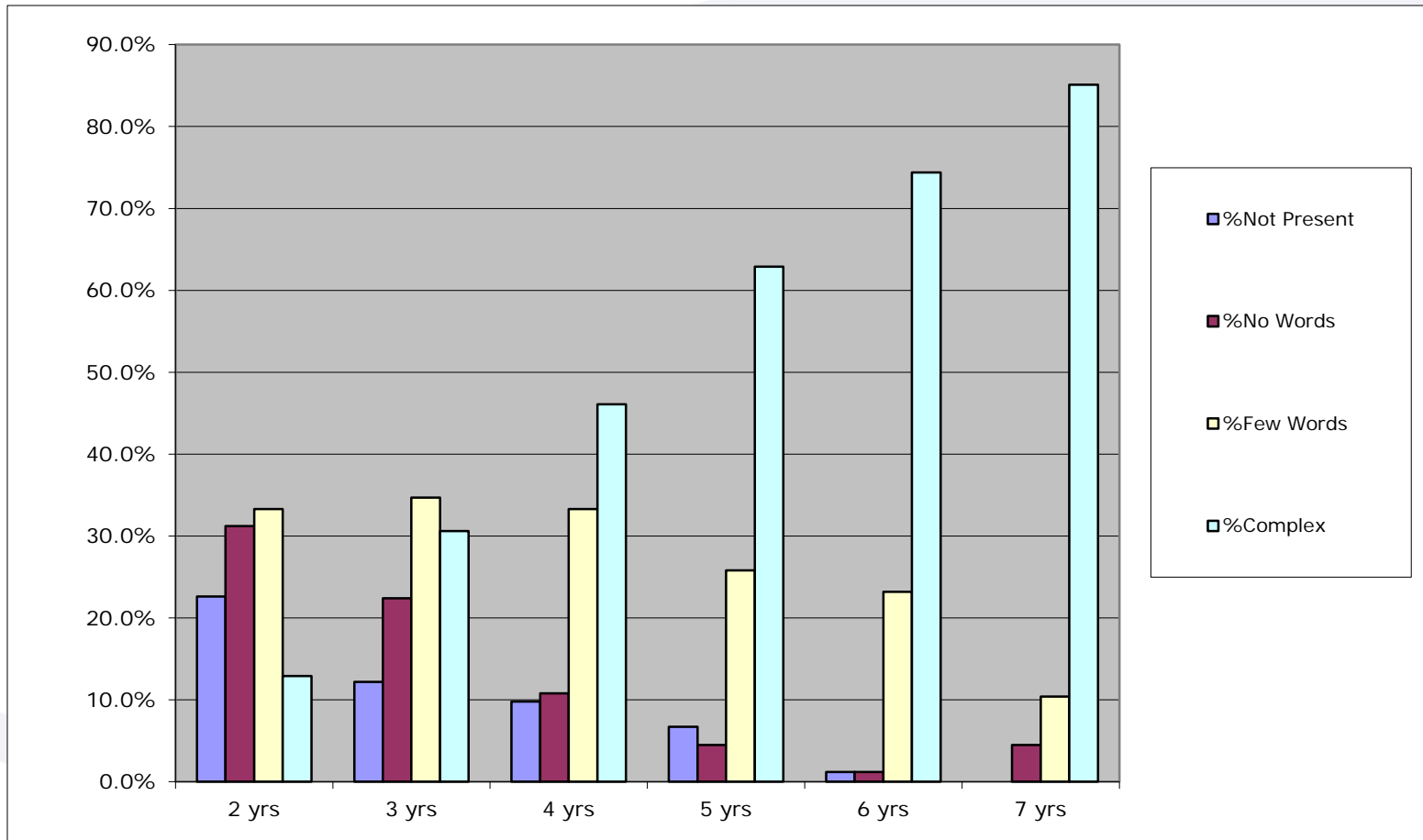
Offers opinions with support



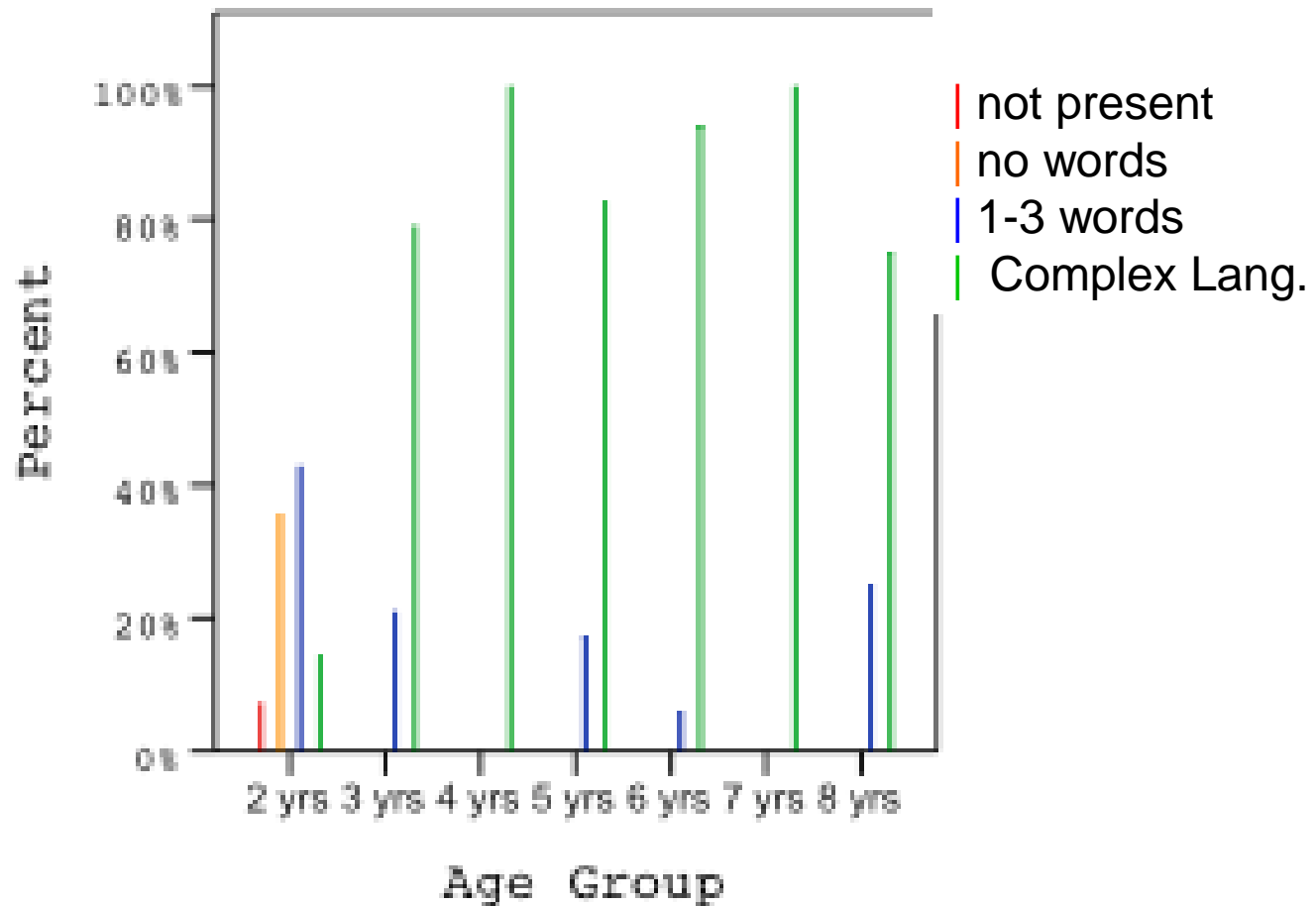
Offers Opinion - Hearing



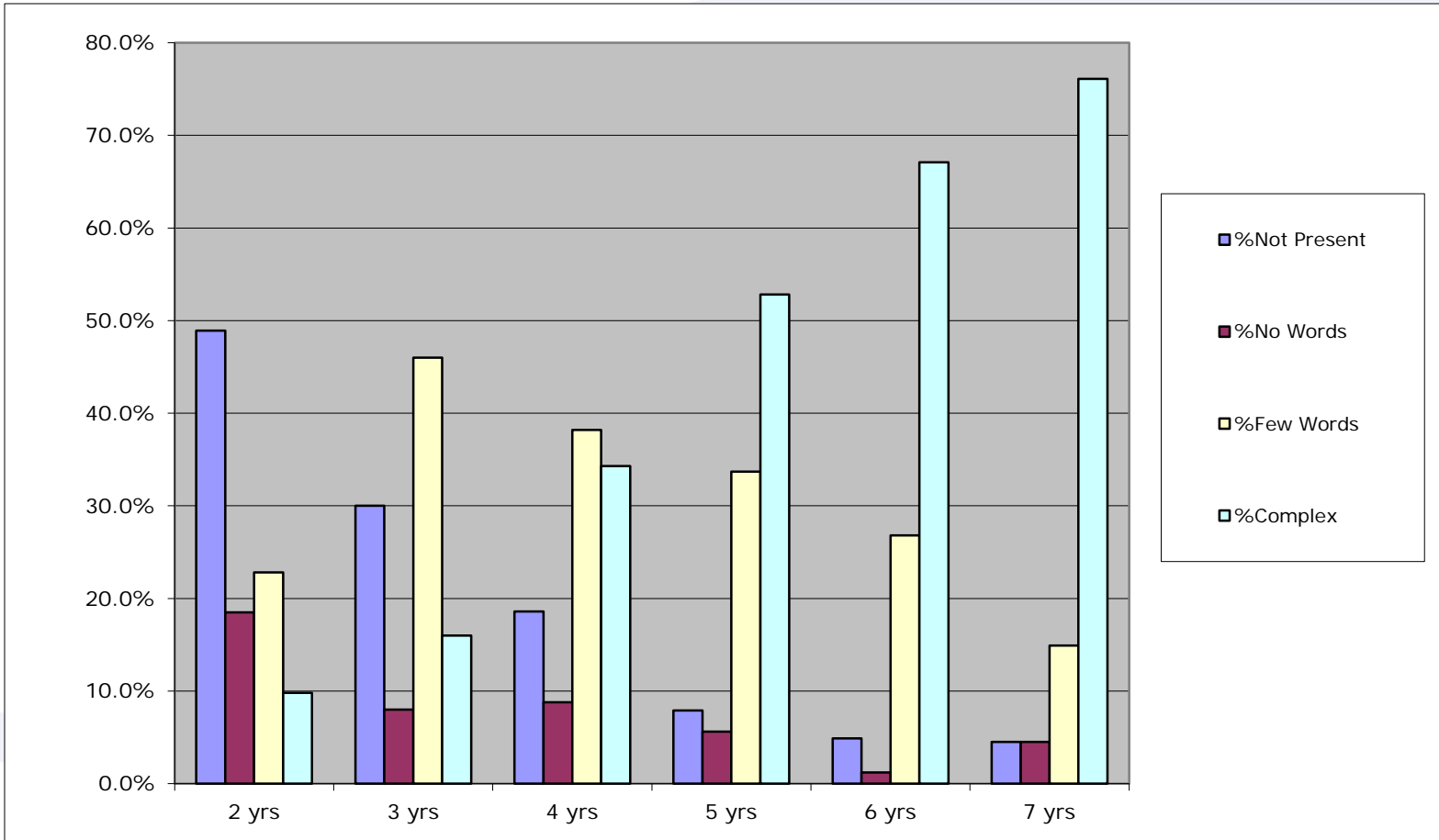
Complains



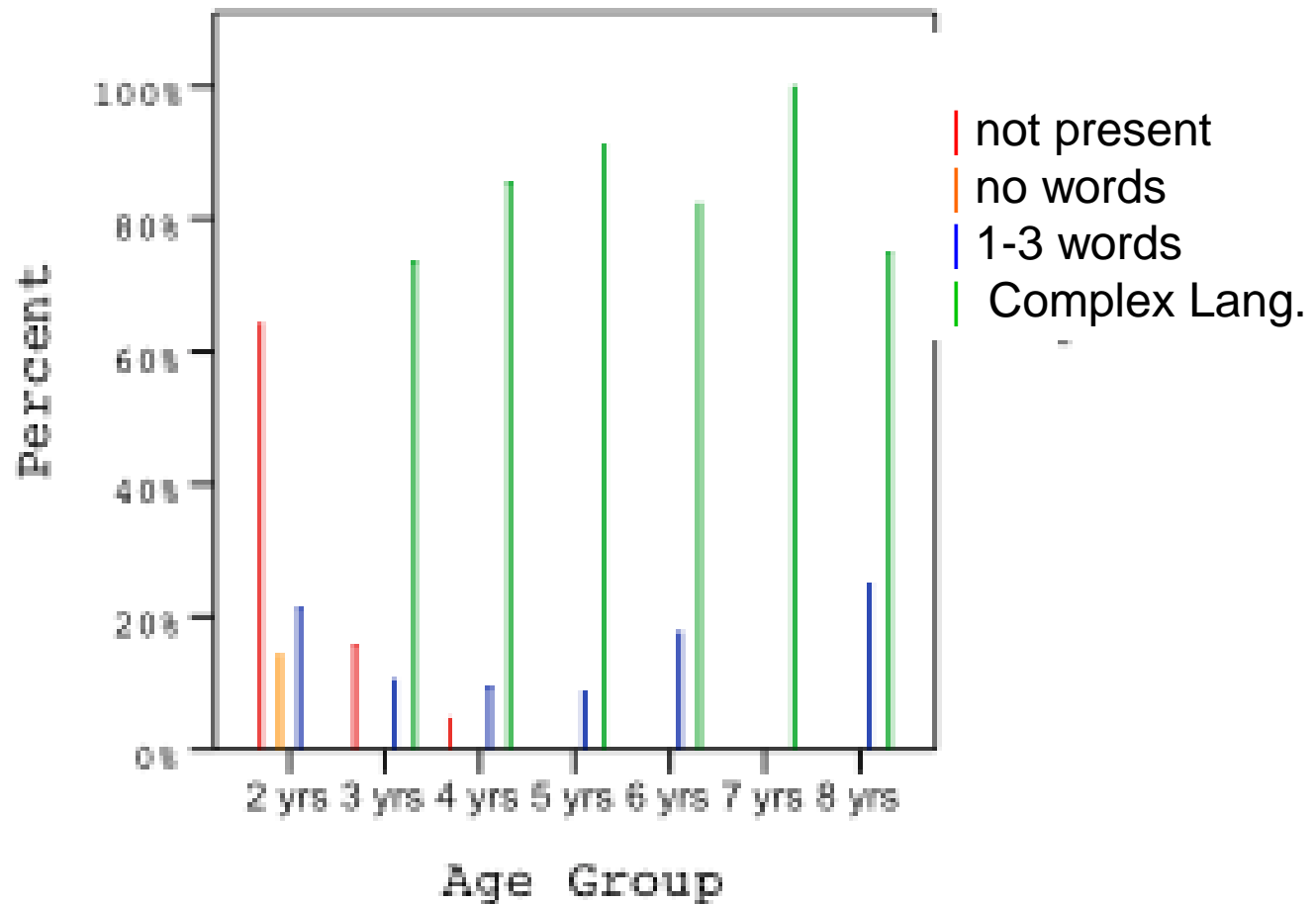
Complains - Hearing



Blames Others



Blames others - Hearing



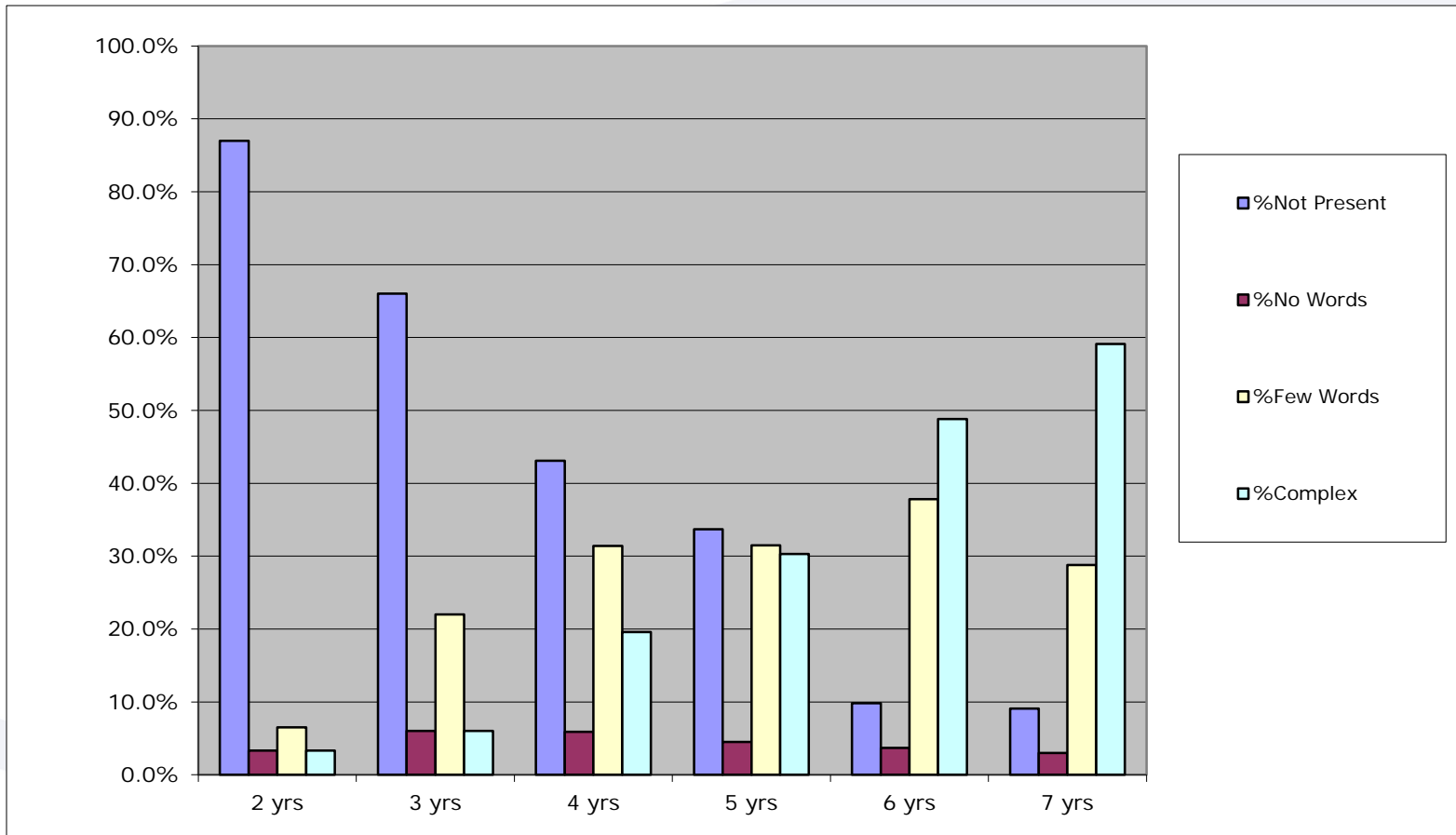
Defense in face of false accusation

- He took the toy
- I didn't take the toy
- I wasn't there
- I don't have the toy
- I didn't want the toy

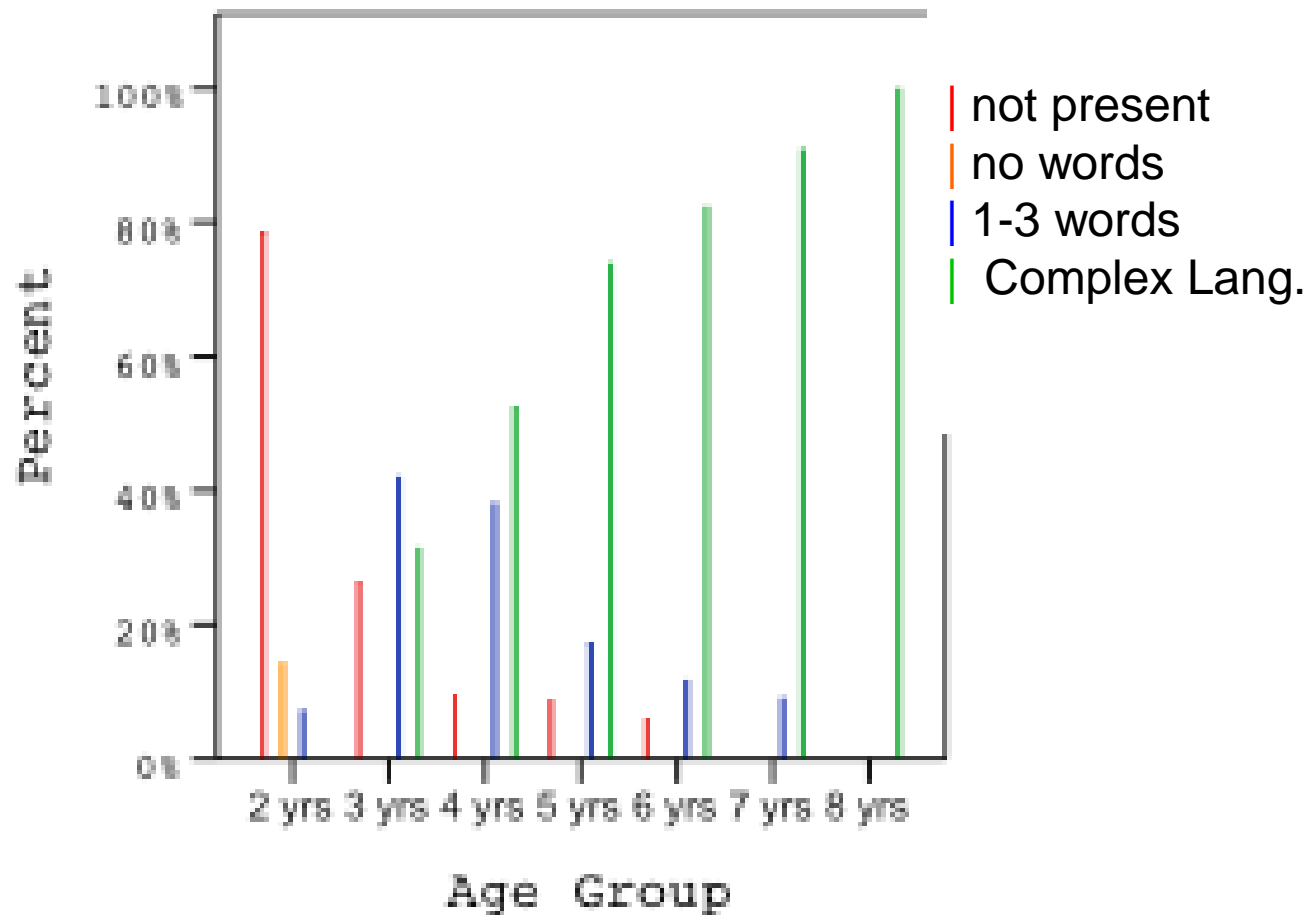
Feelings

- Cause and effect
 - Why
 - How
- Because – Modeling at home and school
- Perspective – taking
- Are you happy because...
- Are you happy because....

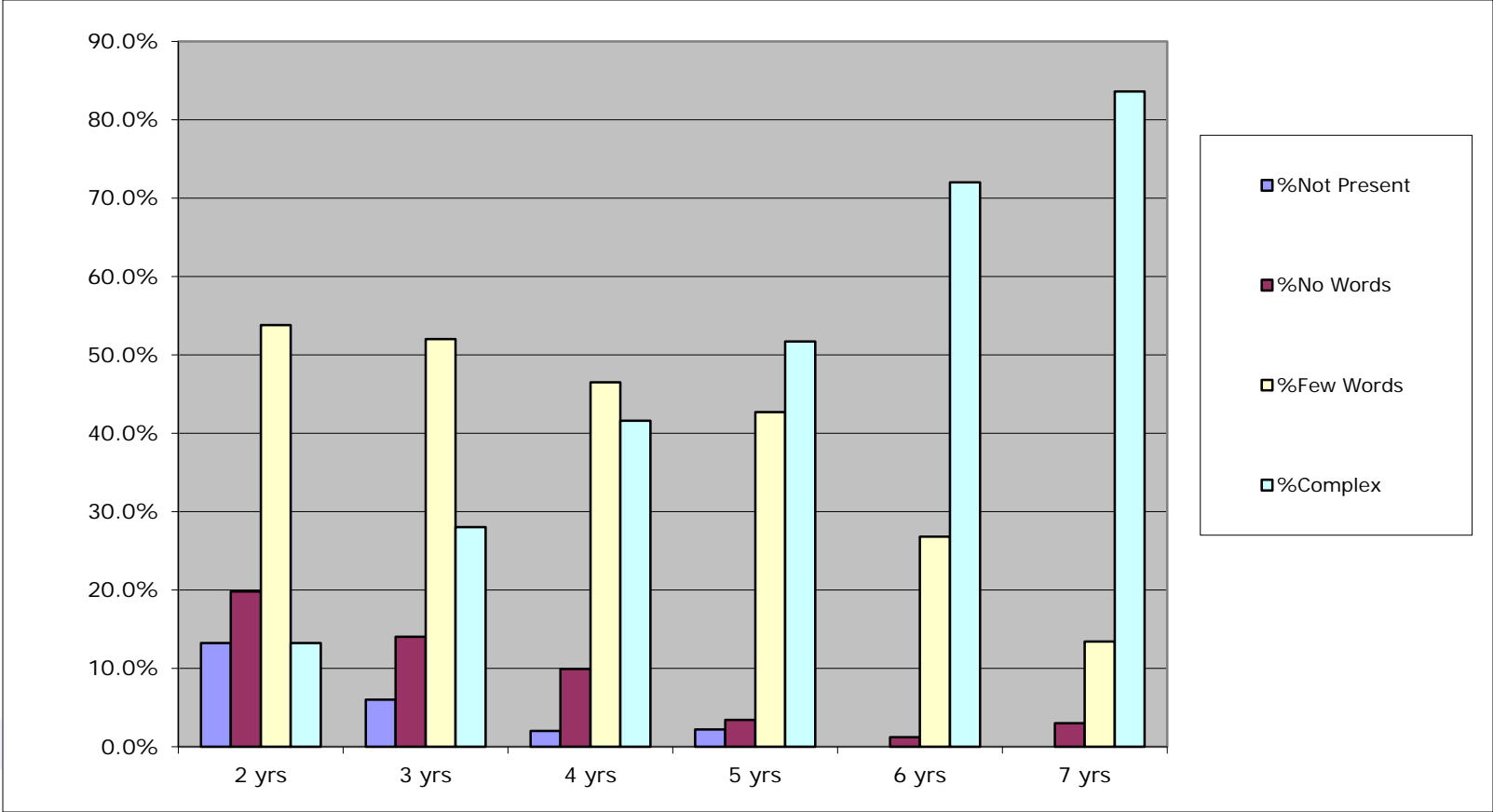
Provides Information on Request



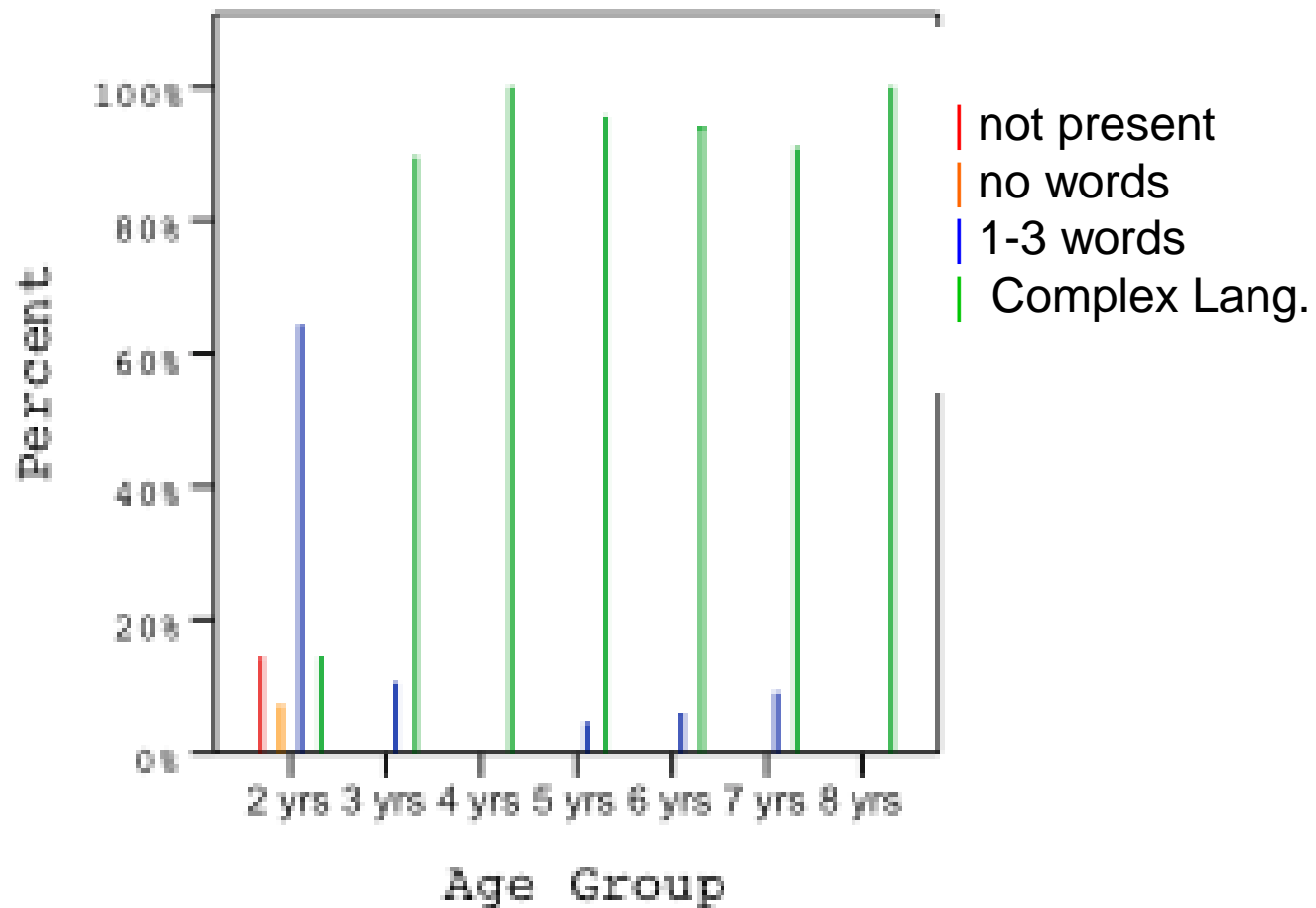
Provides information on request - Hearing



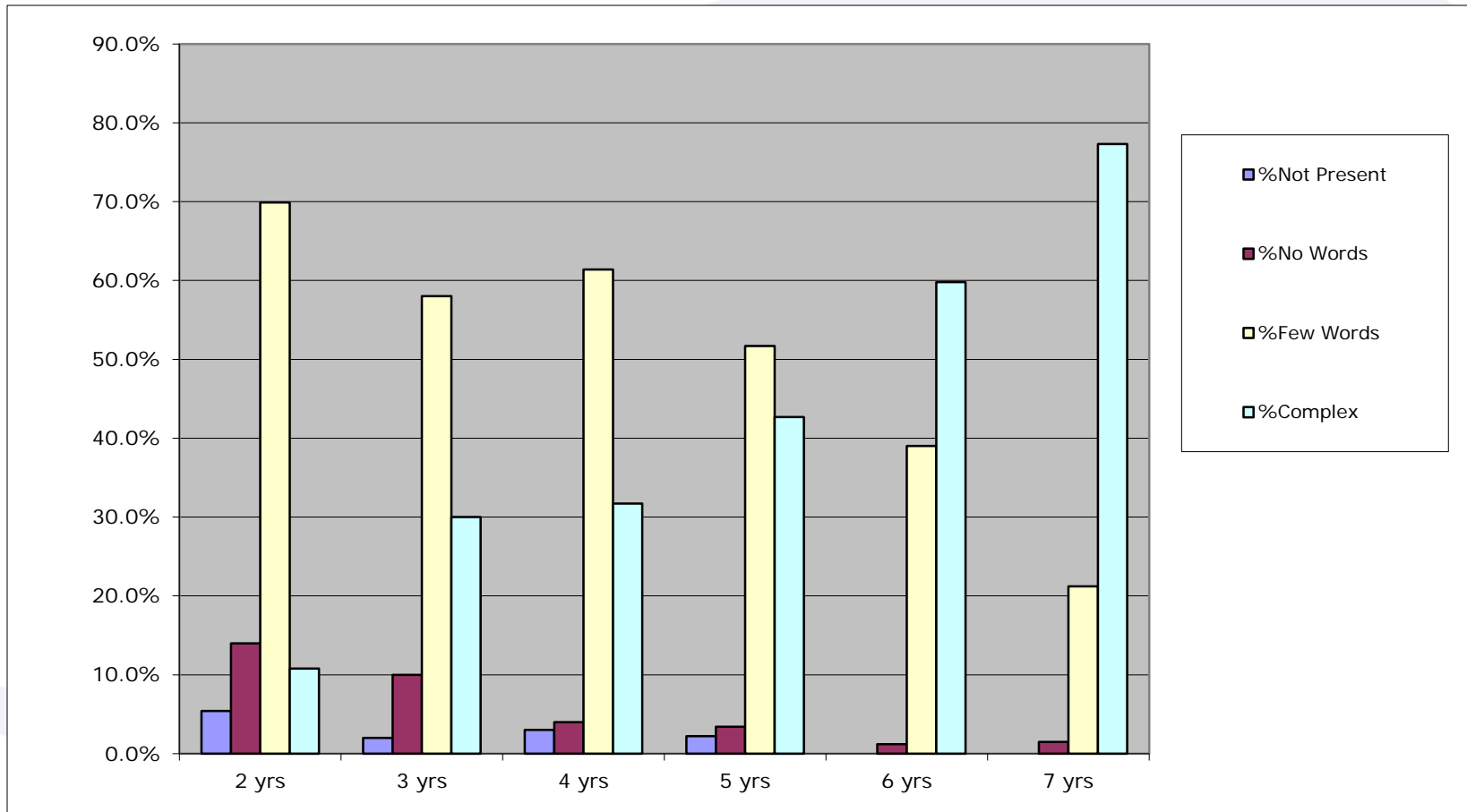
Interacts Politely



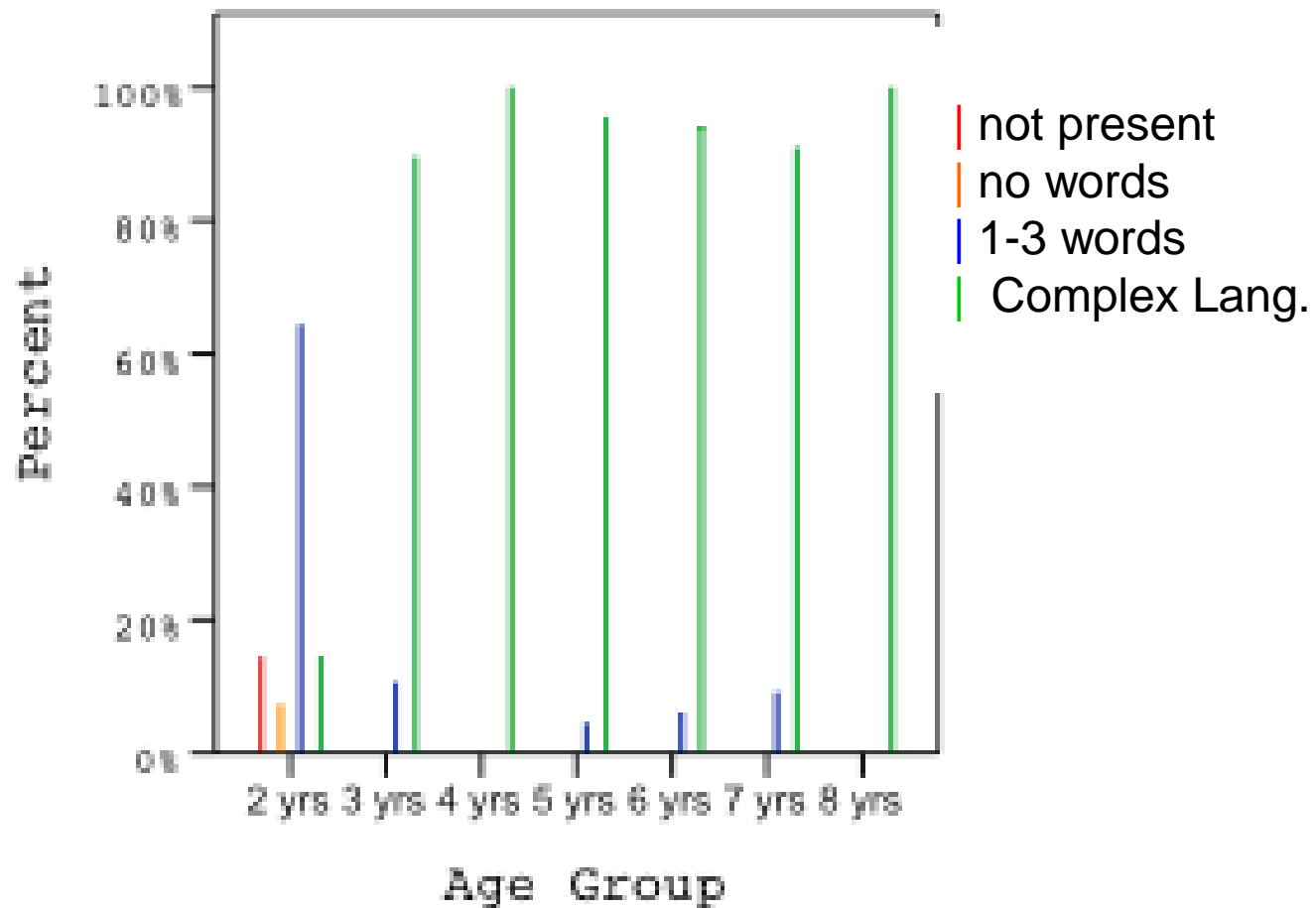
Interacts with others politely - Hearing



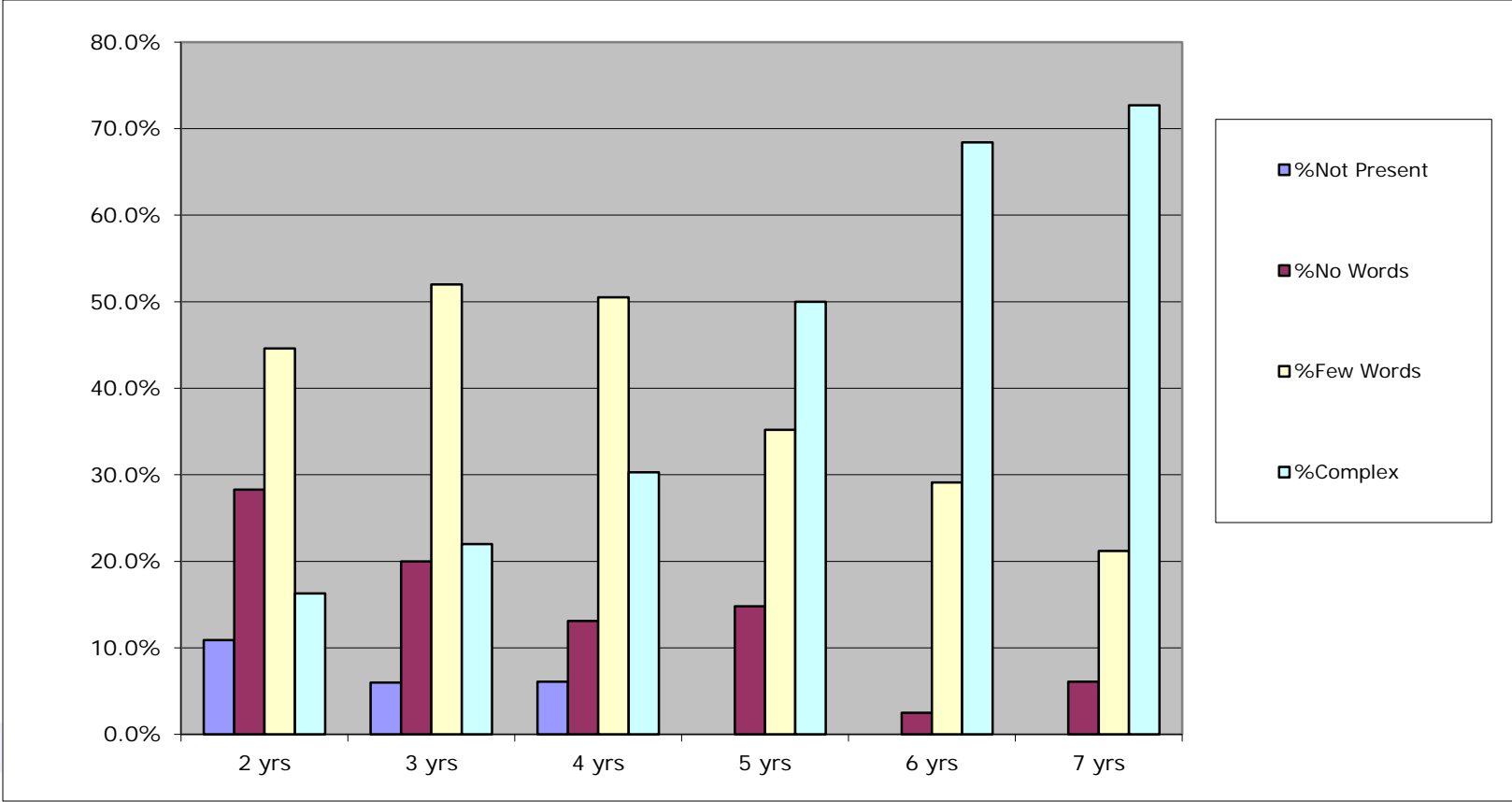
Uses appropriate social rules



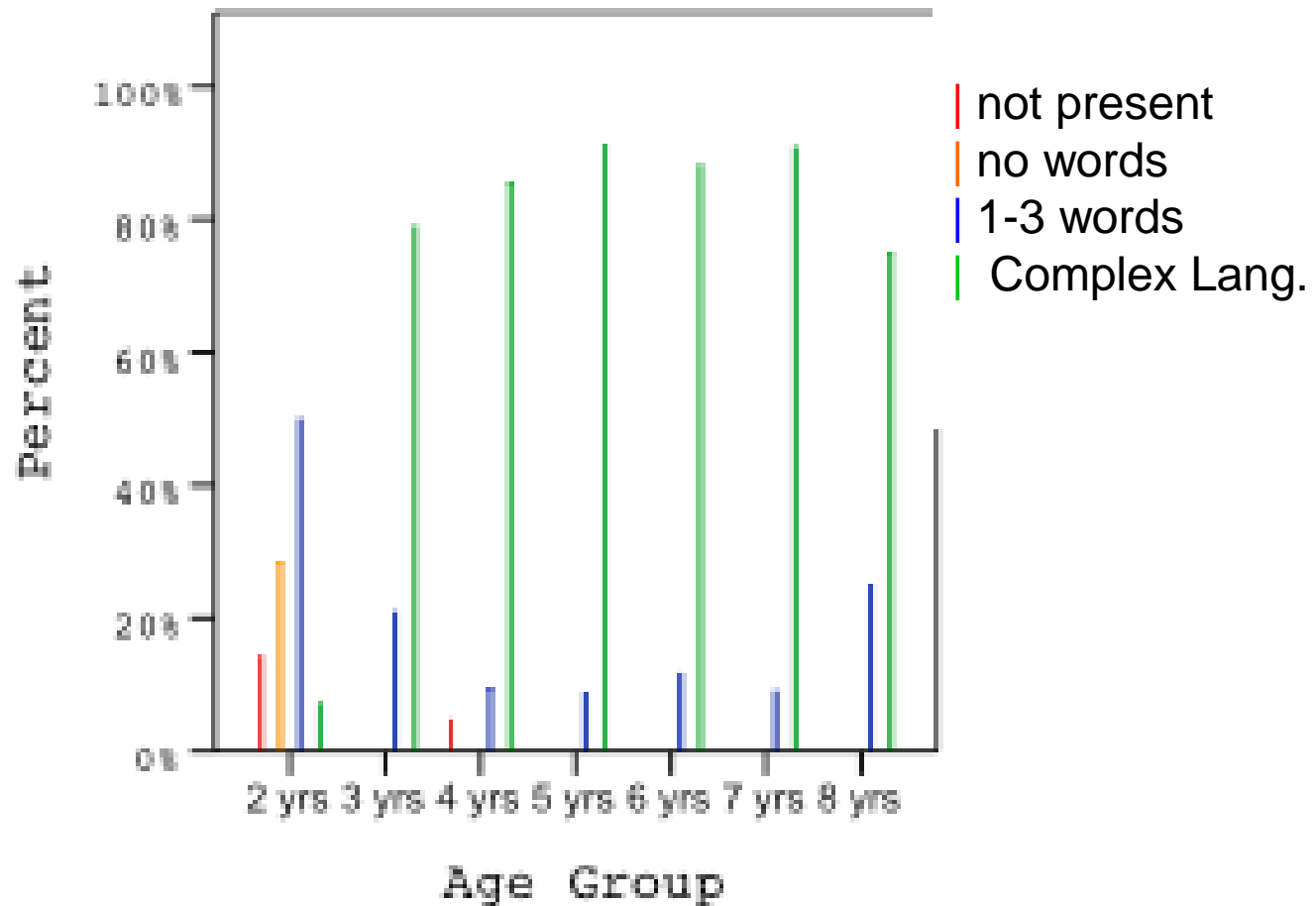
Interacts with others politely - Hearing



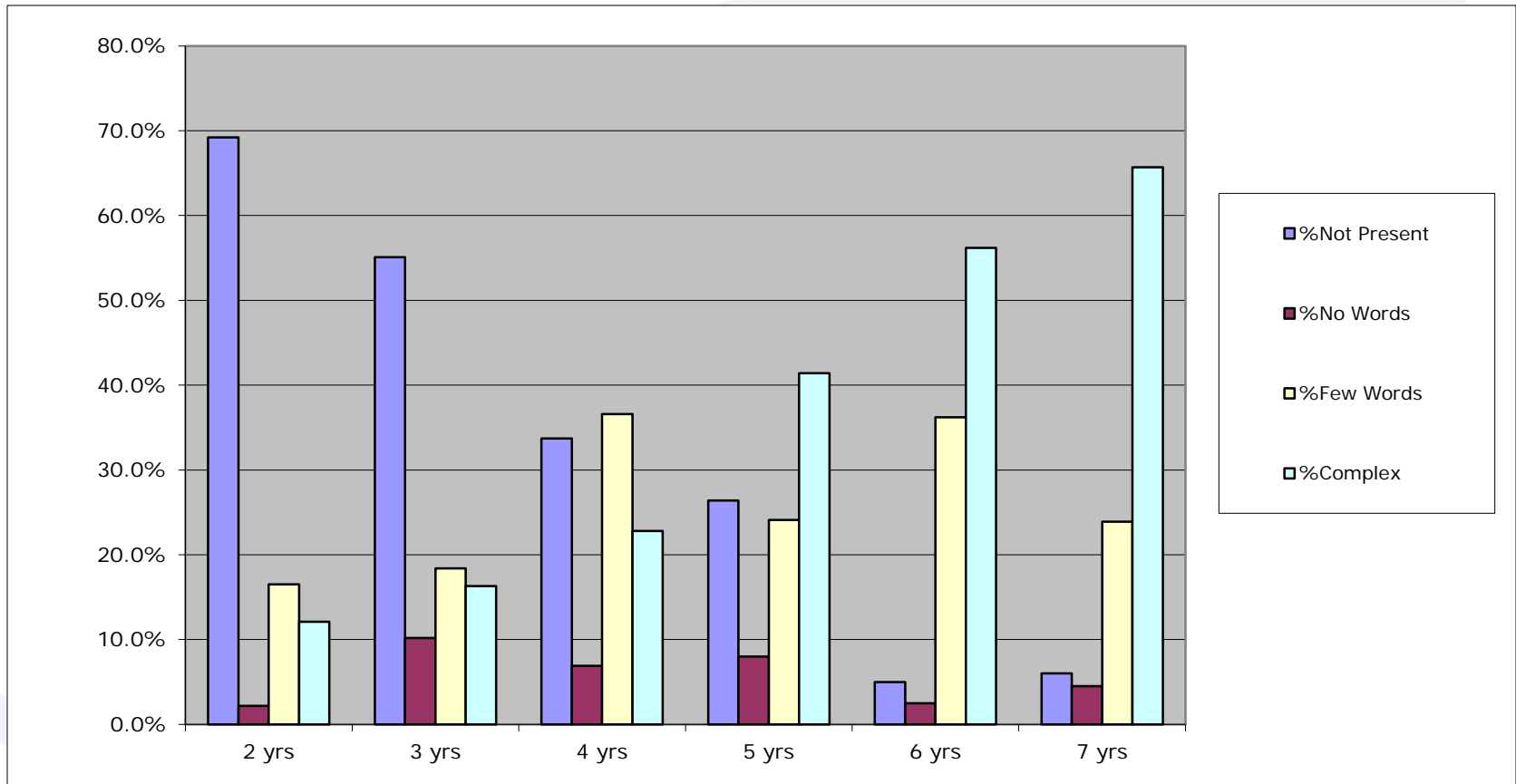
Attends to Speaker



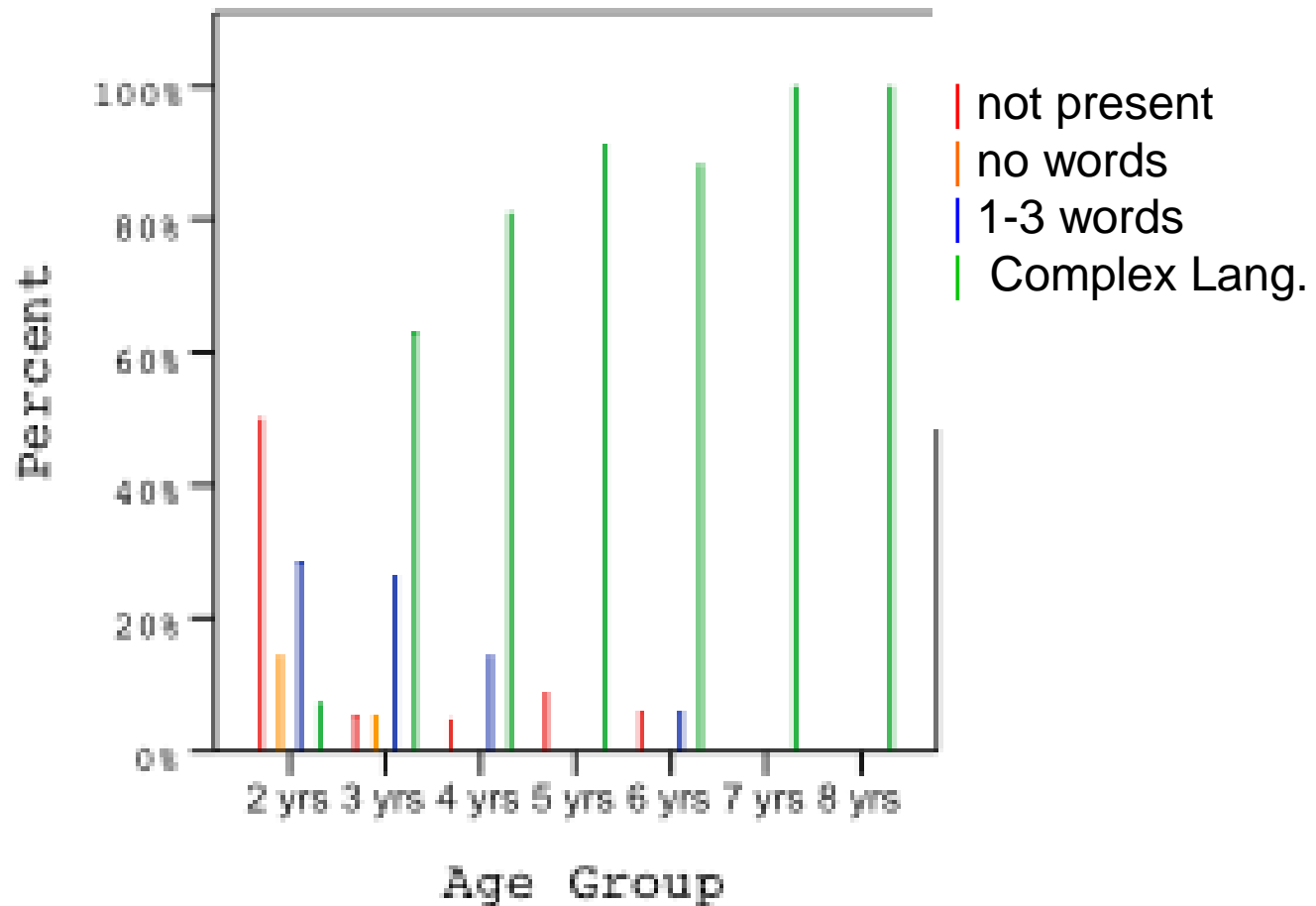
Attends to the Speaker - Hearing



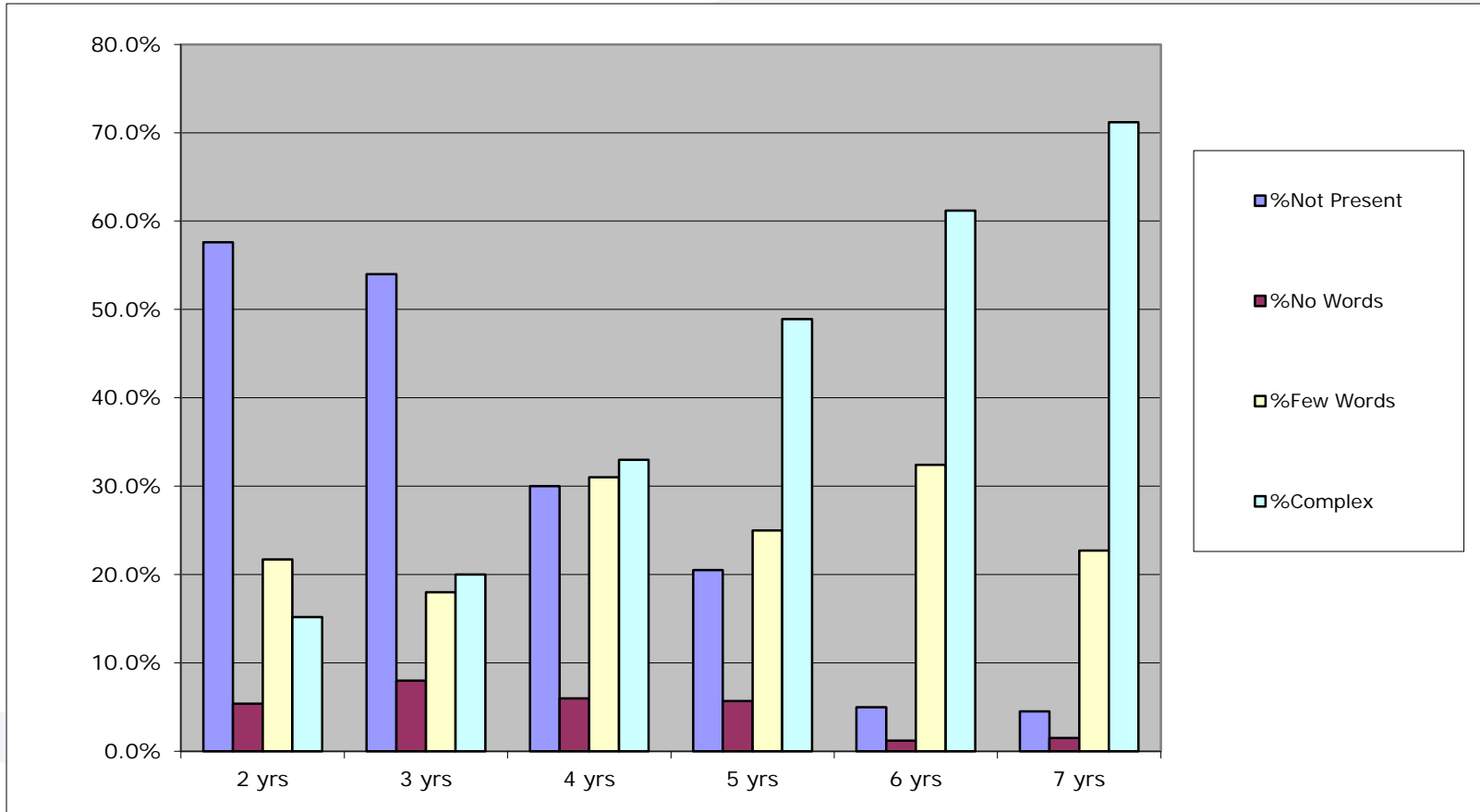
Revises incomplete message



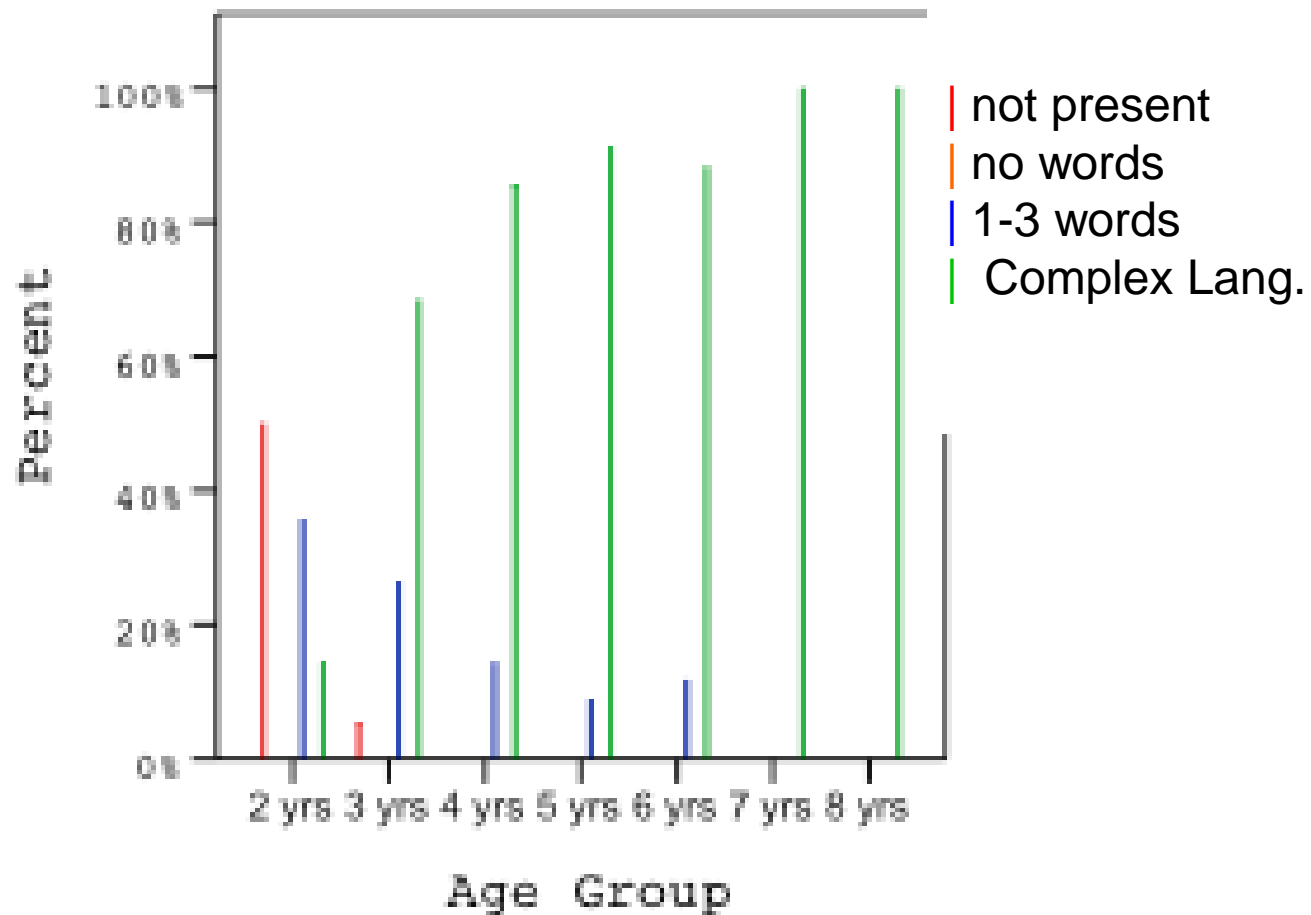
Revises incomplete message - Hearing



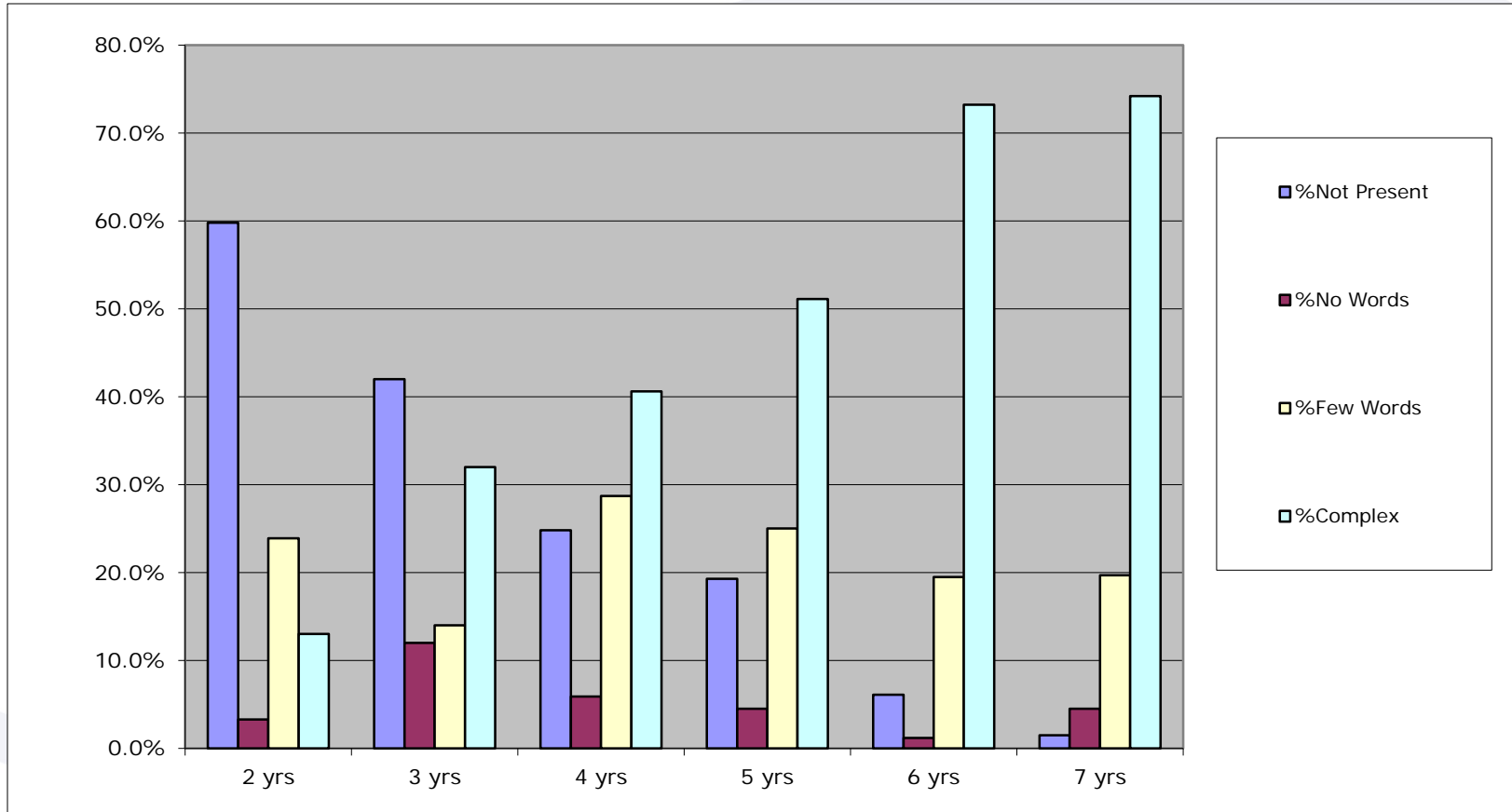
Initiates Topic of Conversation



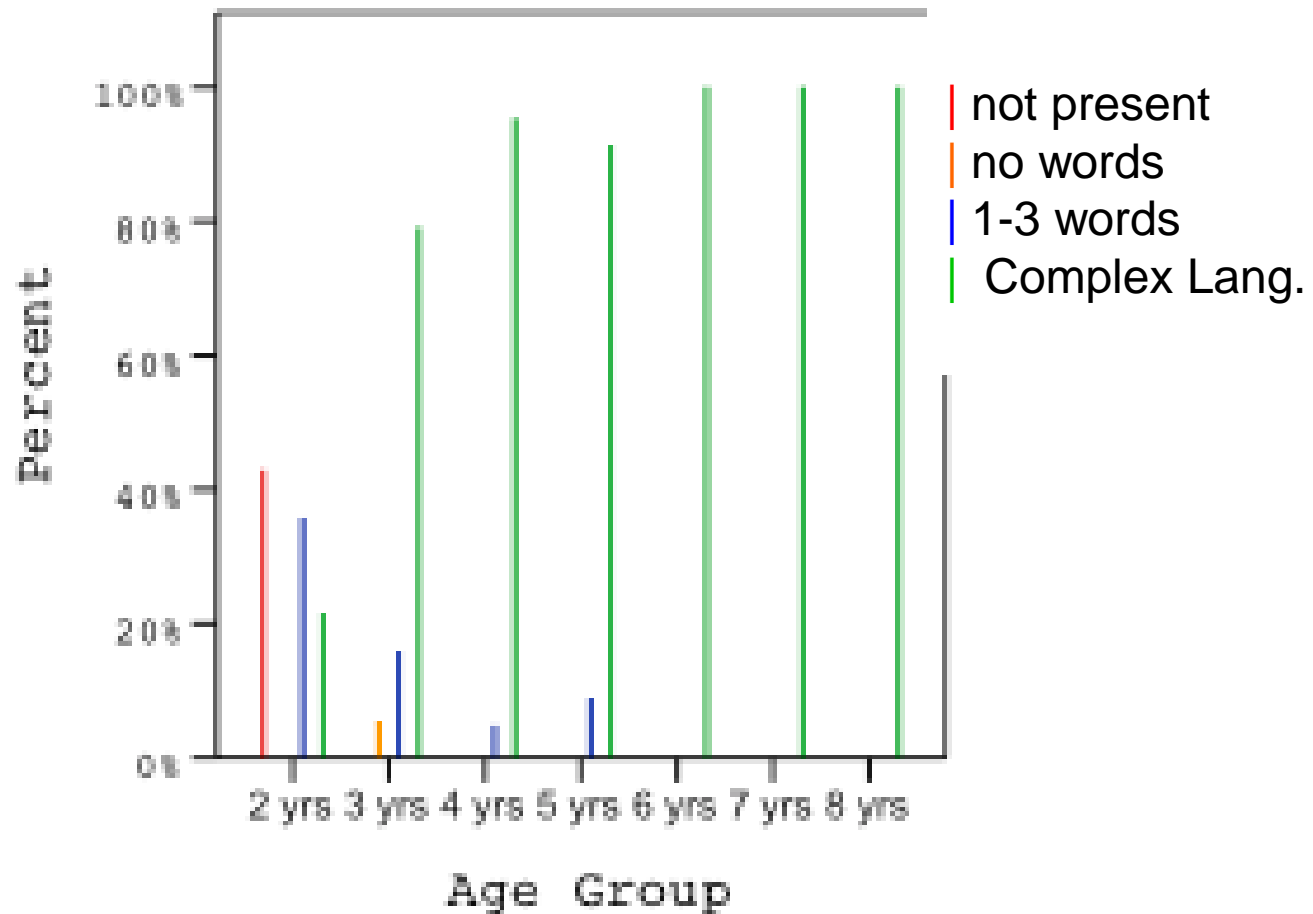
Initiates topics of conversation - Hearing



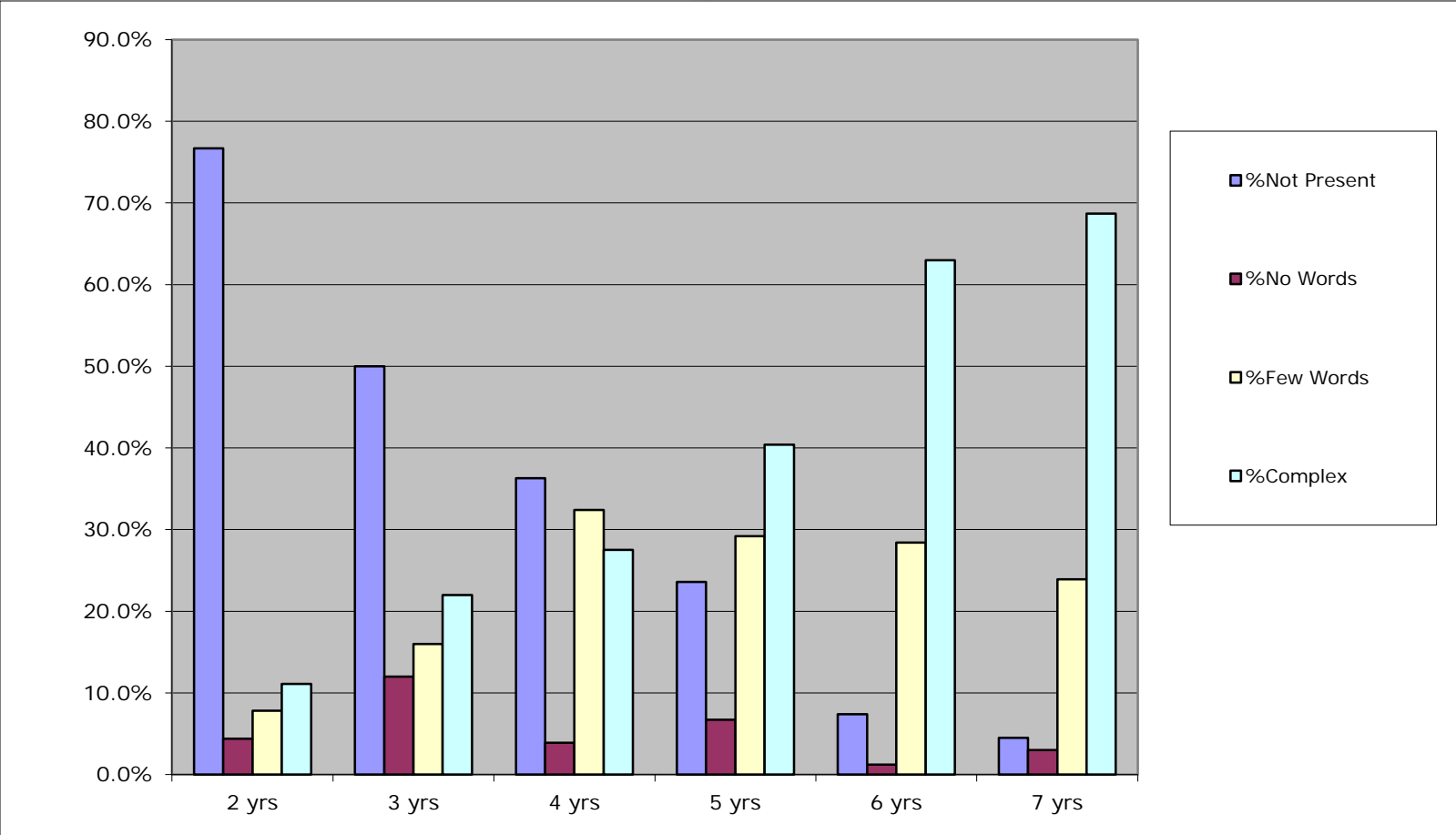
Maintains a conversation



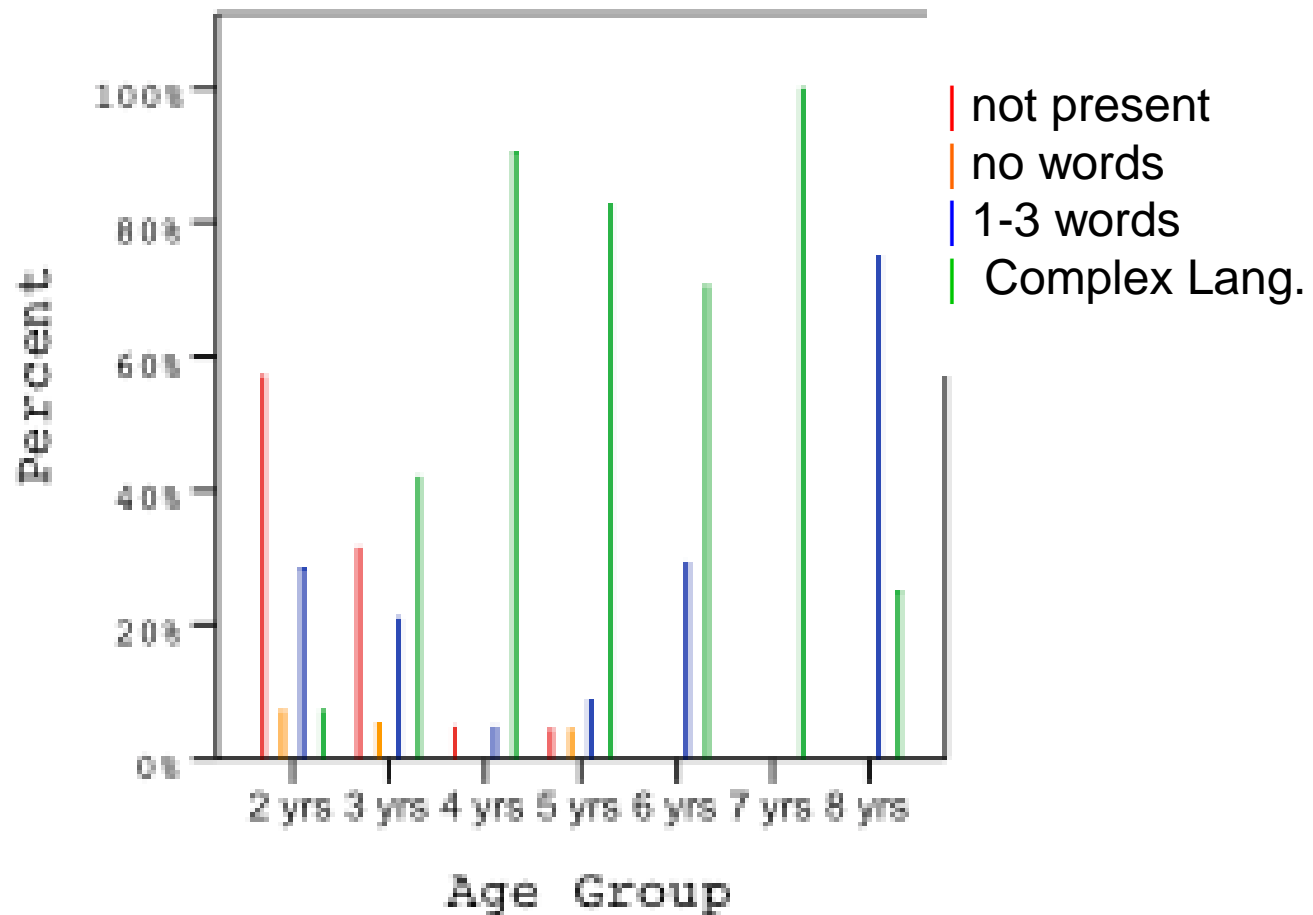
Maintains a conversation - Hearing



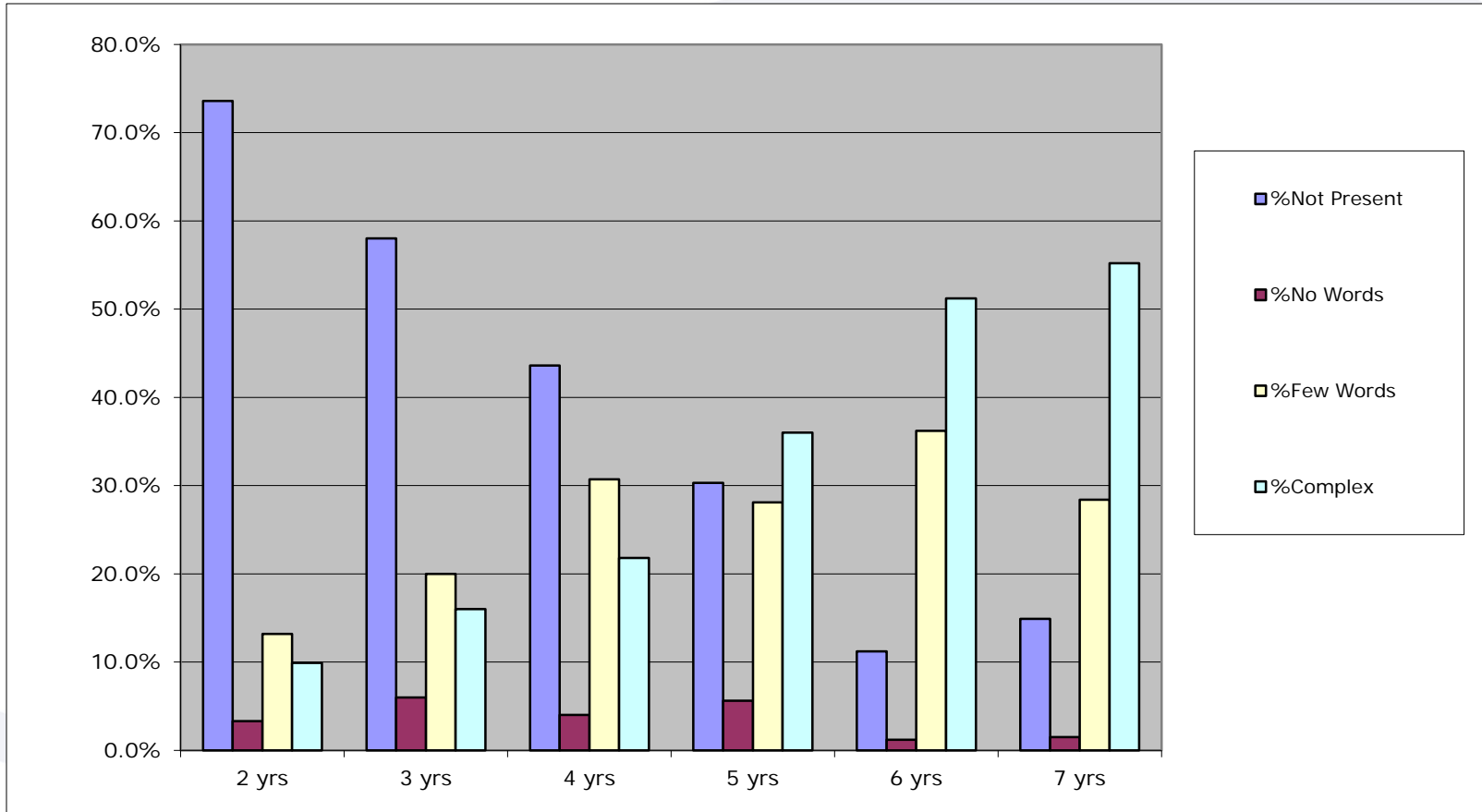
Ends a conversation



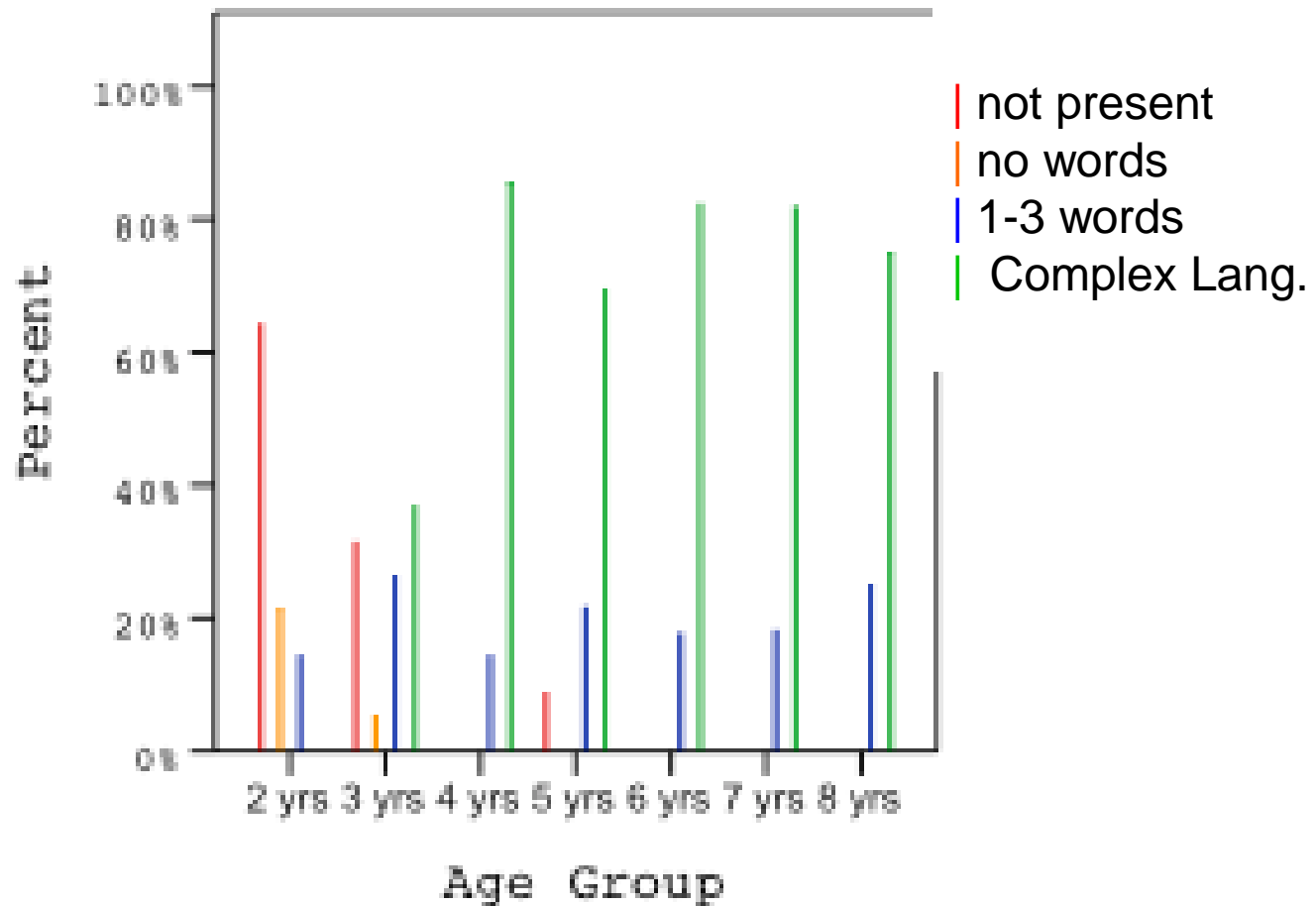
Ends a conversation - Hearing



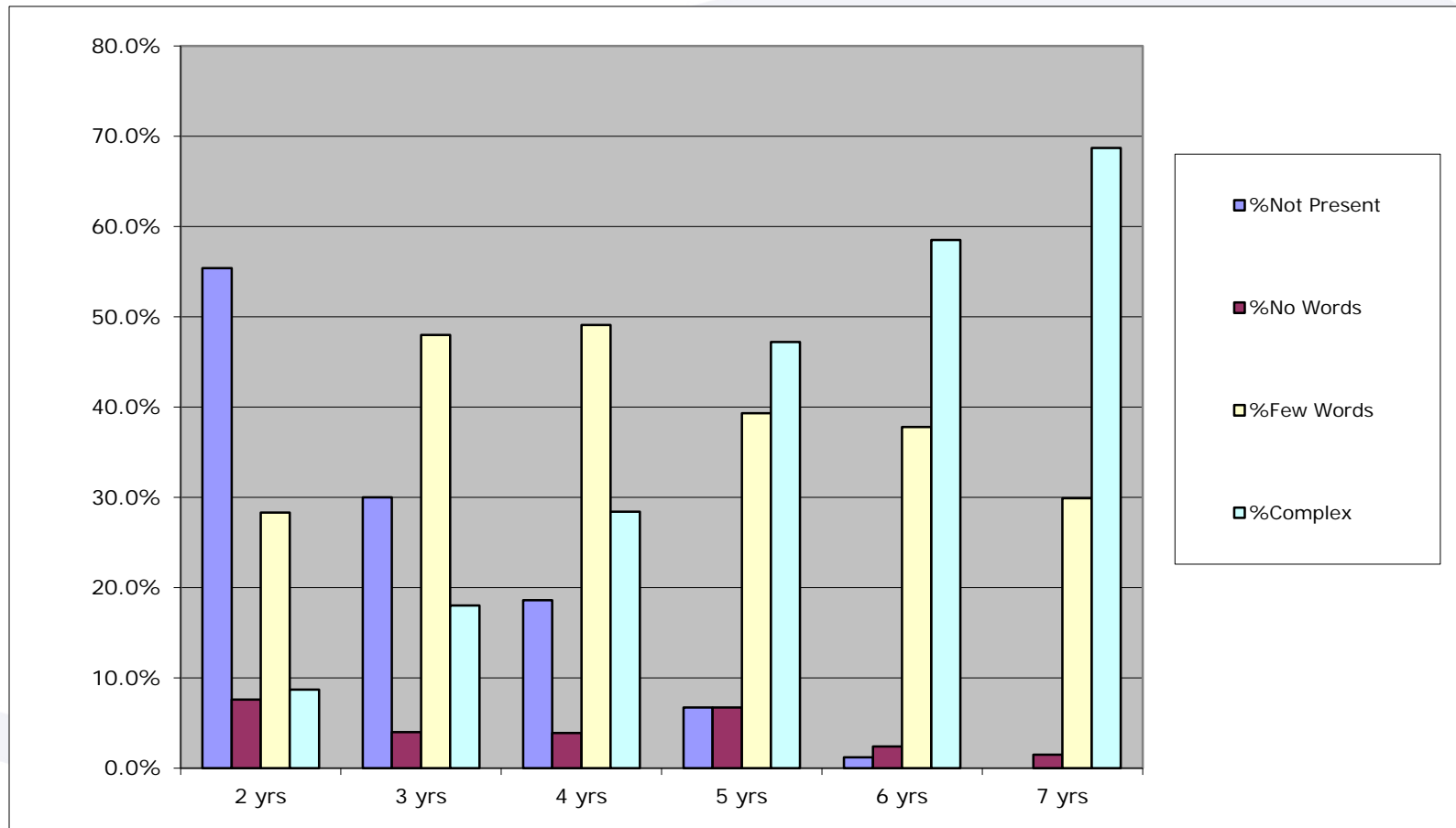
Interjects appropriately



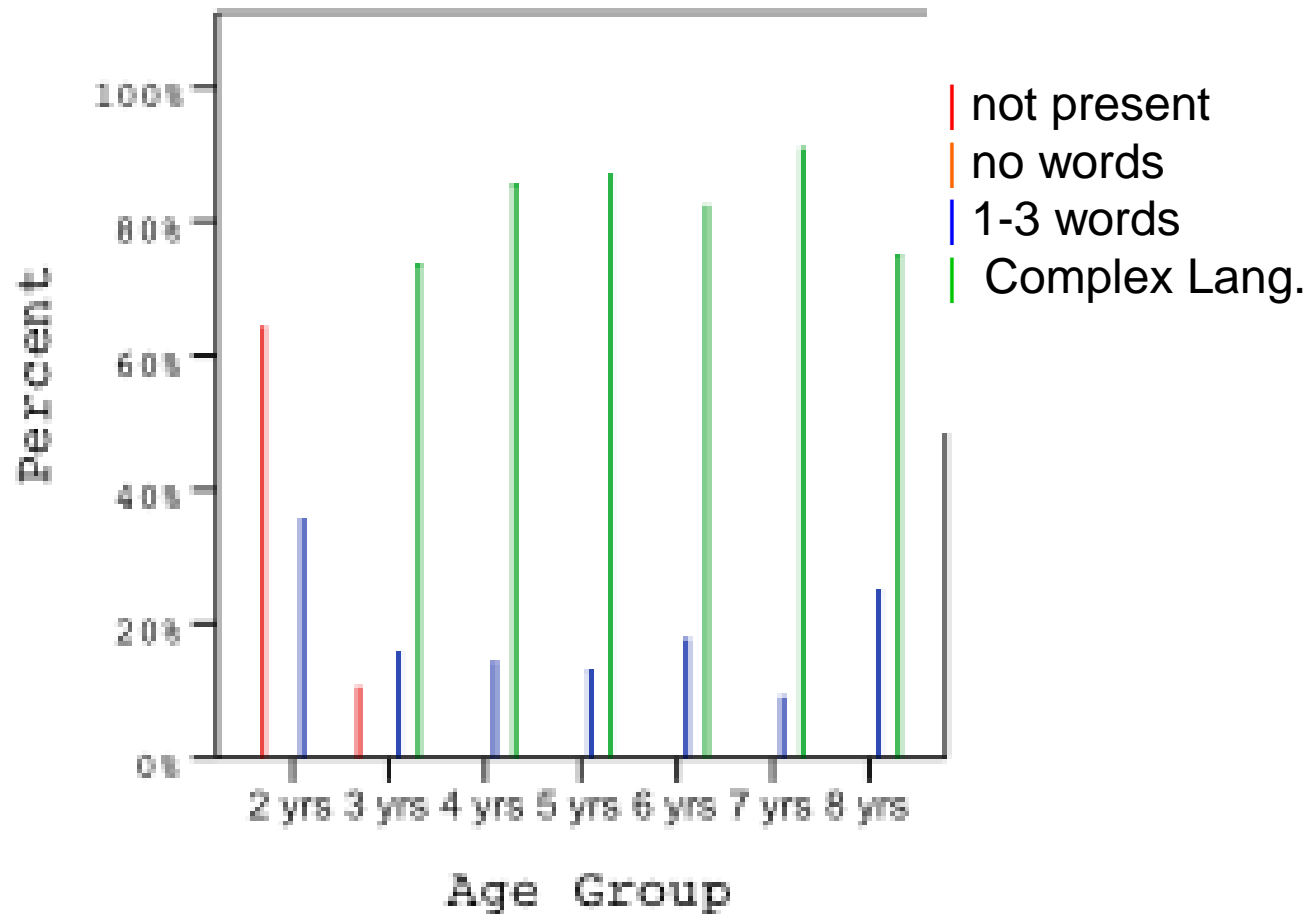
Interjects conversations appropriately - Hearing



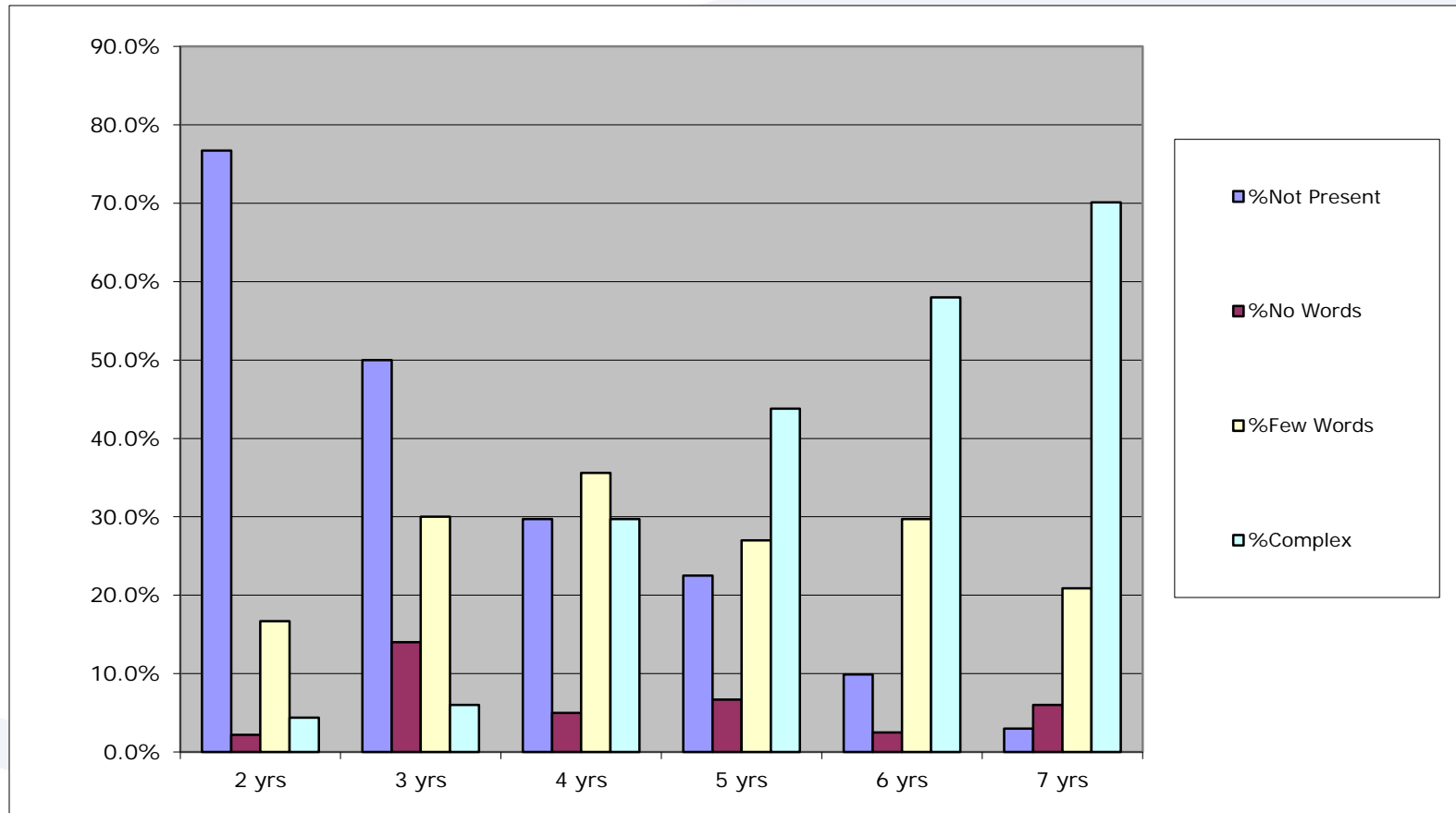
Makes apologies/explanations



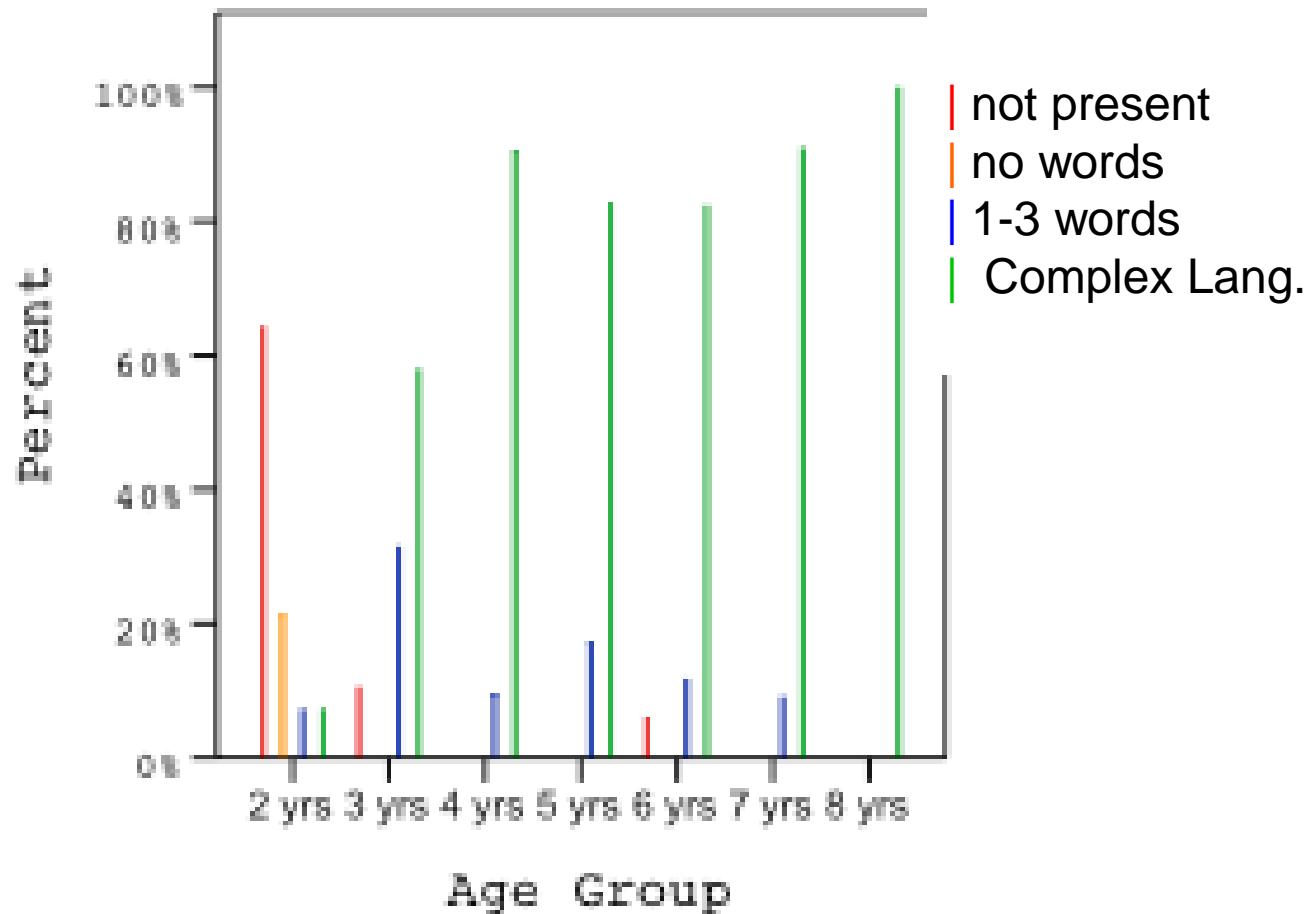
Makes apologies/explanations- Hearing



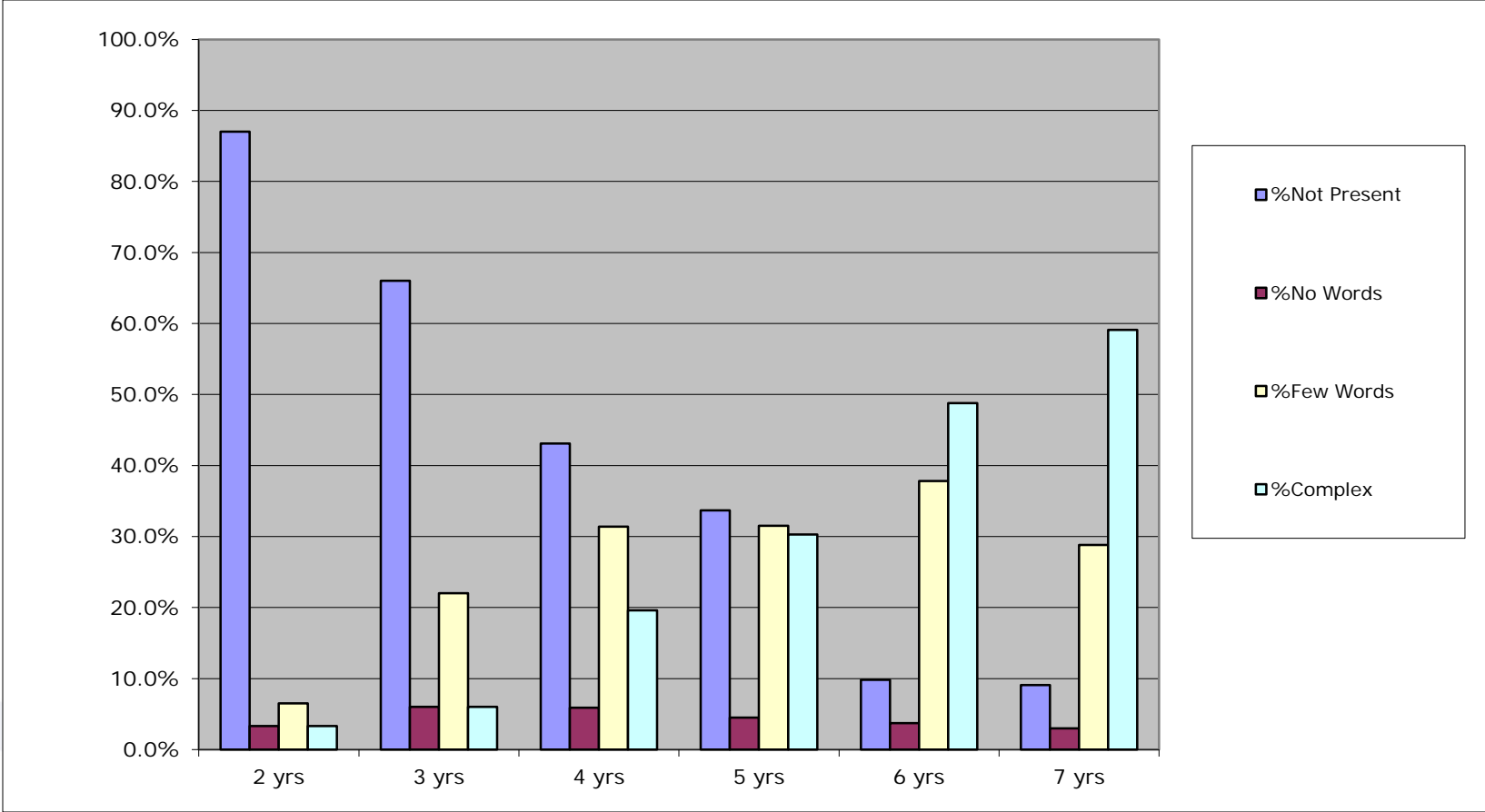
Requests clarification



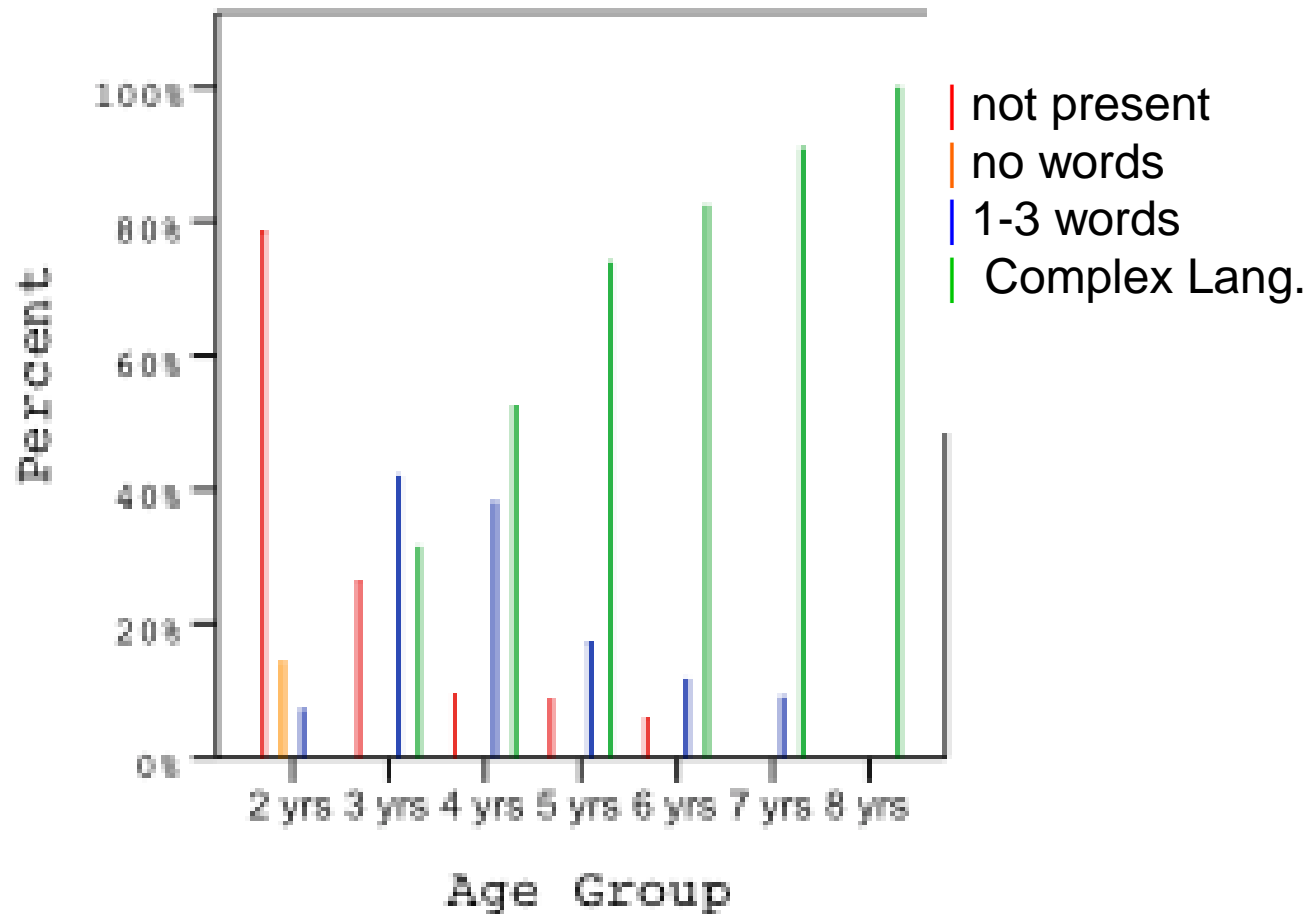
Requests clarification - Hearing



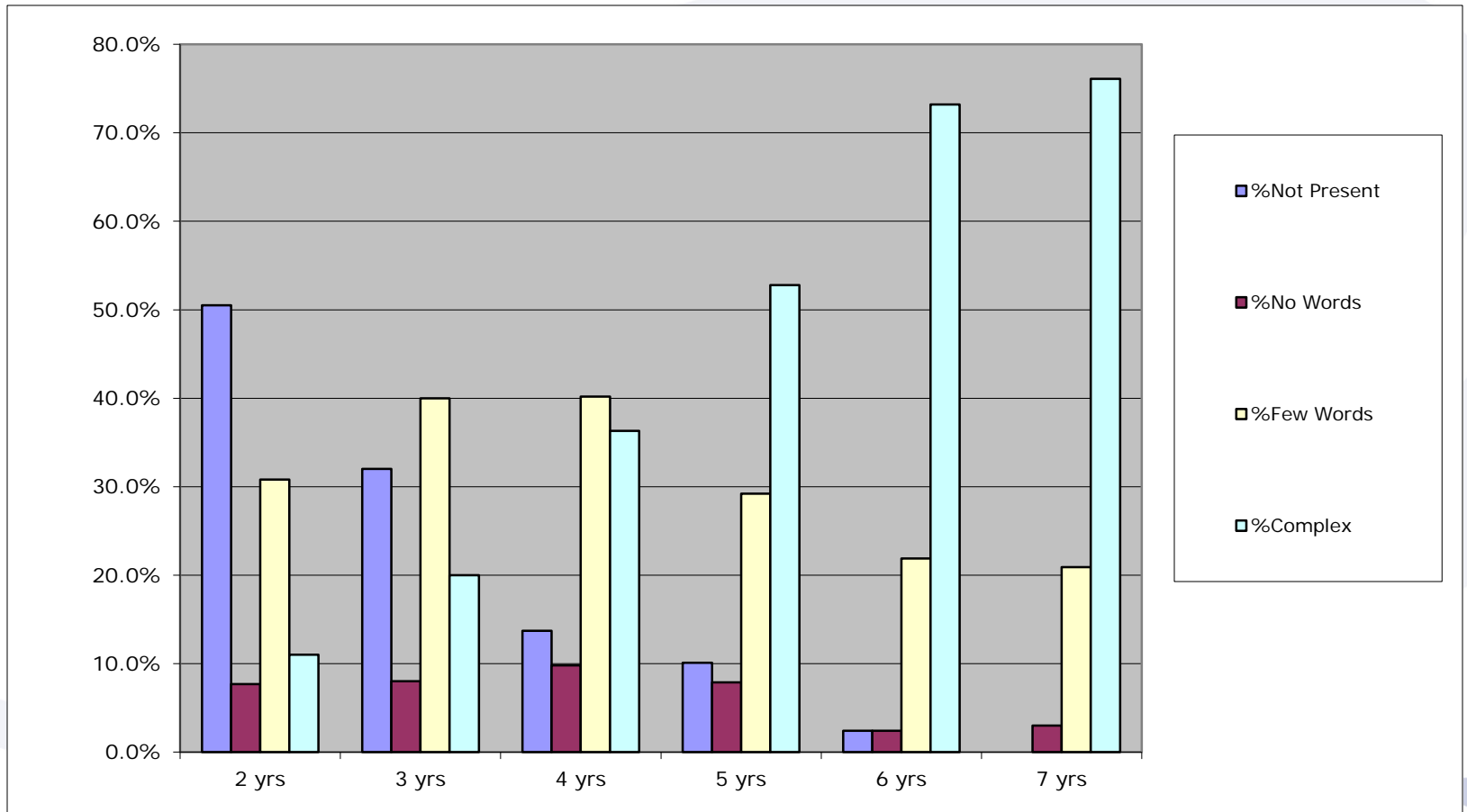
Provides information on request



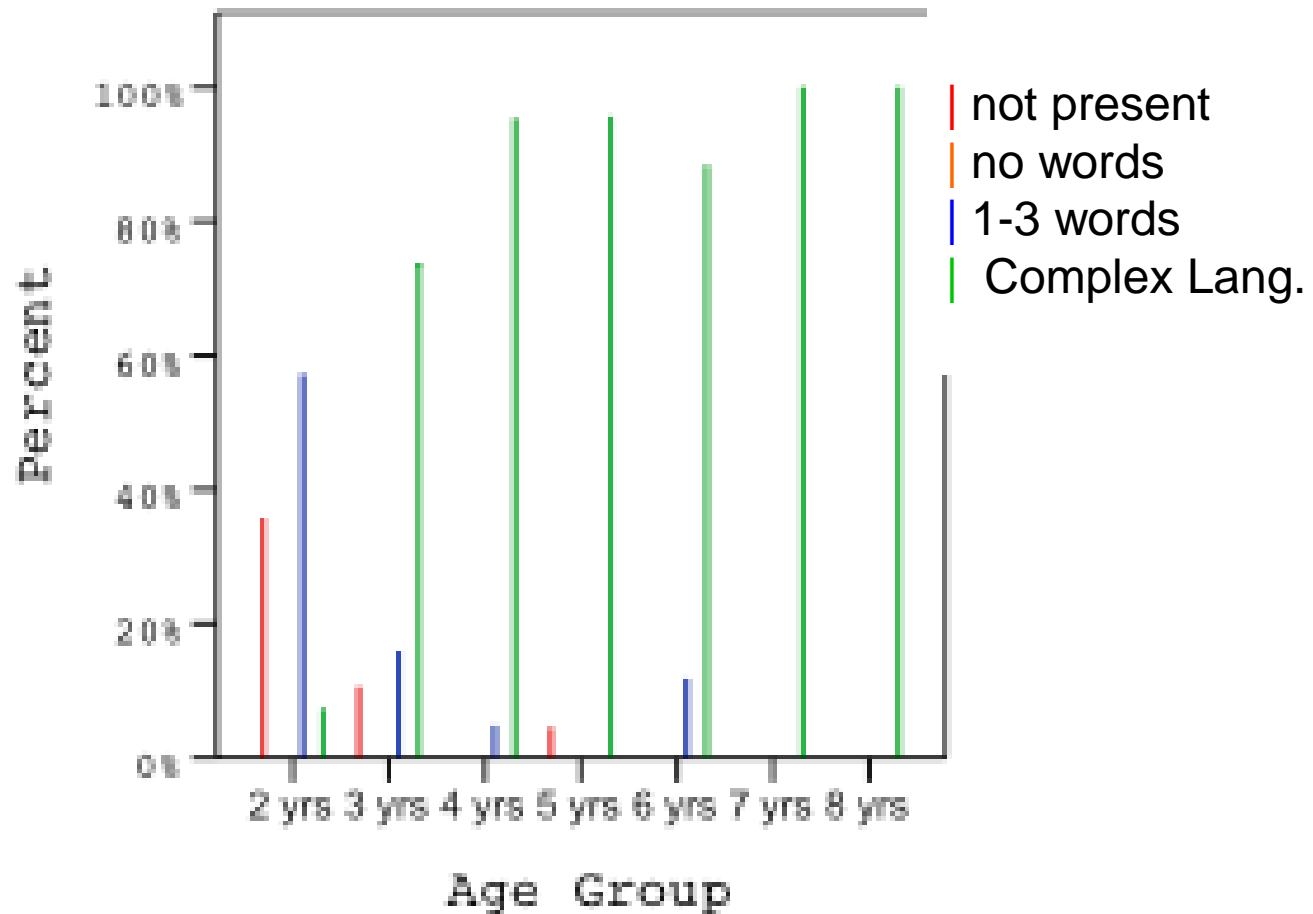
Provides information on request - Hearing



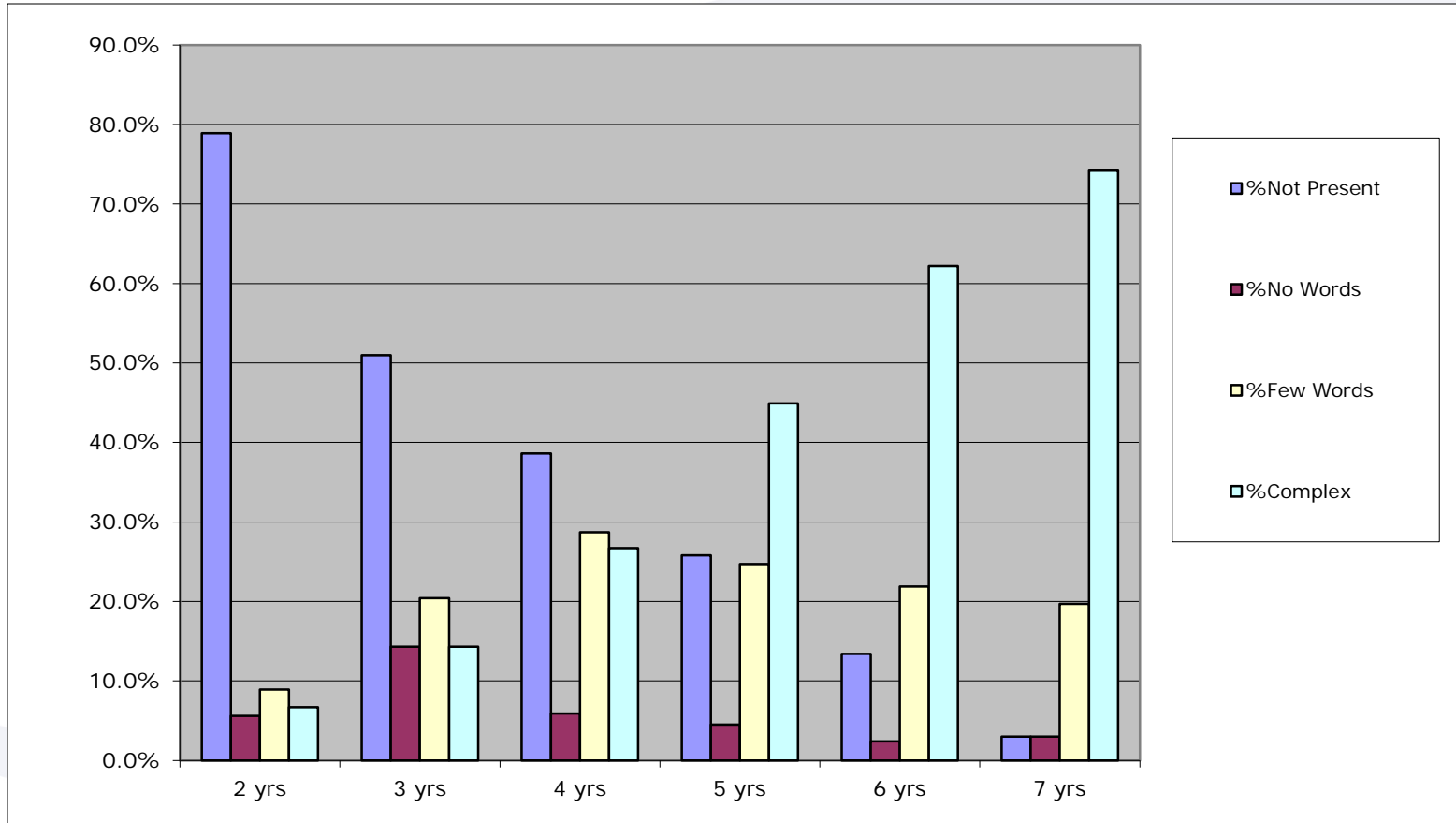
States a problem



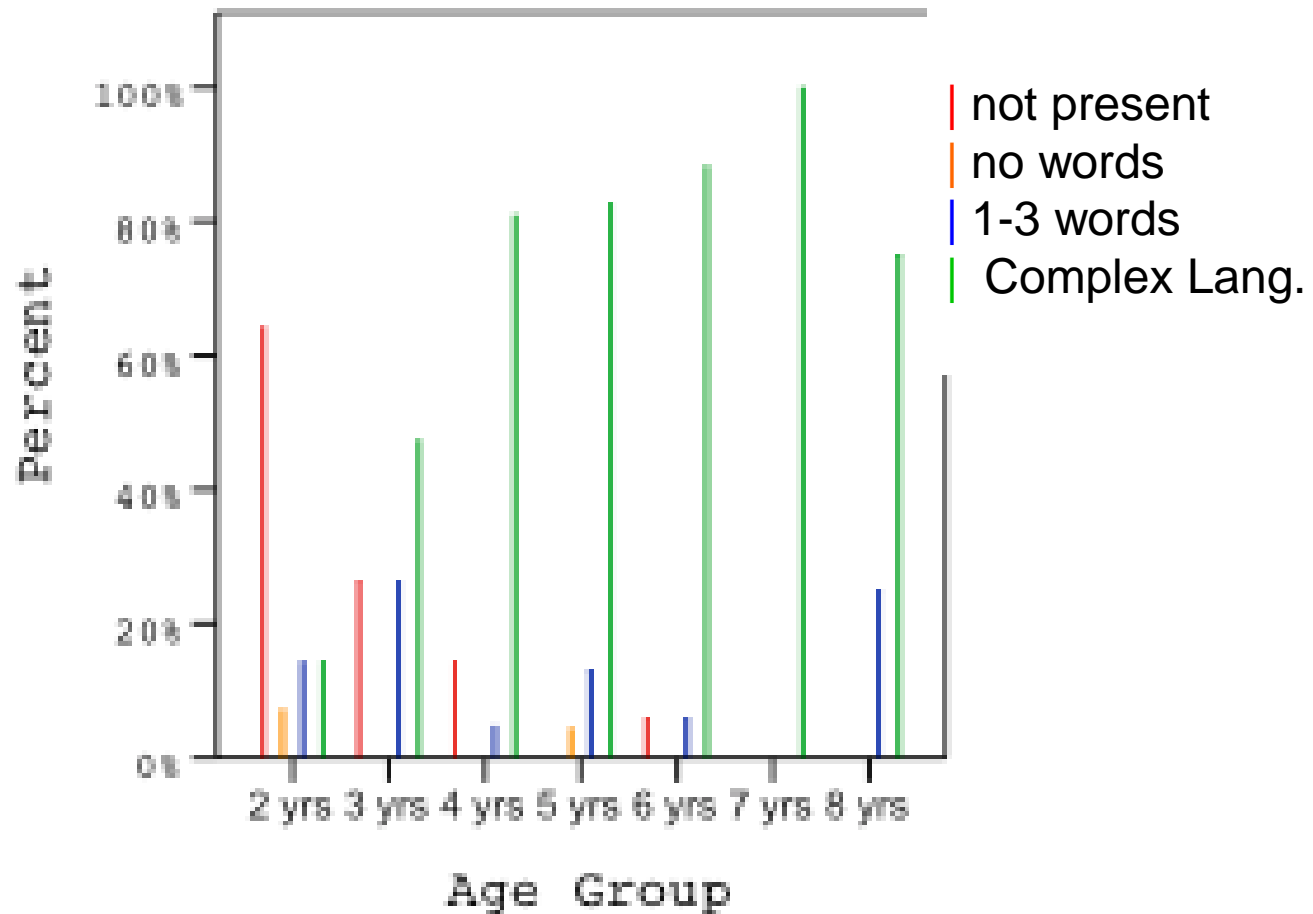
States a problem - Hearing



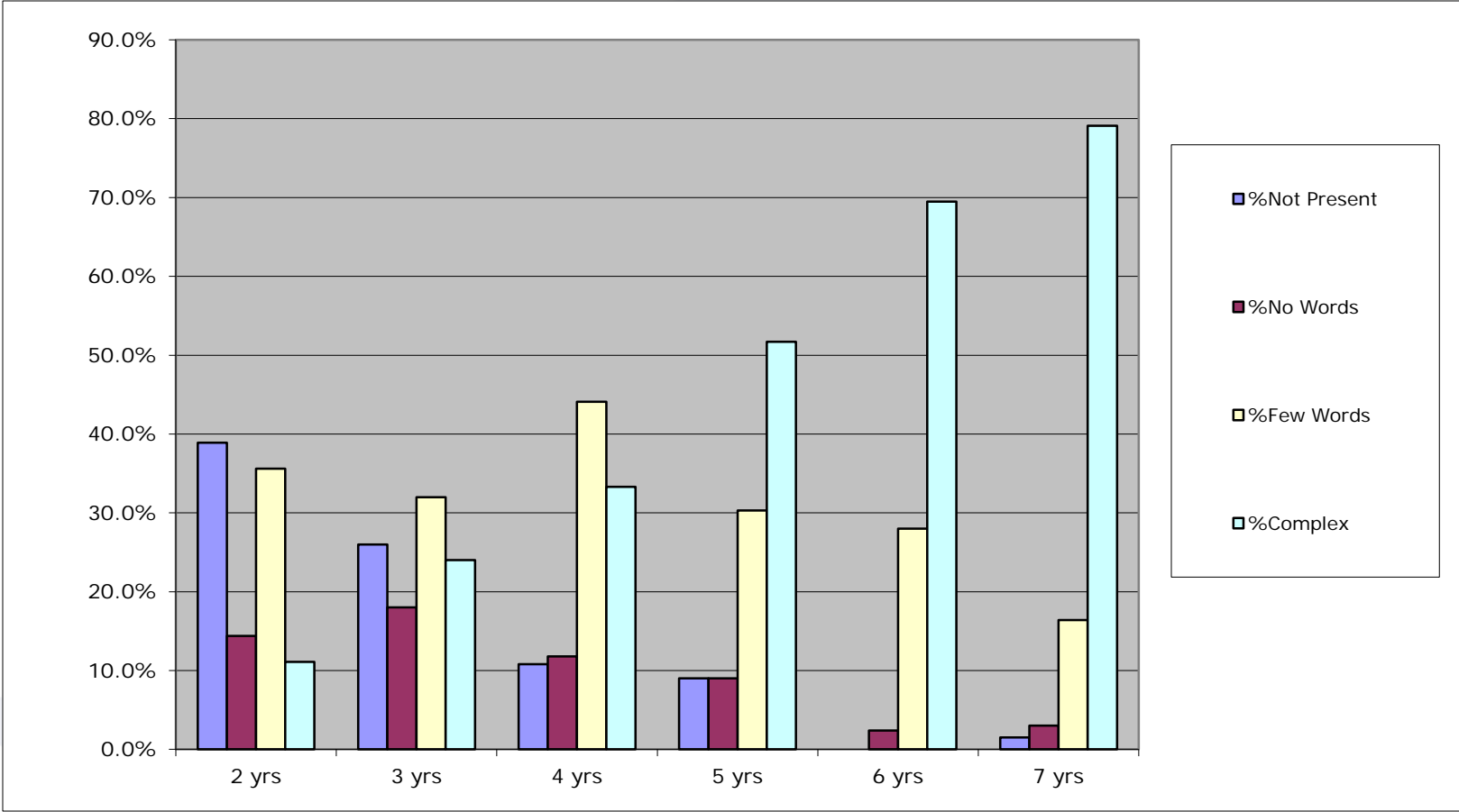
Criticizes others



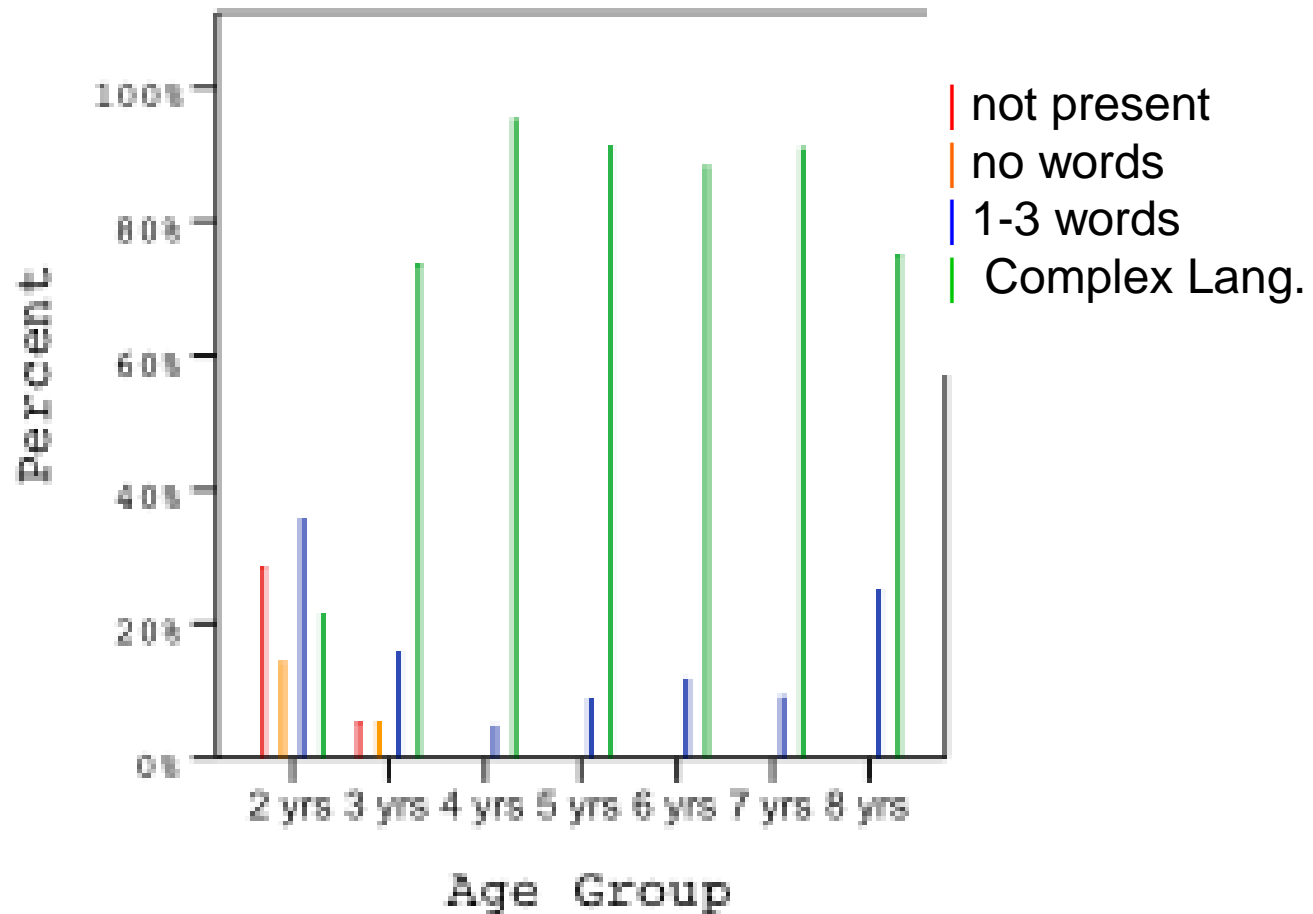
Criticizes others - Hearing



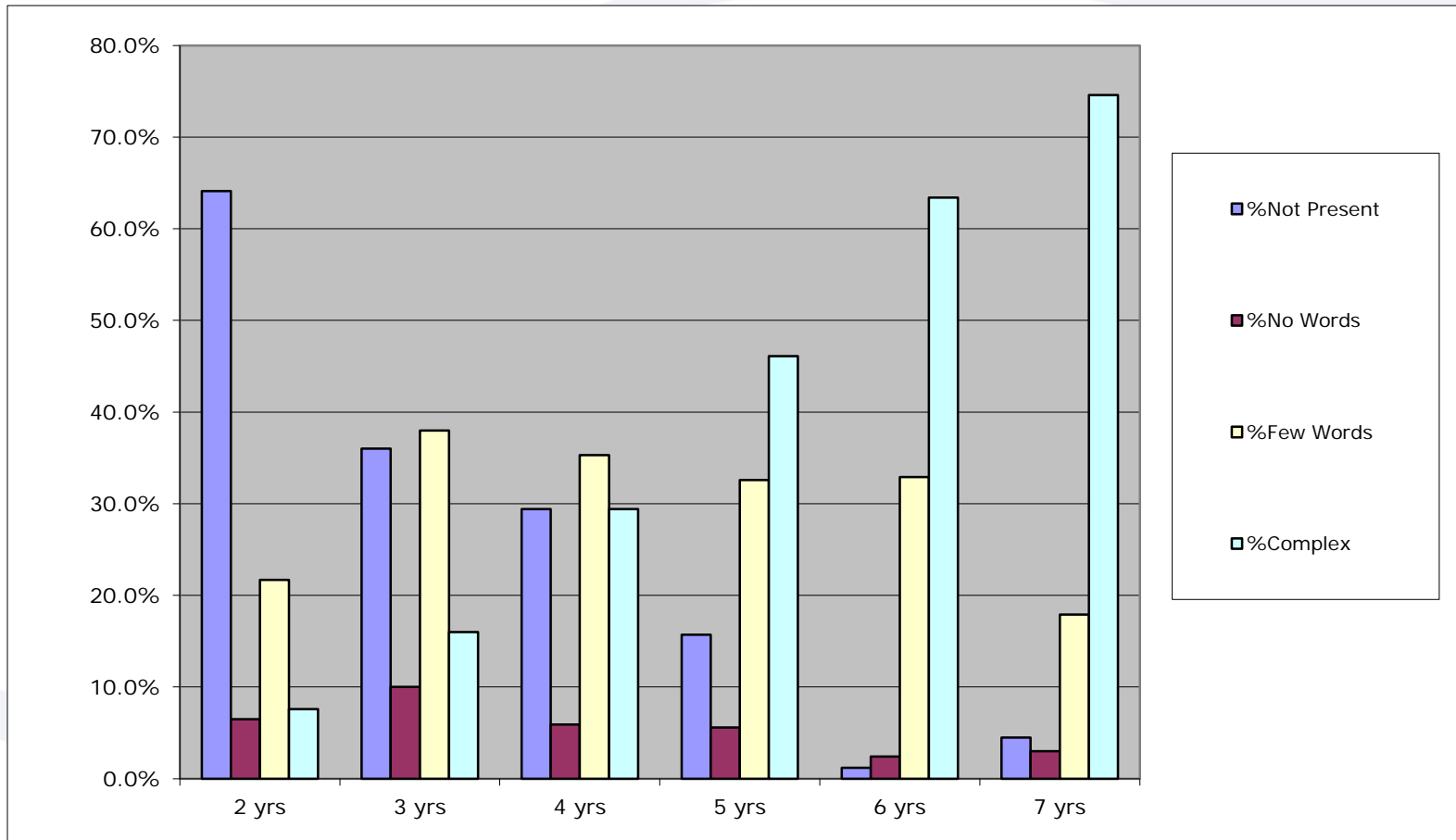
Disagrees with Others



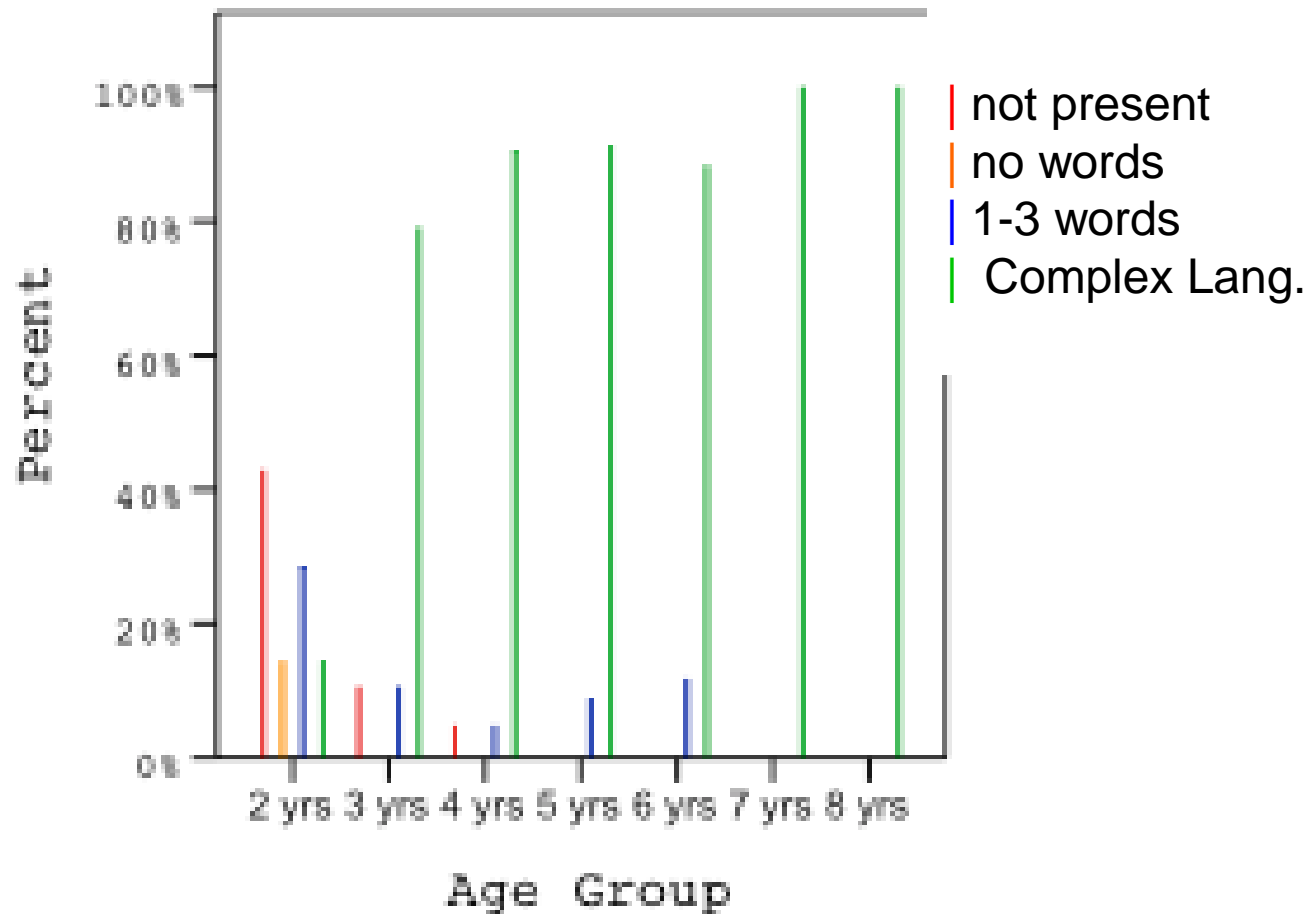
Disagrees with others - Hearing



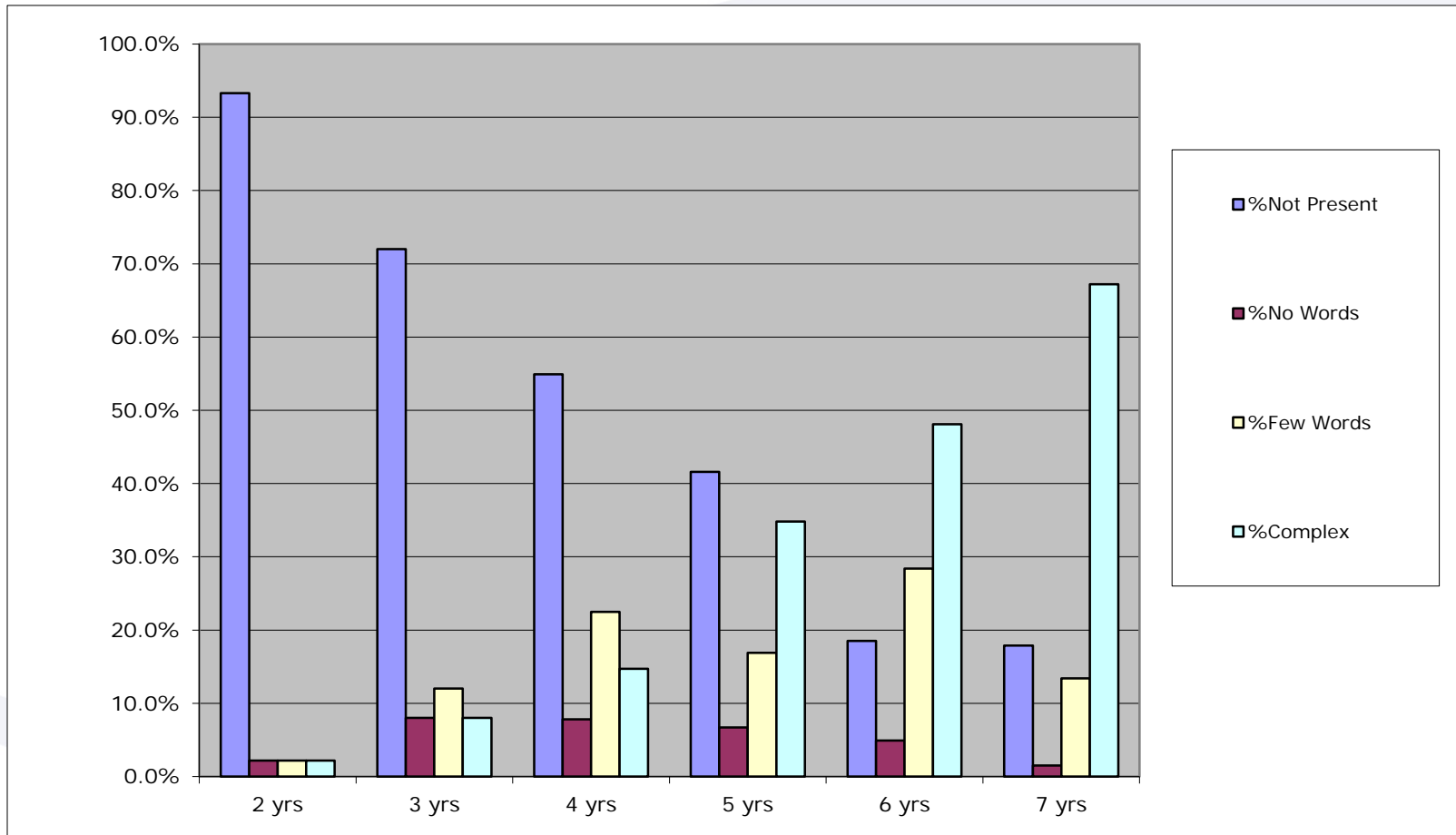
Compliments Others



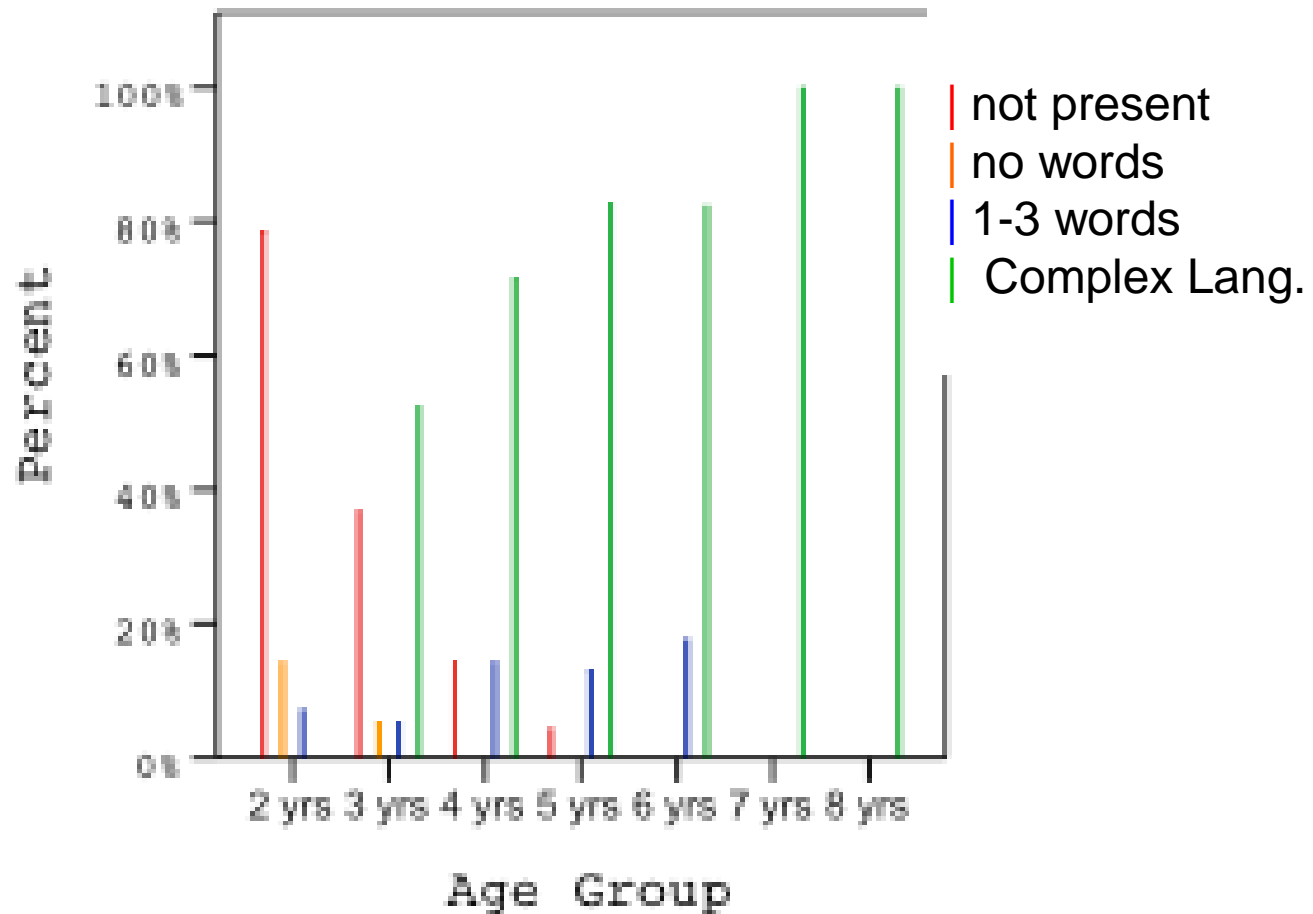
Compliments others - Hearing



Makes Promises



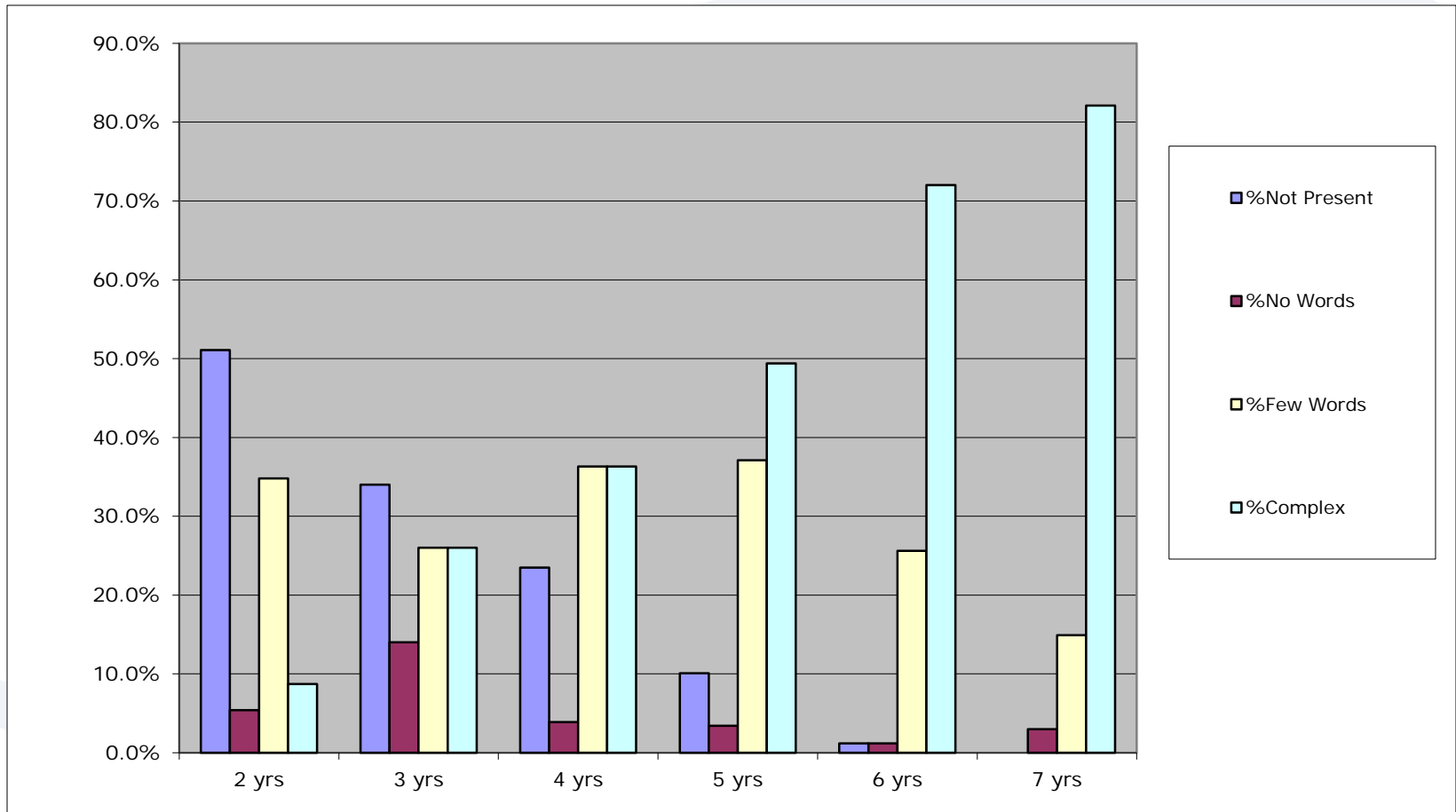
Makes promises - Hearing



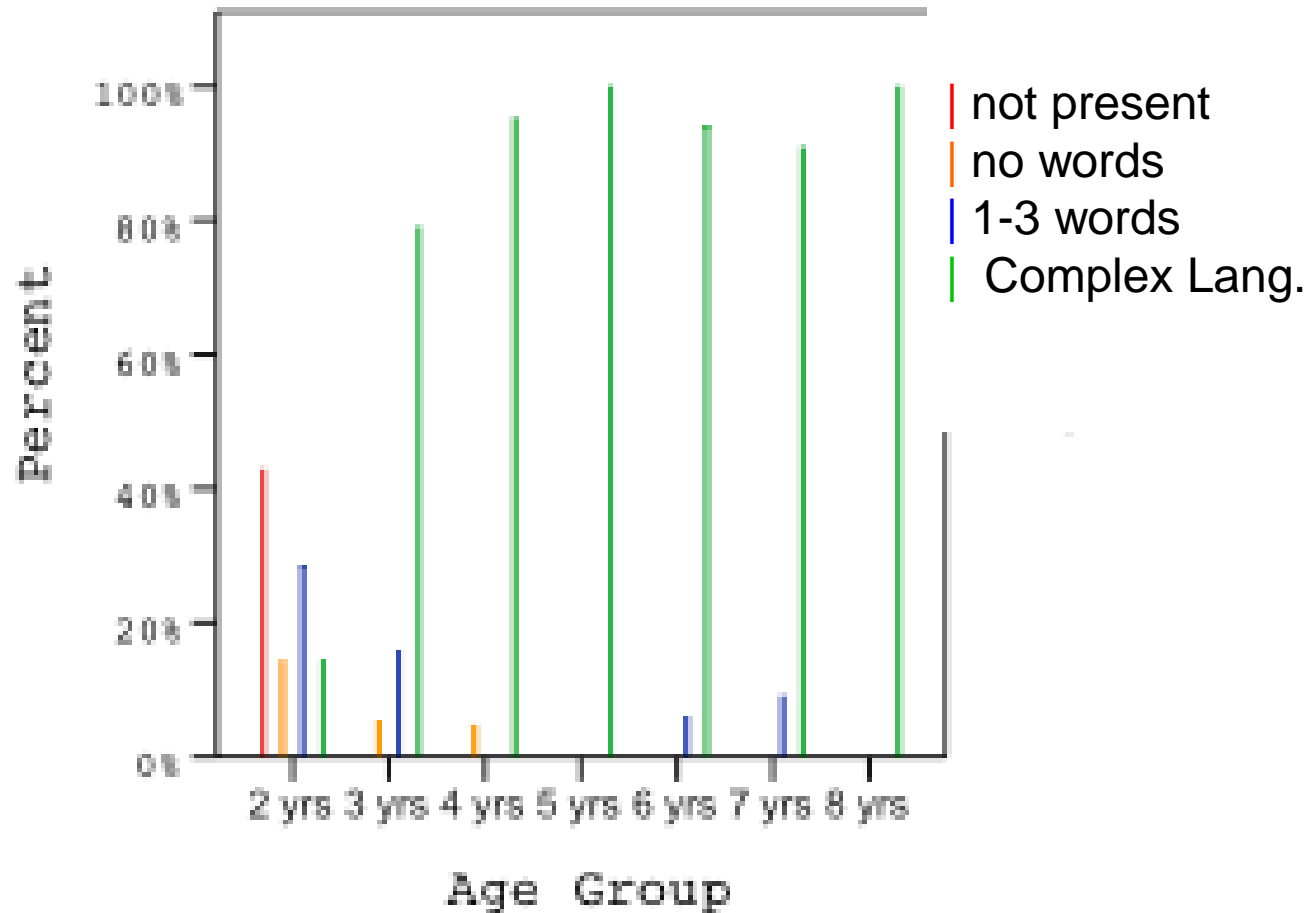
Heuristic

- Tell me why
- Requests for information

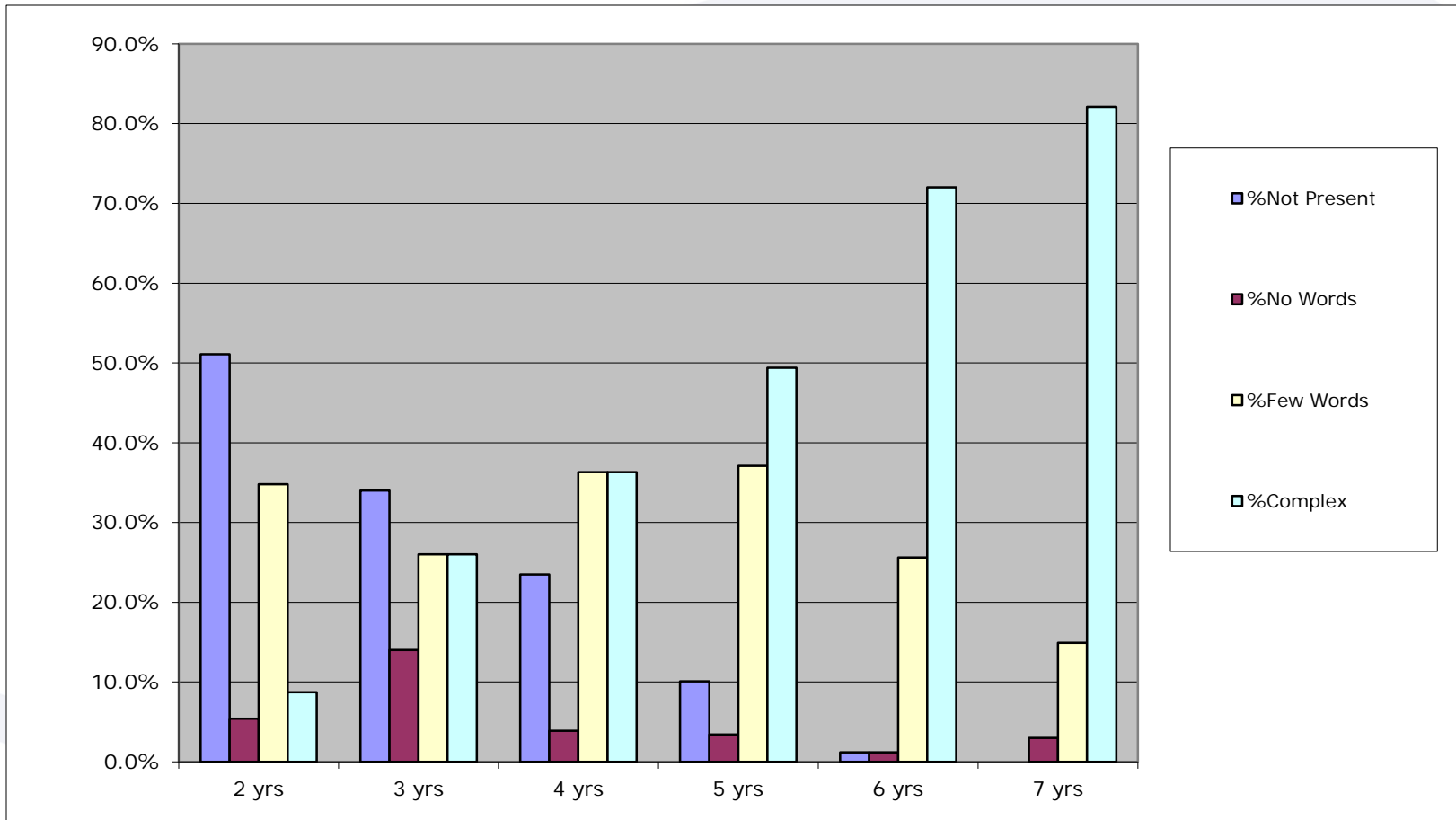
Questions for more information



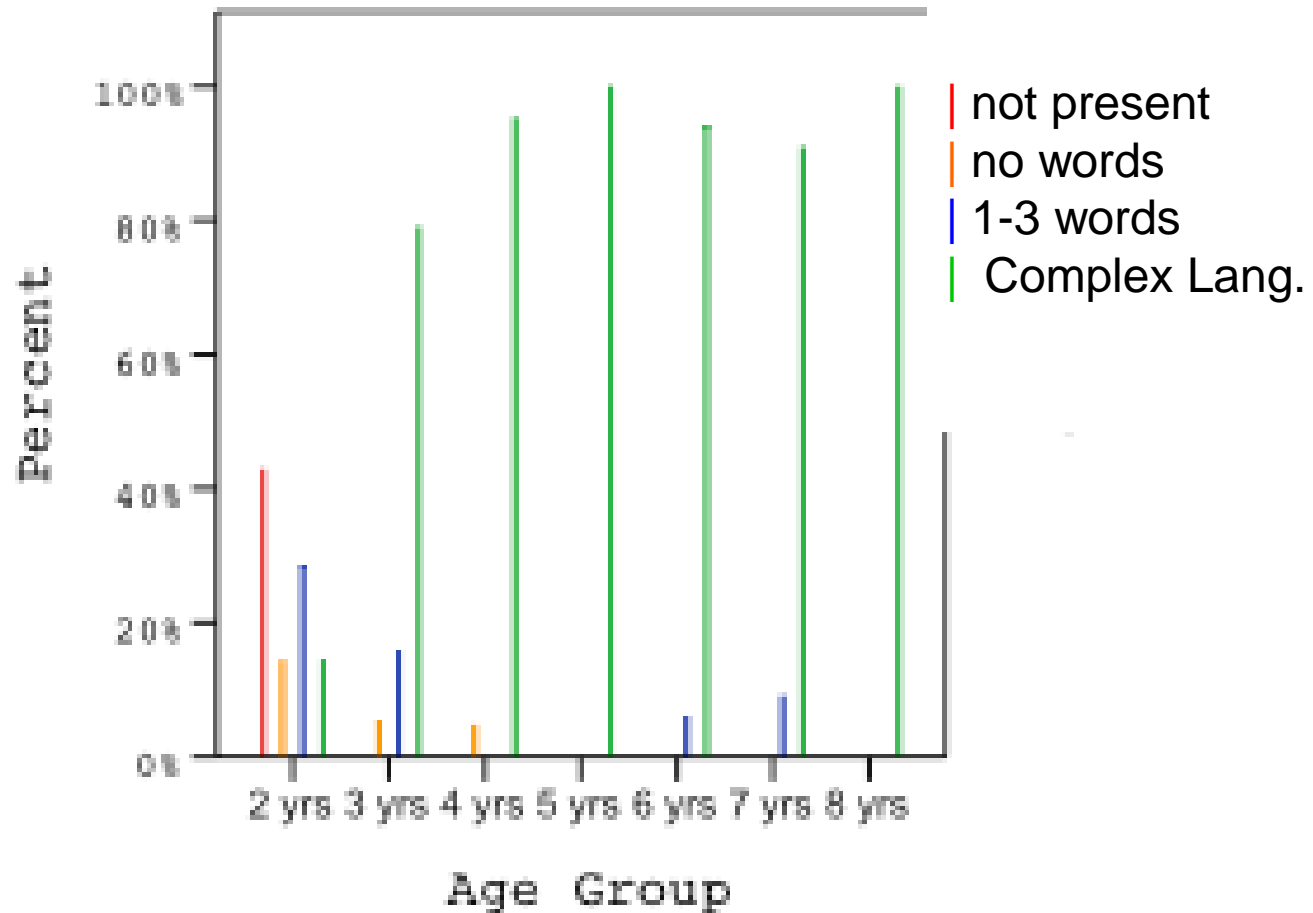
Asks questions for clarification - Hearing



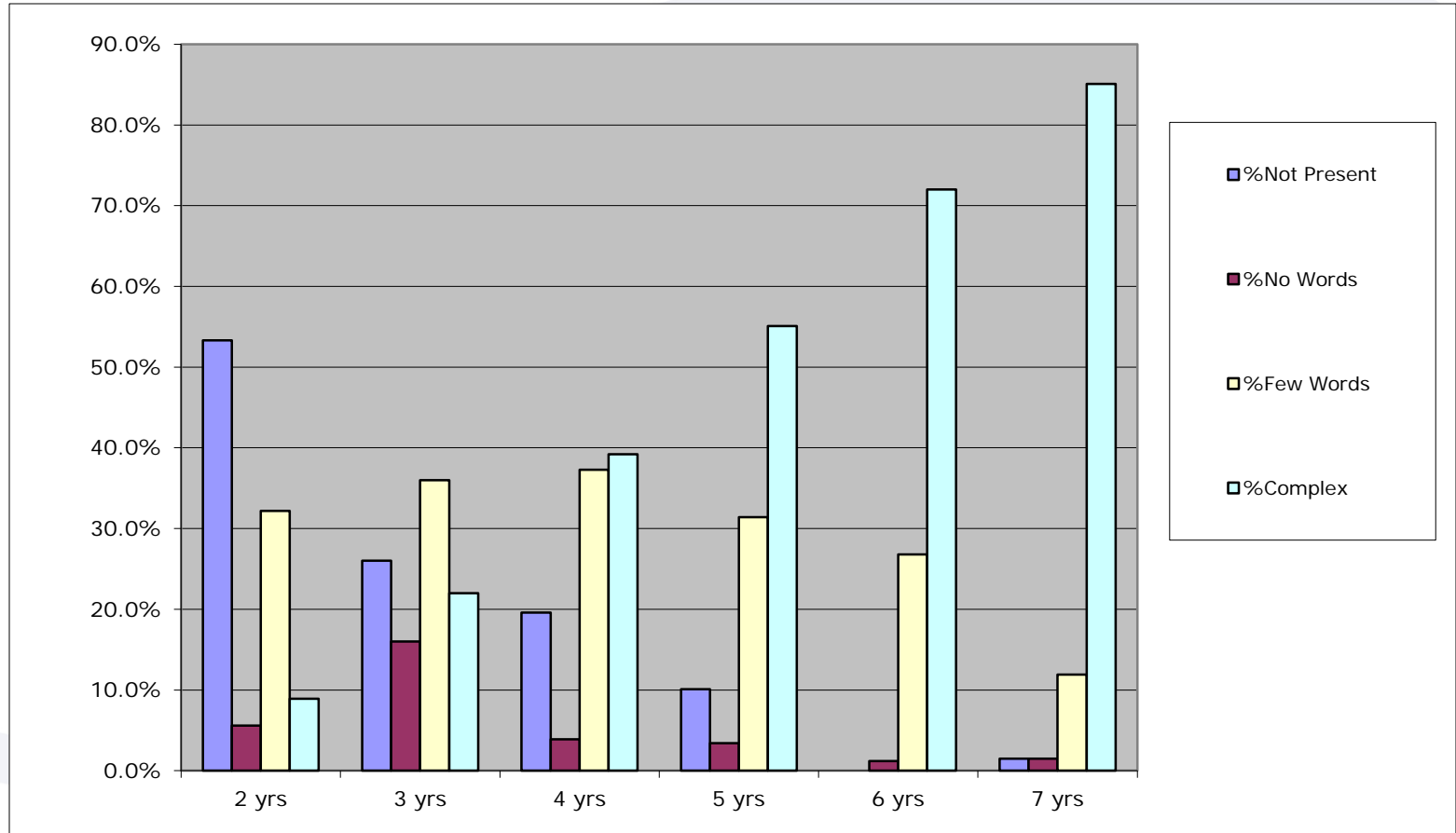
Questions to systematically gather information



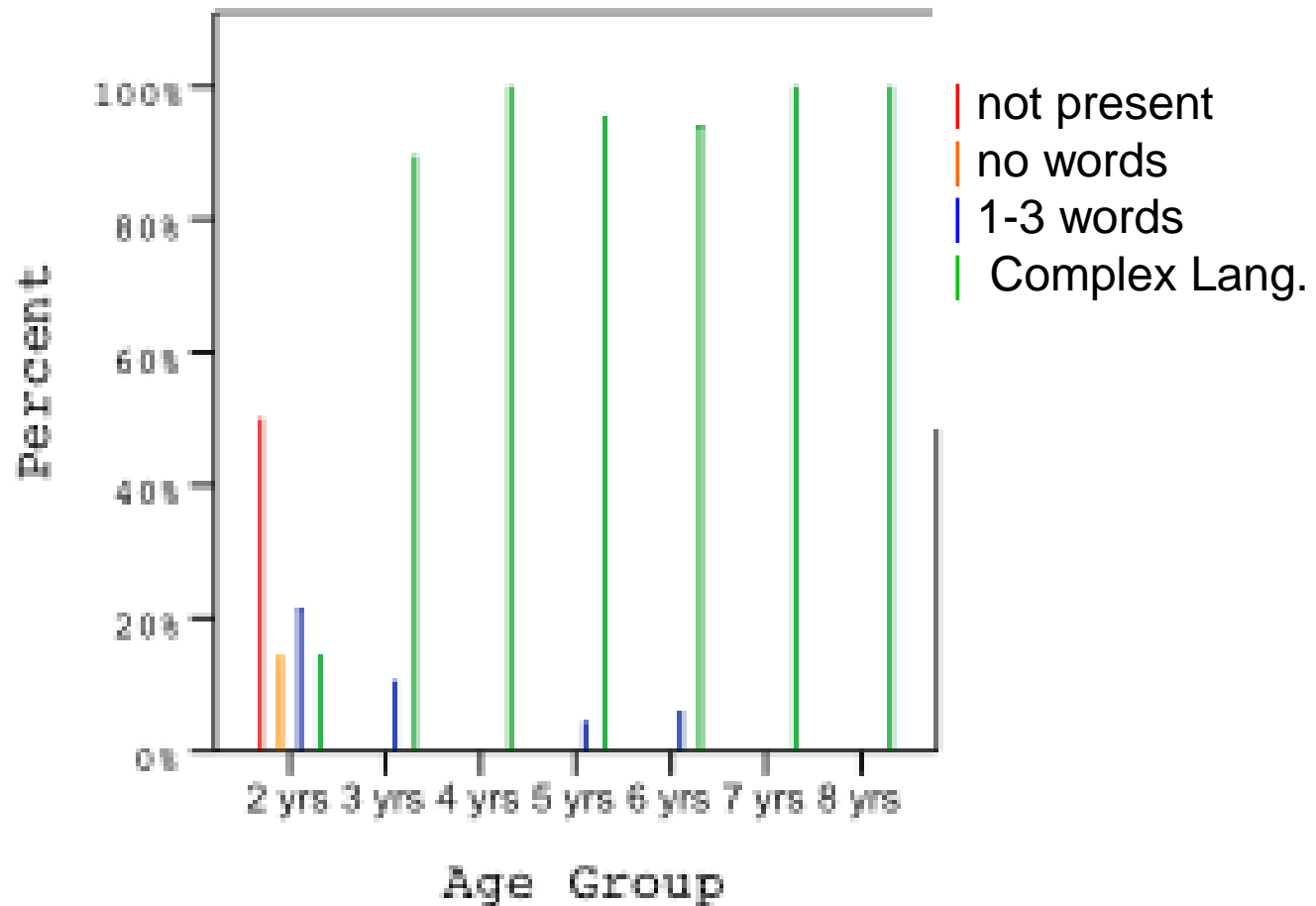
Asks questions for clarification - Hearing



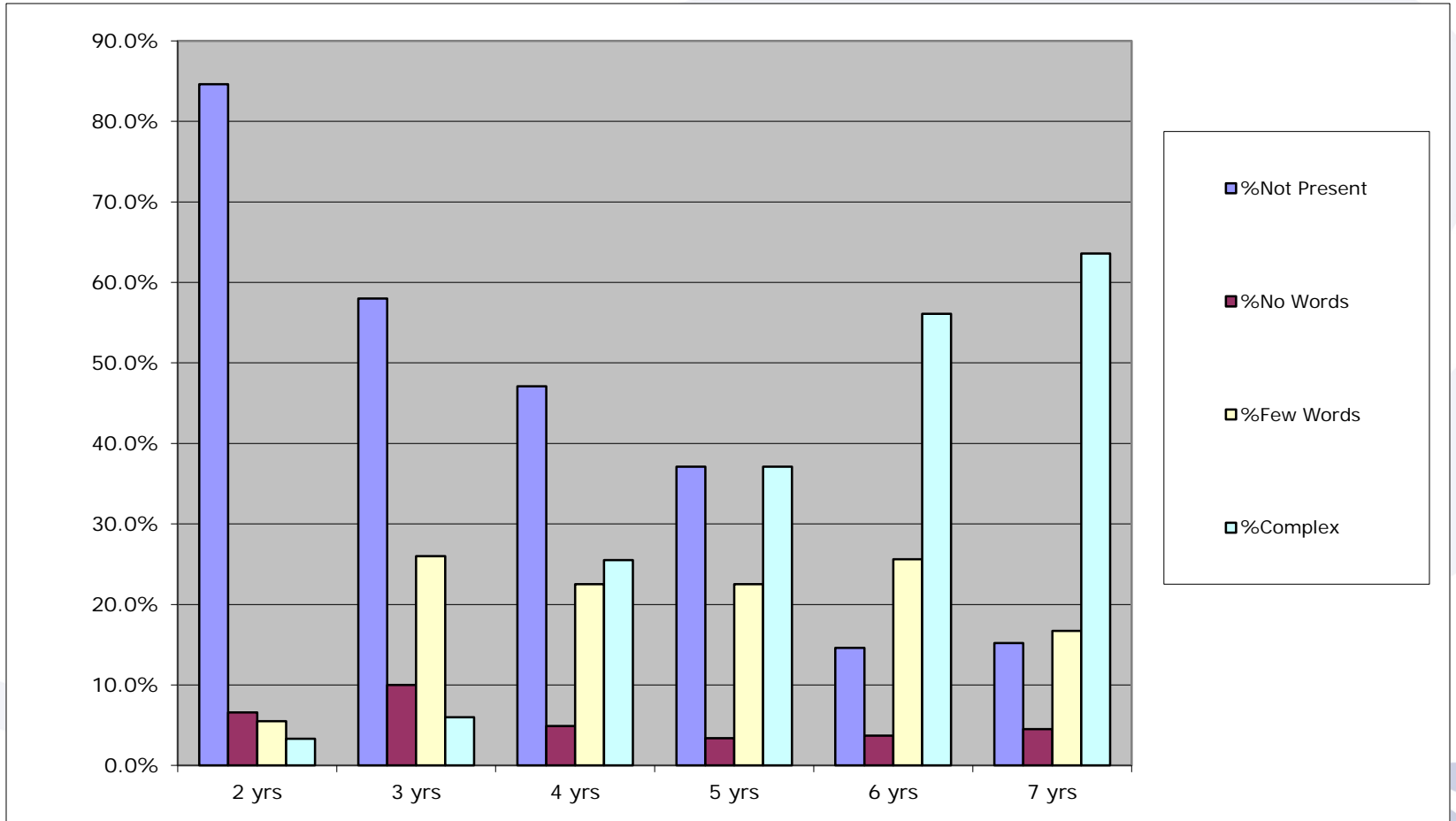
Questions for curiosity



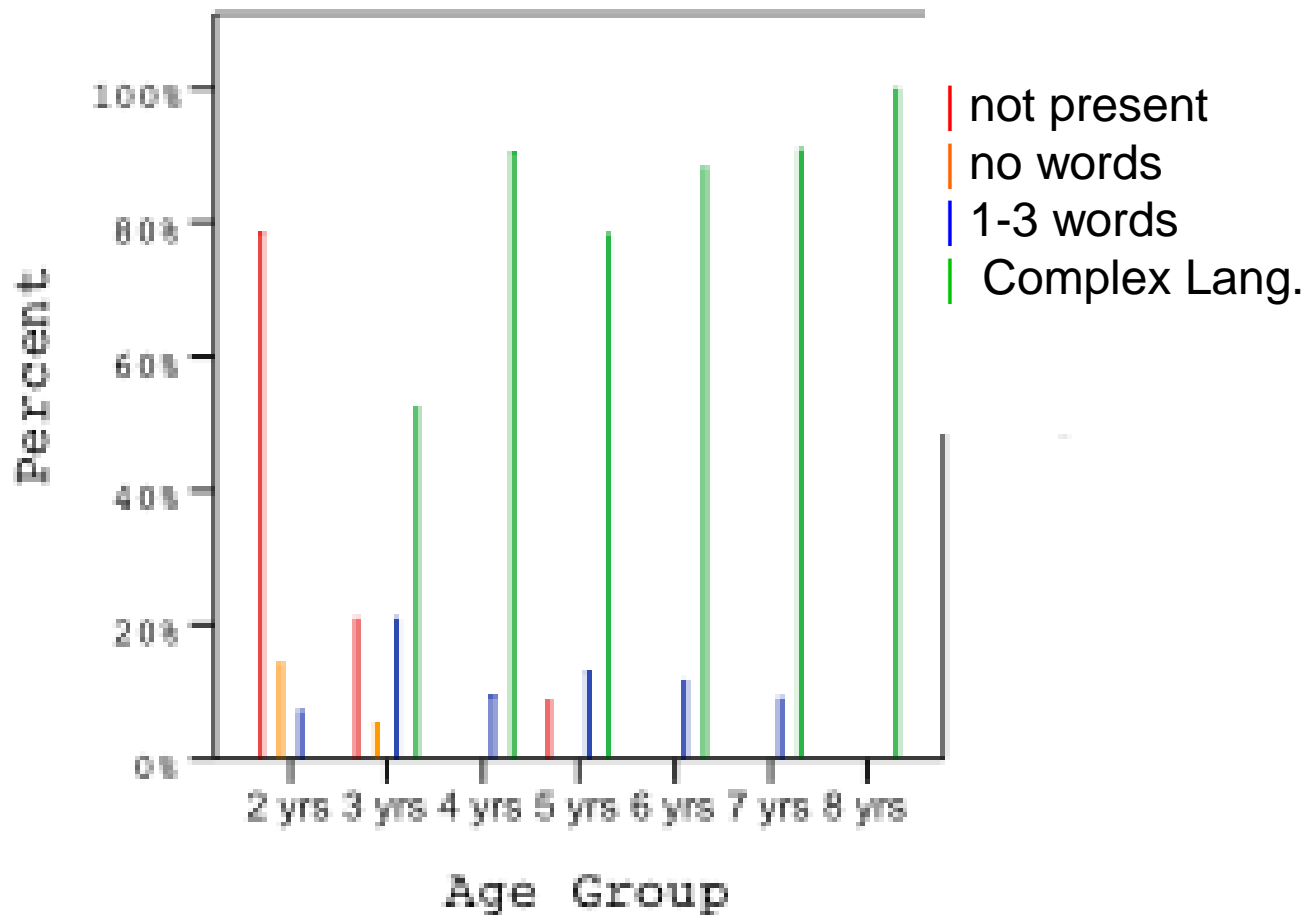
Questions for curiosity - Hearing



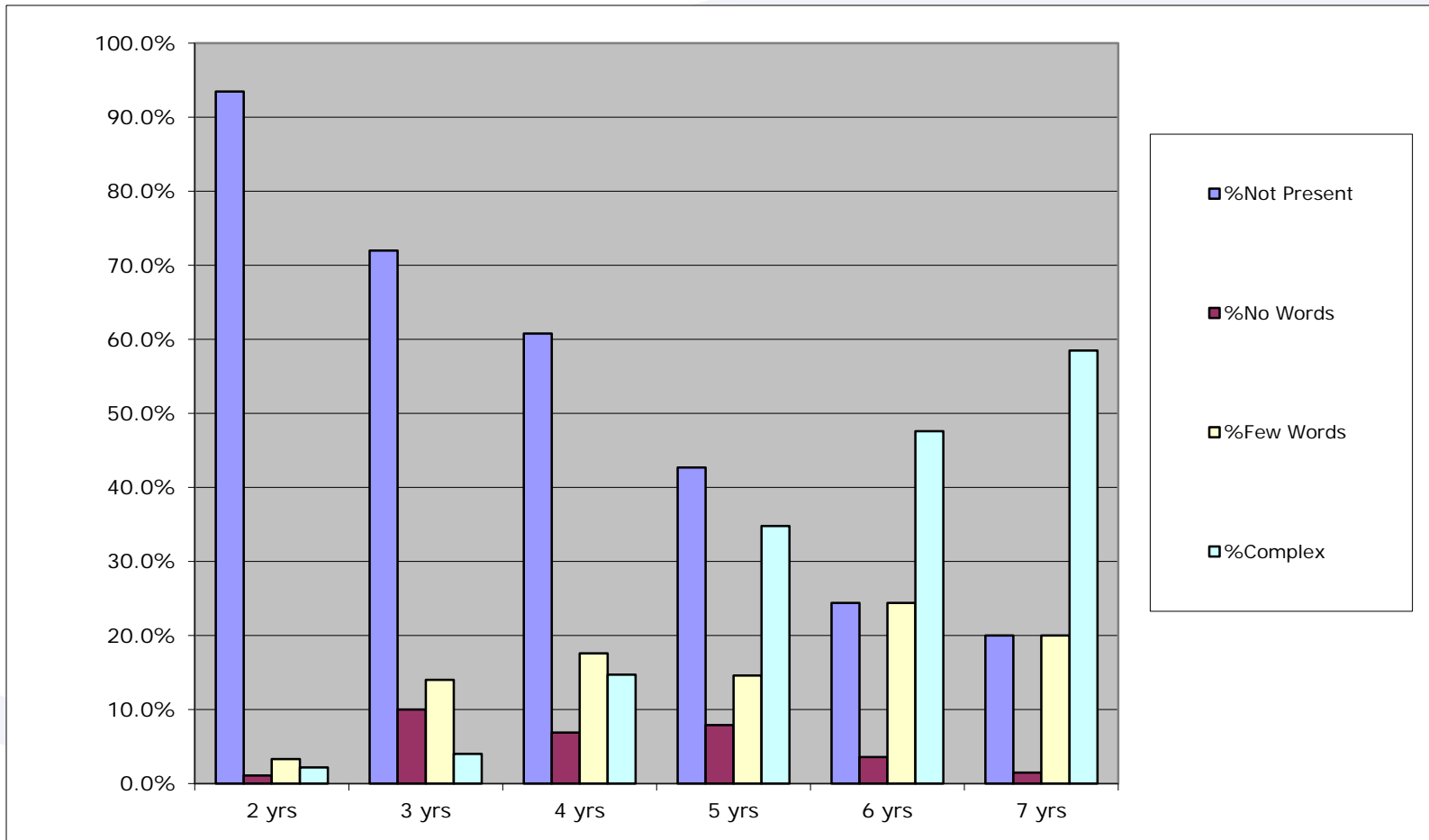
Questions to problem solve



Ask questions to problem solve - Hearing



Questions to make predictions



Asks questions to make predictions - Hearing



Twenty questions

- May have to teach child how to play
 - What does the answer to the question eliminate?
 - Is it an animal?
 - Is it alive?
 - Easiest to learn with a closed set of answers –rather than everything in the room
 - May have to cross out the things that it can't be after getting an answer to a question

Twenty Questions

- Closed Set of pictures
- Mother is thinking of a picture
- Child asks questions – Model yes/no questions
- Is it alive – cross out all the things it can't be
- Is it white? - cross out all the things that it can't be

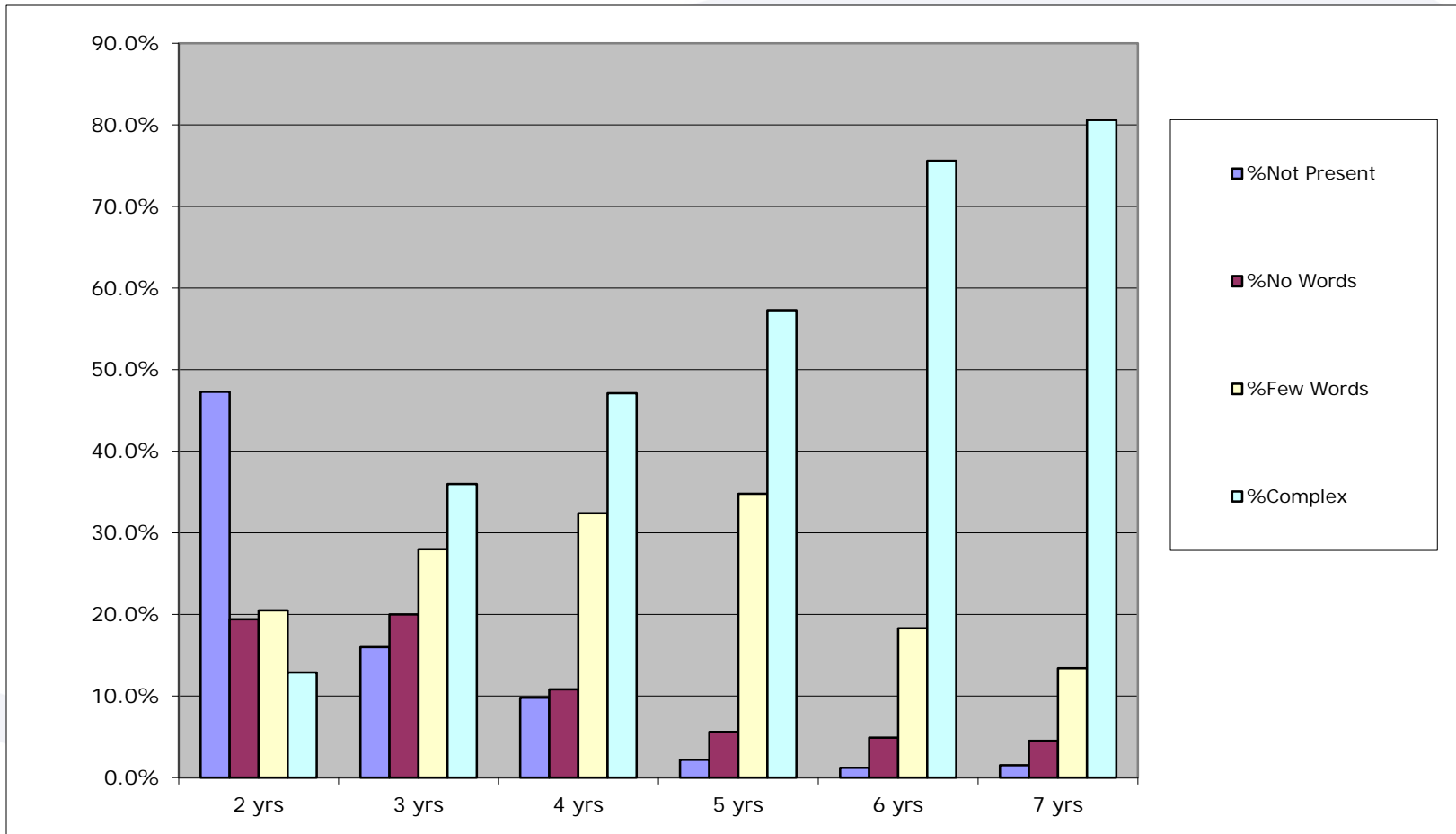
Twenty Questions

- Holding information in your head to use for the next question
- Categorizing things
- Categorization often begins with visual characteristics
 - name of the category
 - ▣ What pictures are things that are alive?
 - ▣ What pictures are things that are big?
 - ▣ How do the animals move? – do they fly, swim, walk?

Imaginative

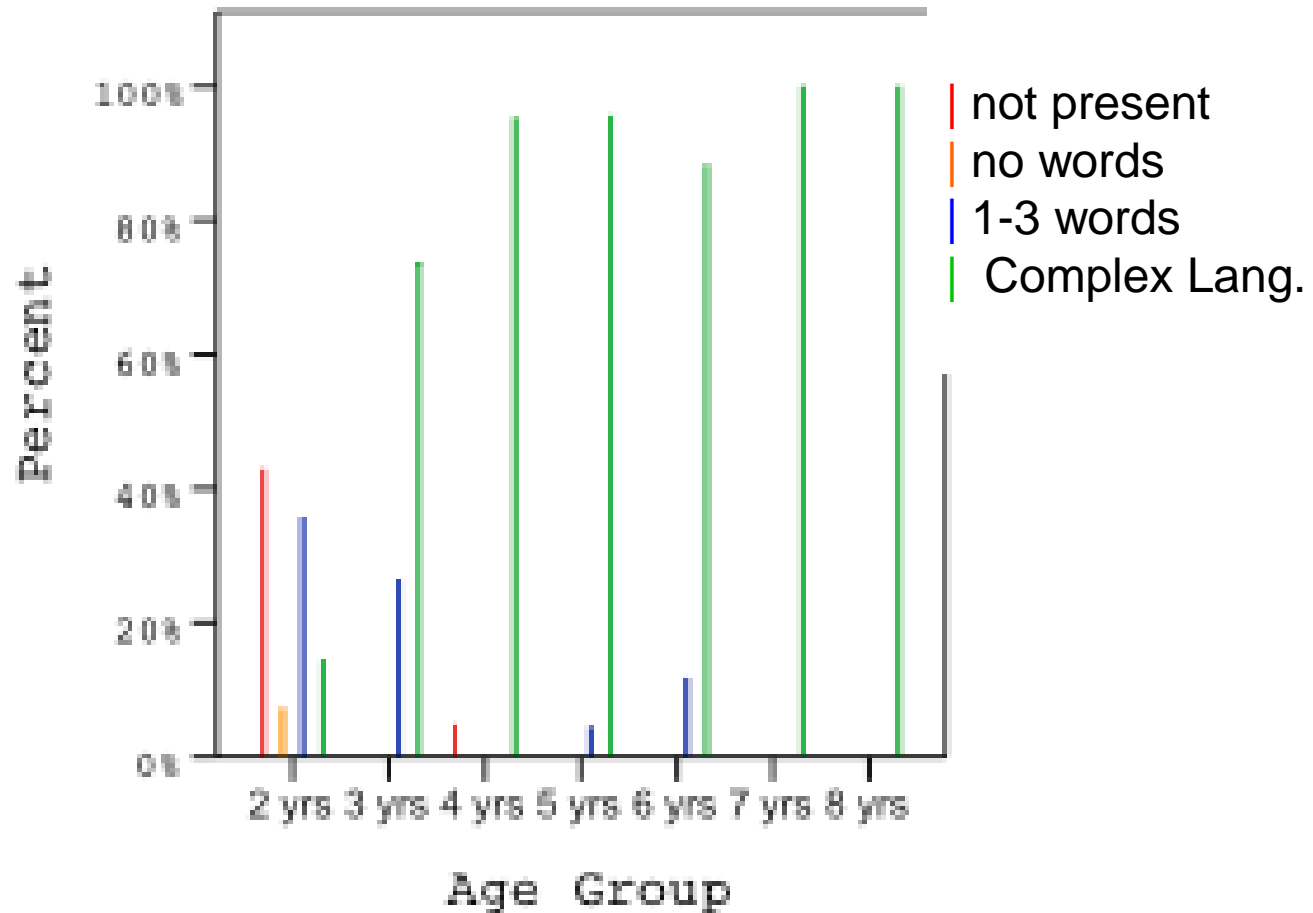
- “Let’s pretend”
- The creative strategy
- role playing
- creating a story

Role plays with different characters

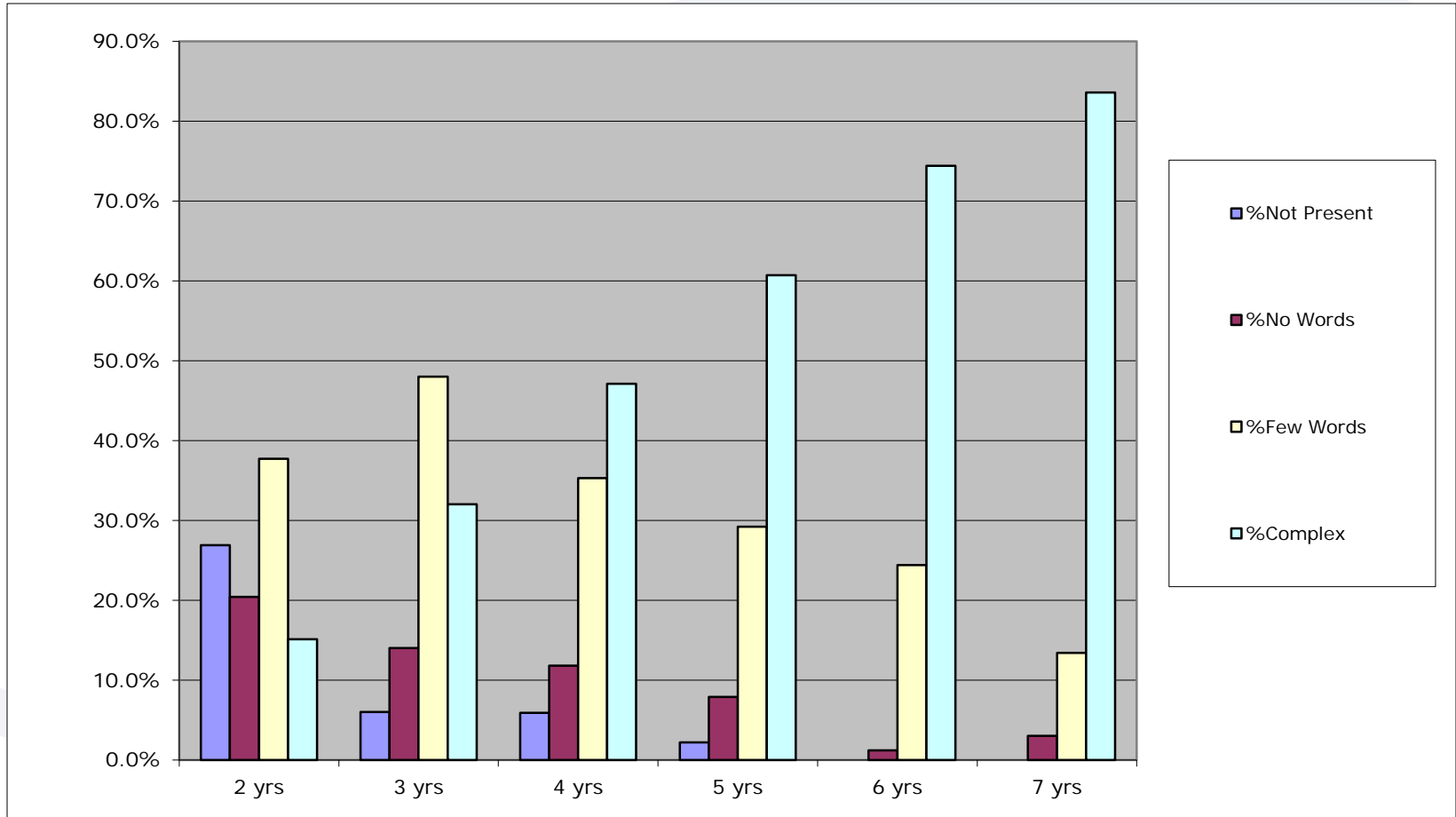


Role plays with different characters

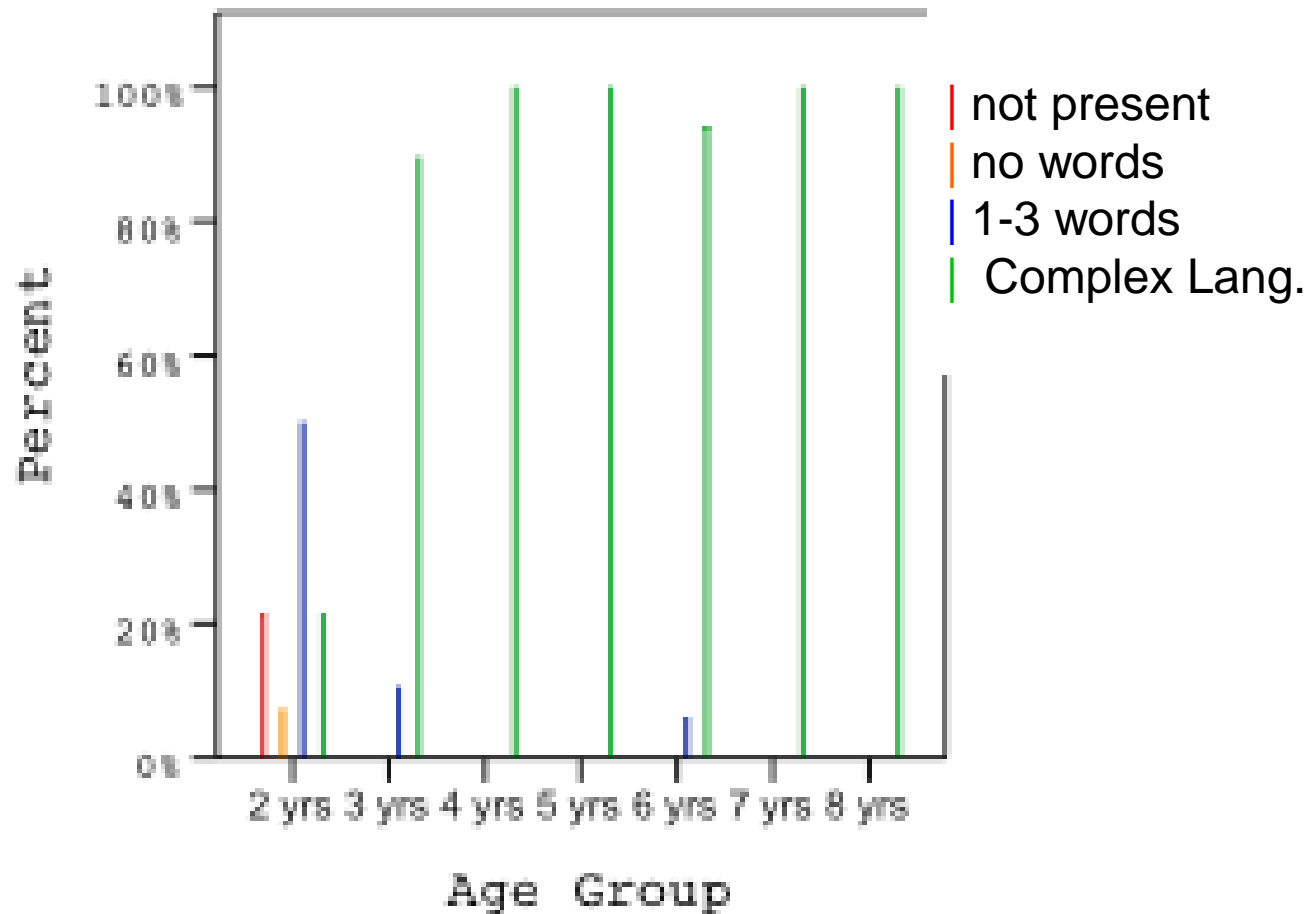
- Hearing



Role plays with props



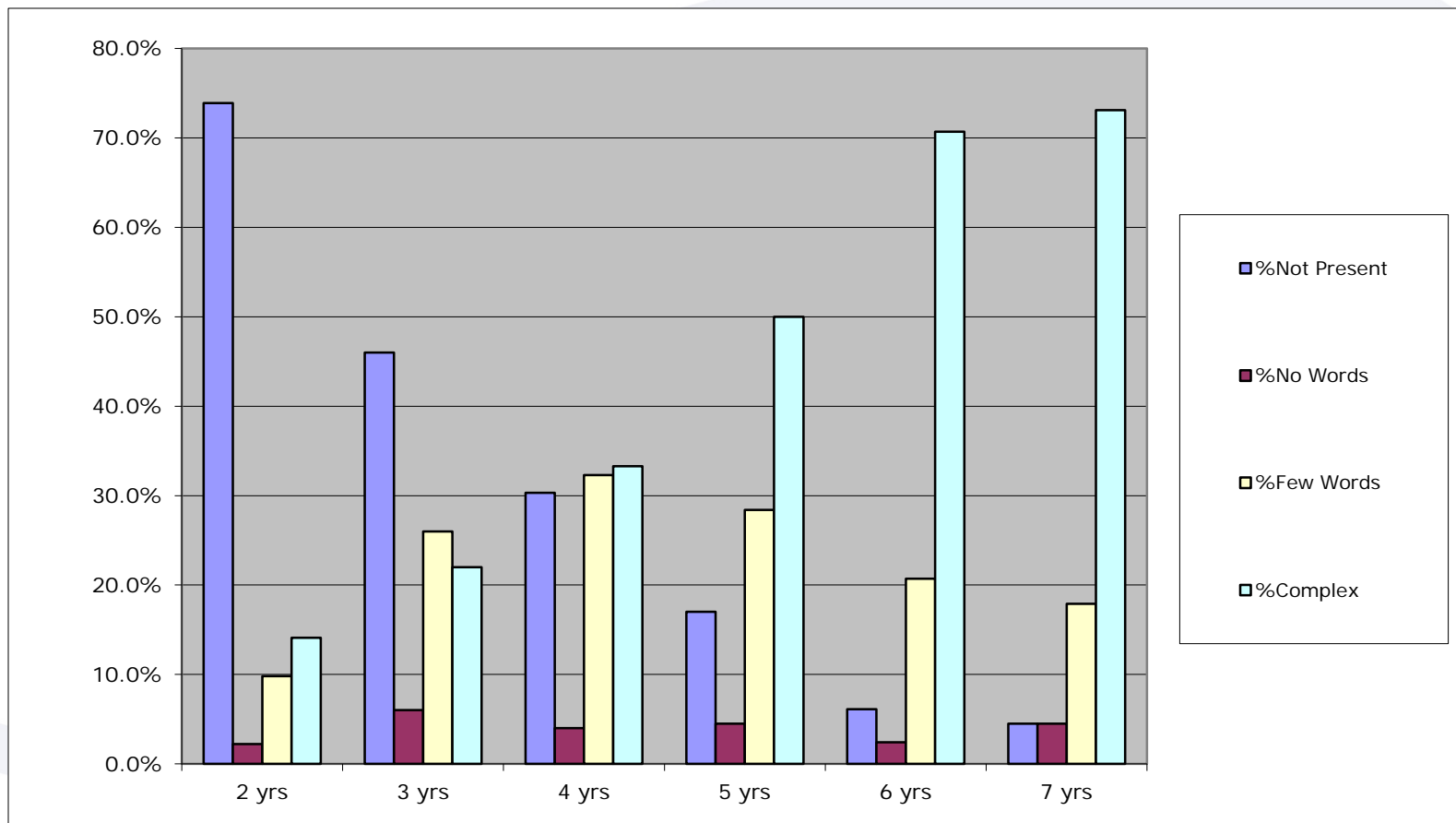
Role plays with props - Hearing



Informative

- “I’ve got something to tell you”
- organized description of a situation or object
- observations of cause/effect
- compare and contrast
- improve story quality after modeling

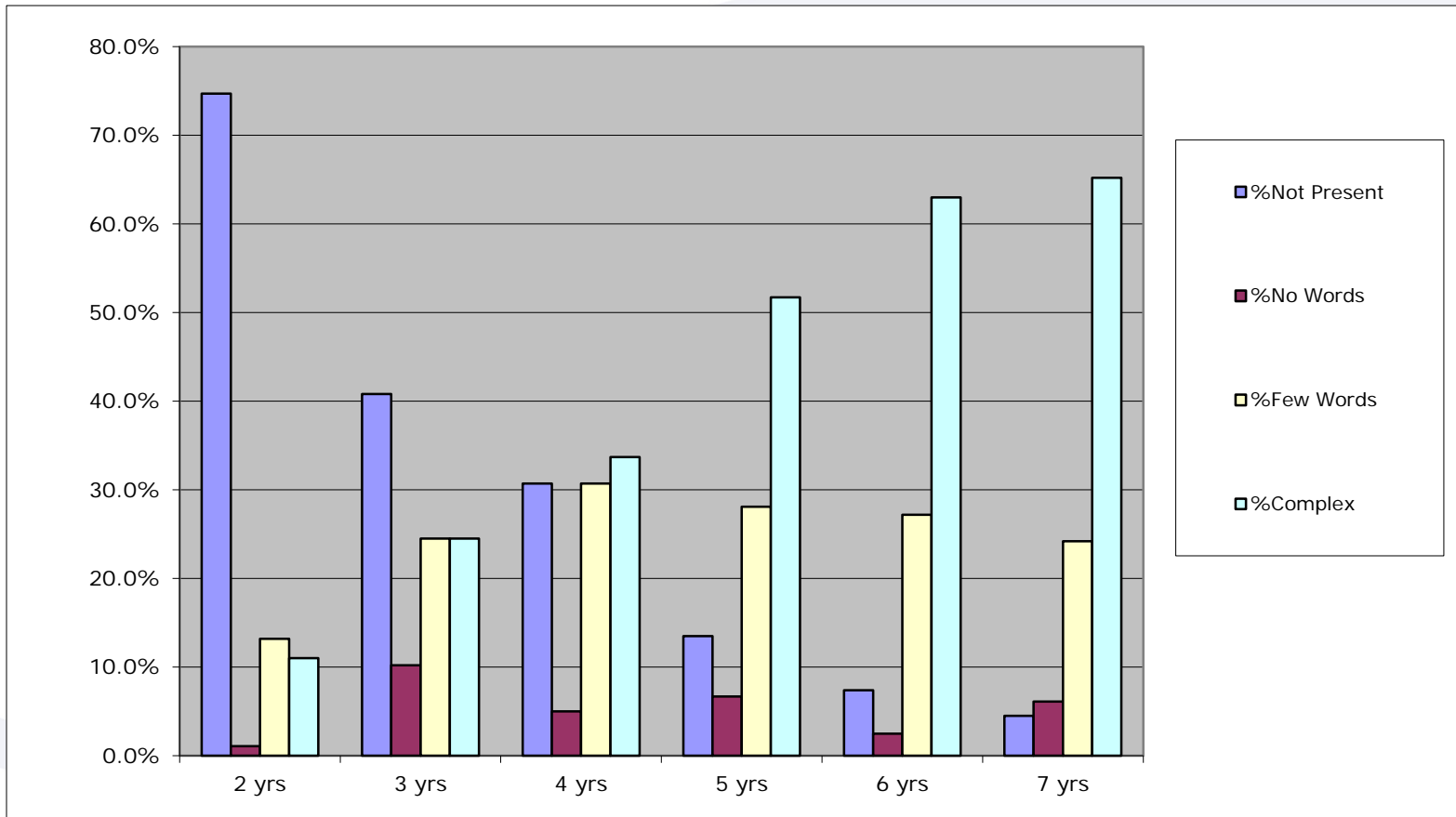
Provides description of situation



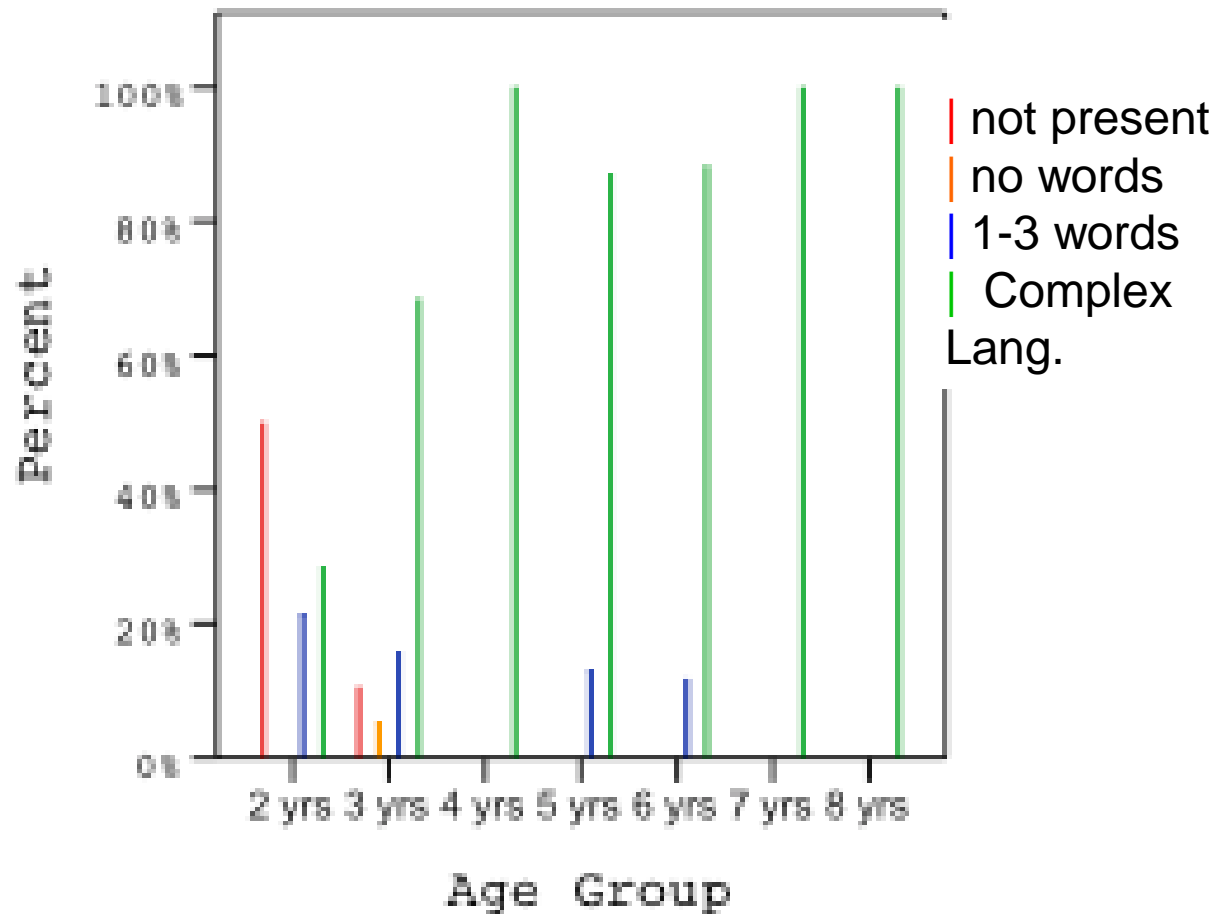
Provides description of situations - Hearing



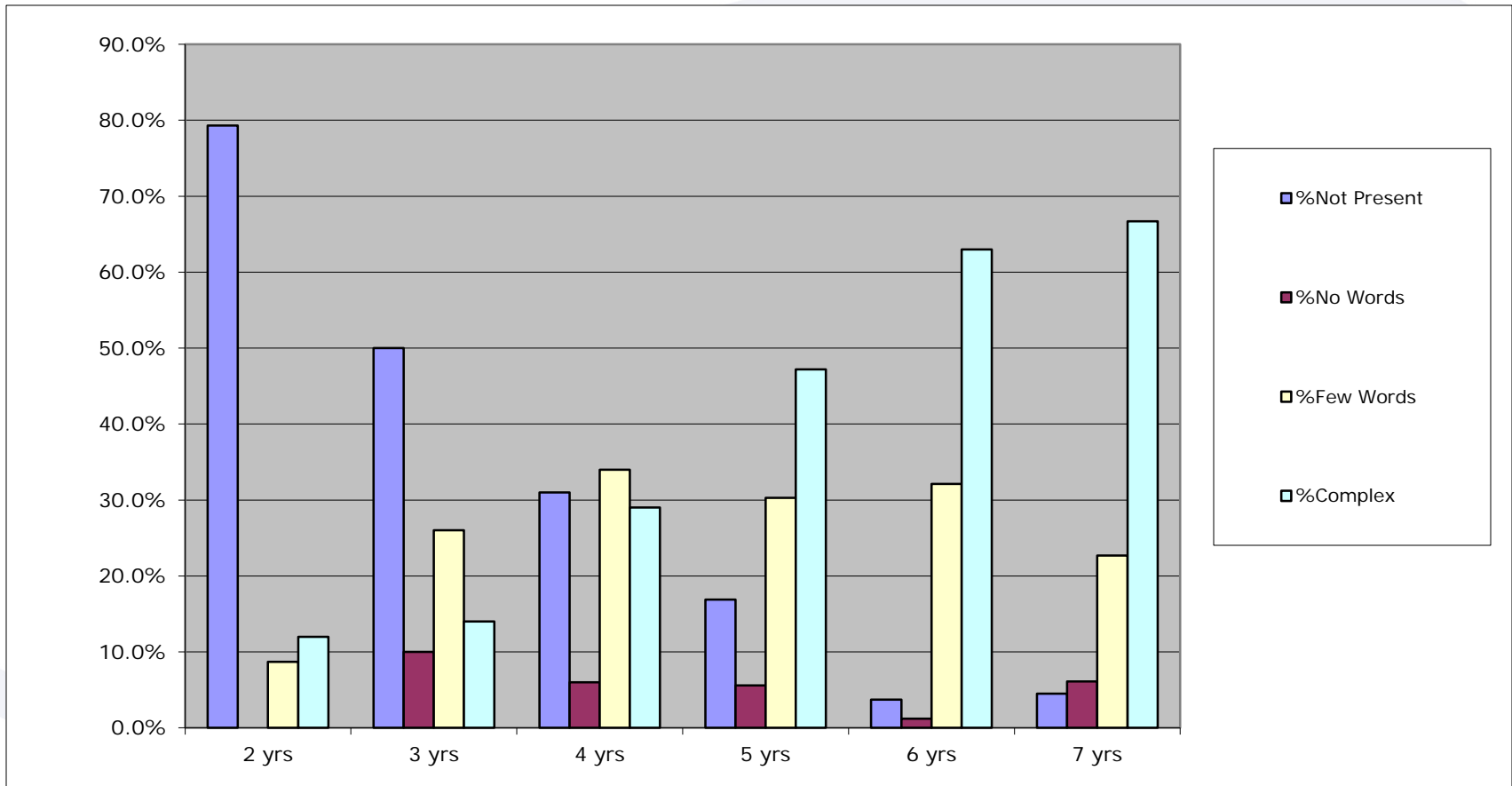
Correctly retells story



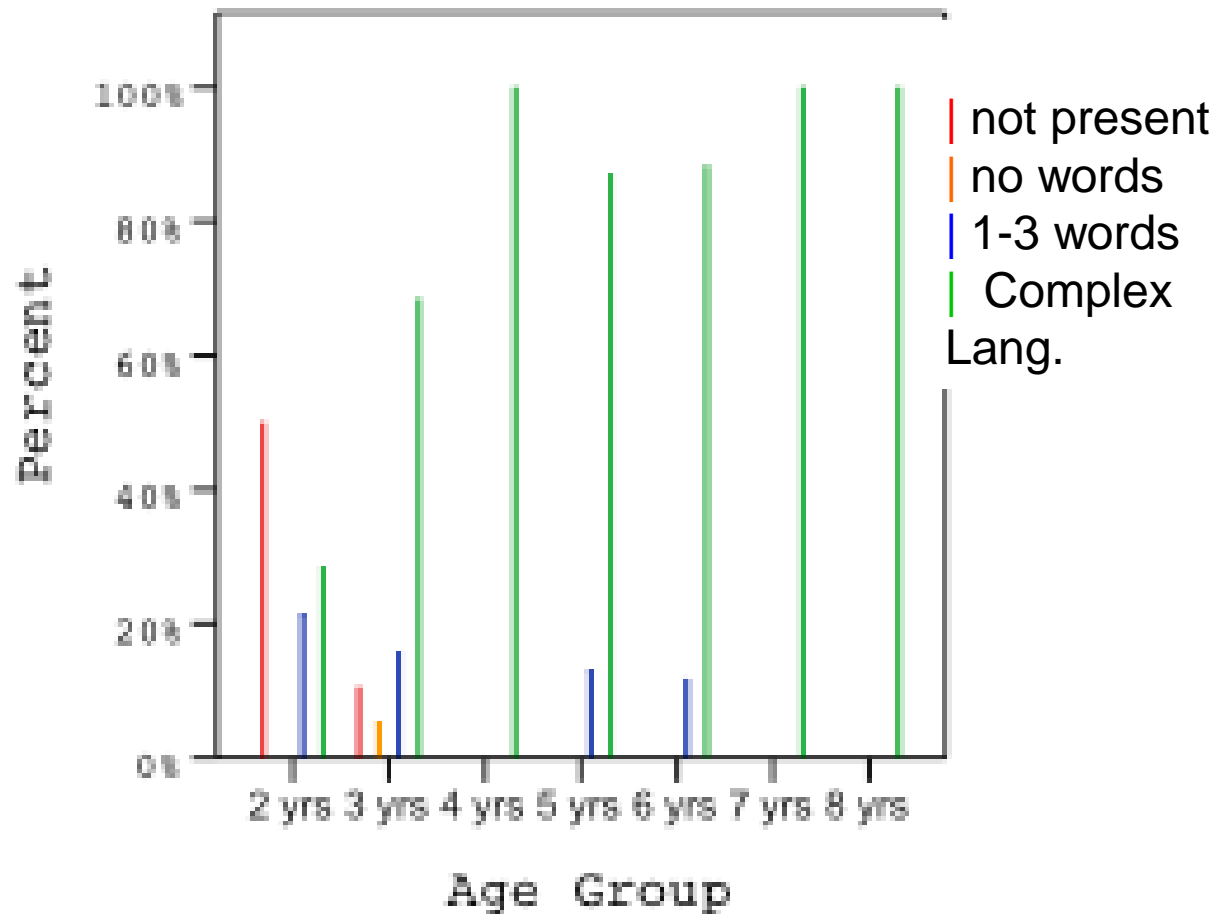
Correctly re-tells a story - Hearing



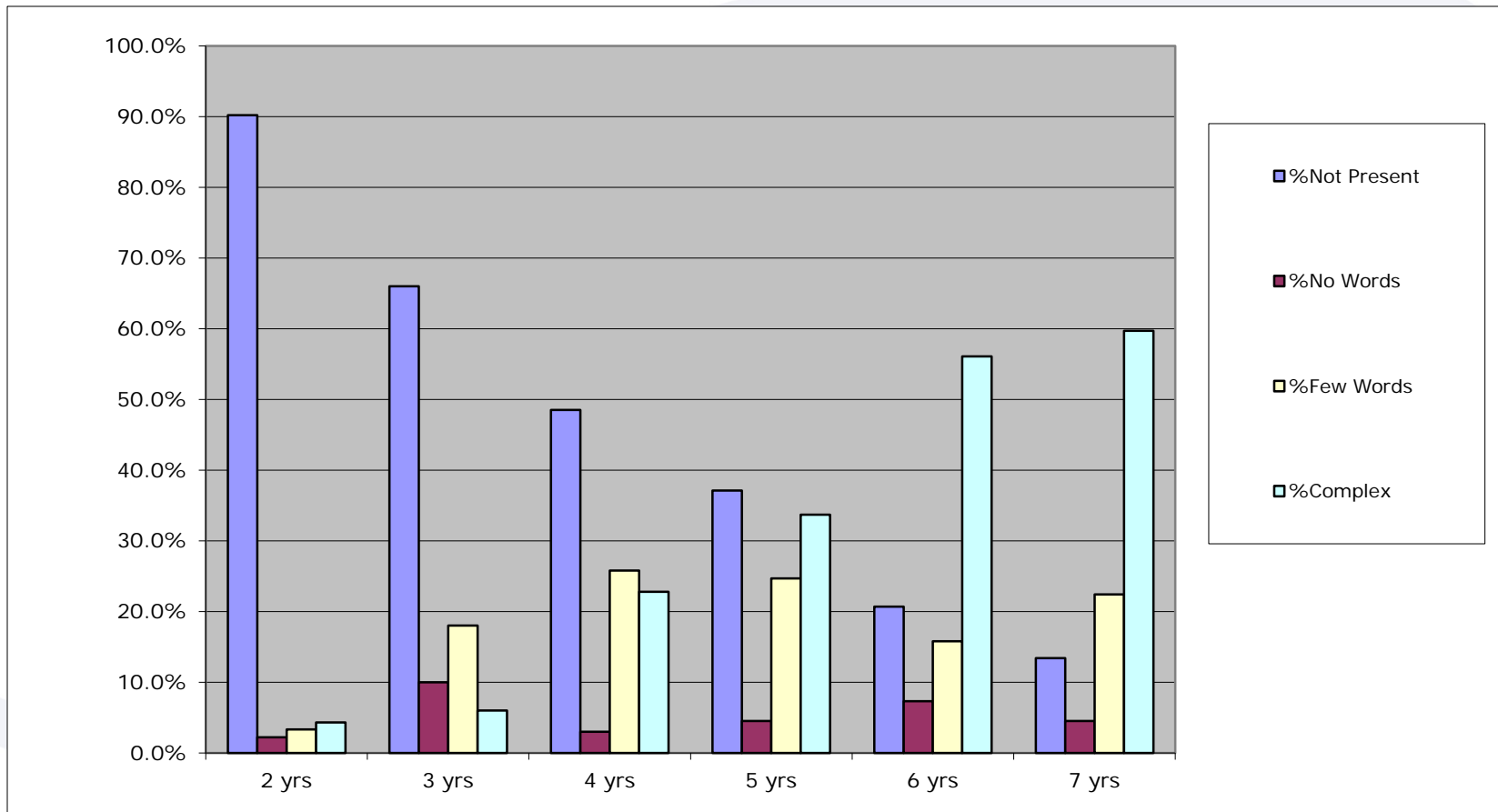
Relates 4-6 frame picture story



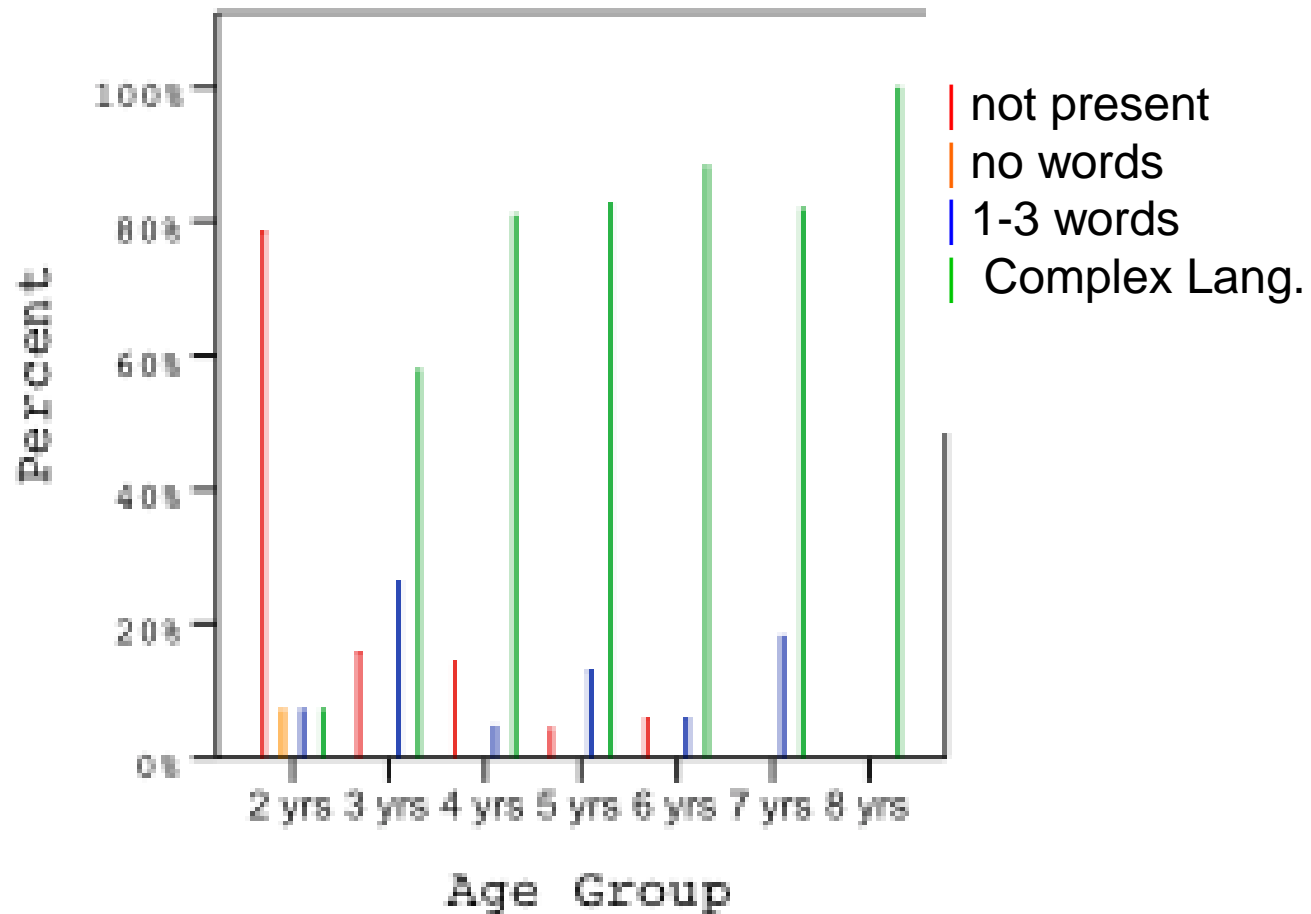
Correctly re-tells a story - Hearing



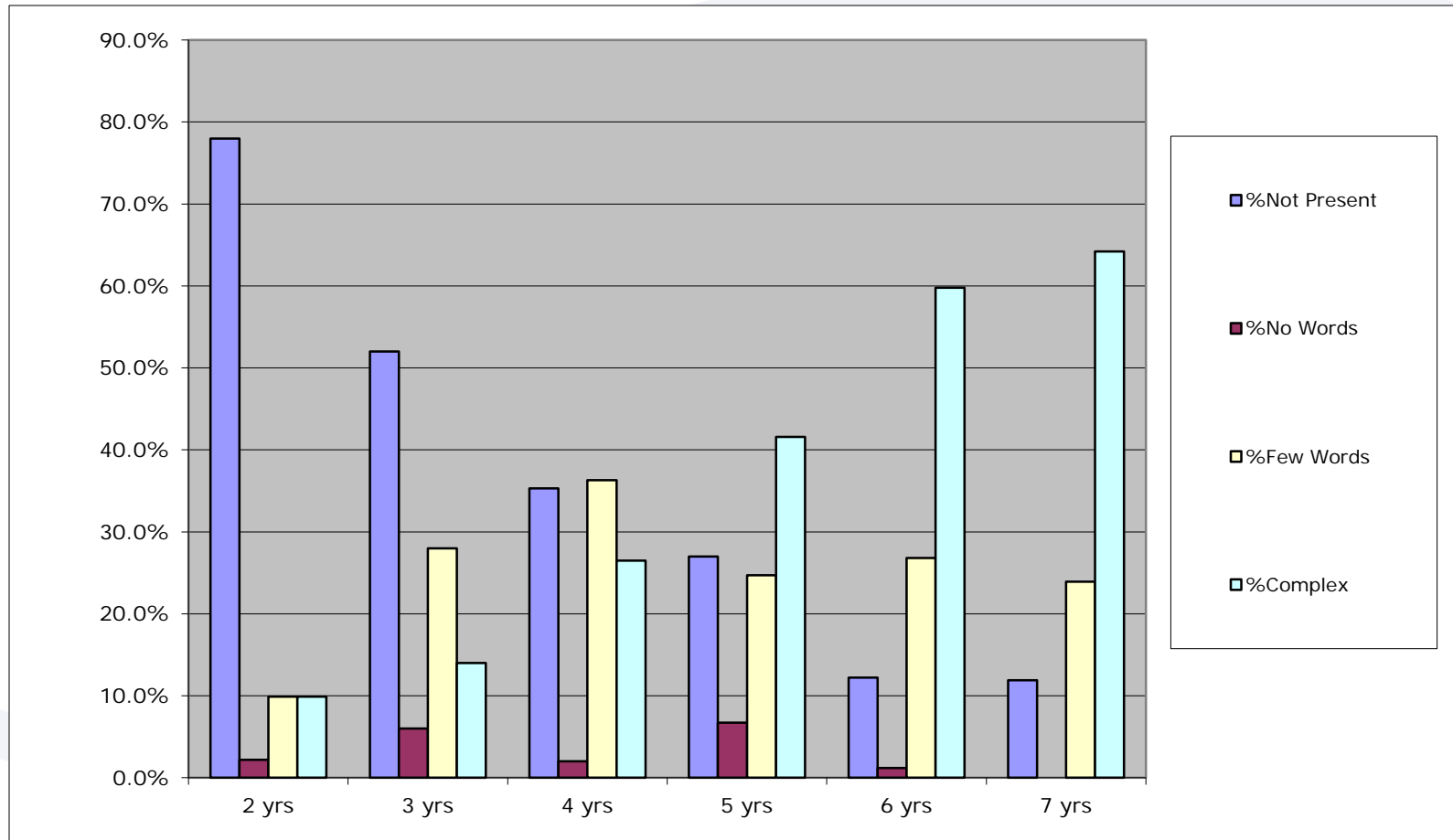
Creates original story: beginning, middle and end



Creates original story - Hearing

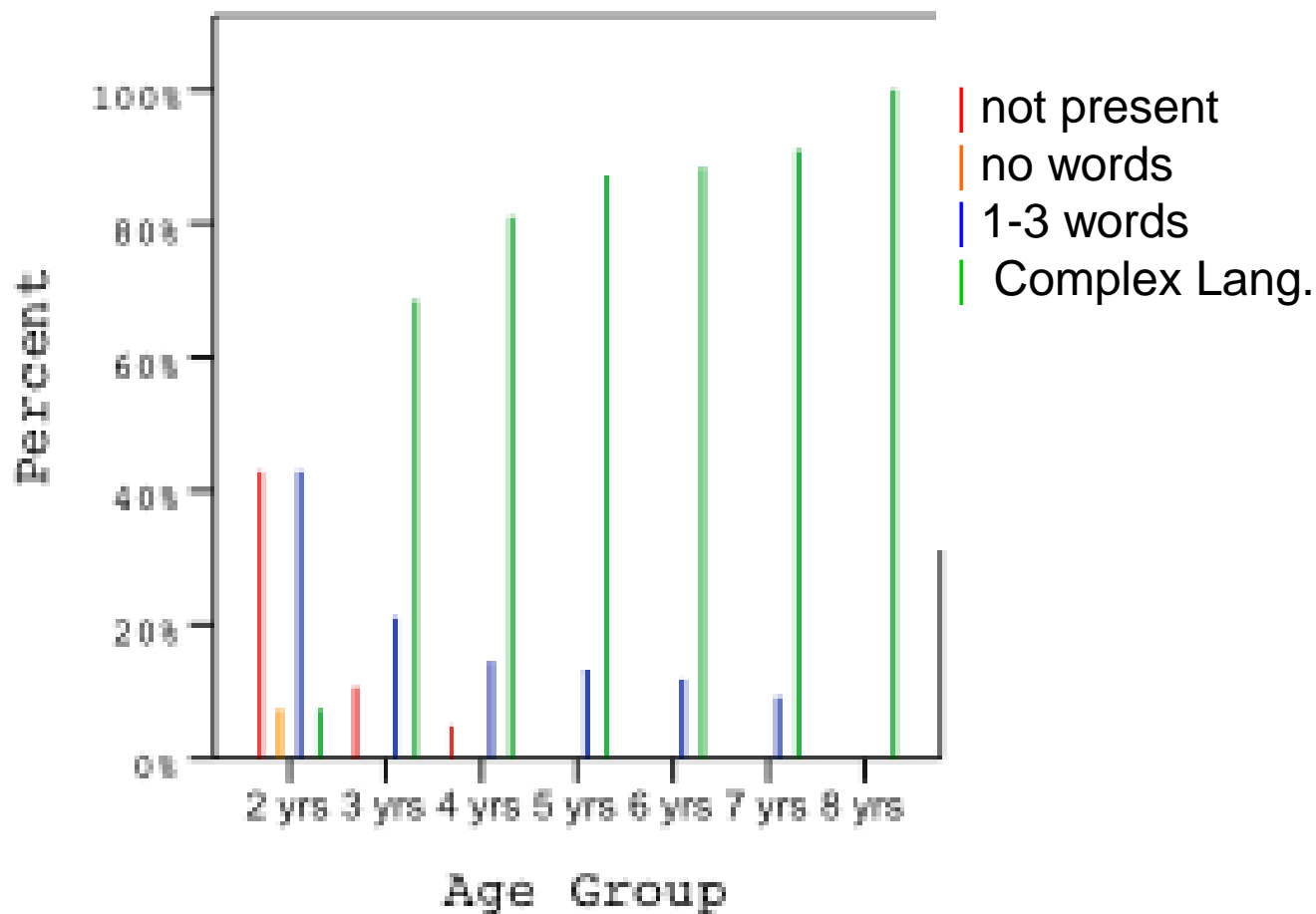


Expresses relationships between two objects

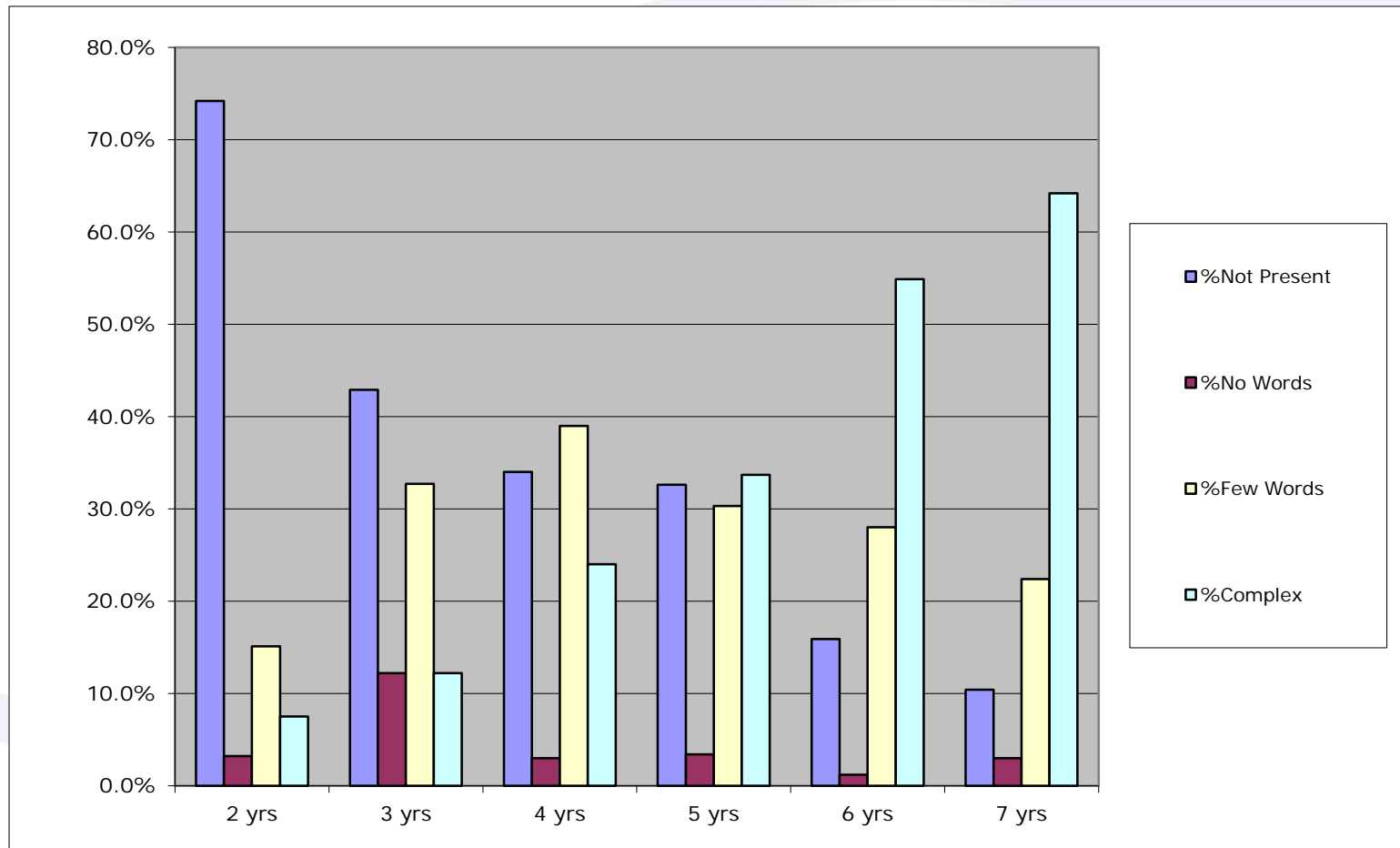


Explains relationship b/w 2 objects

- Hearing



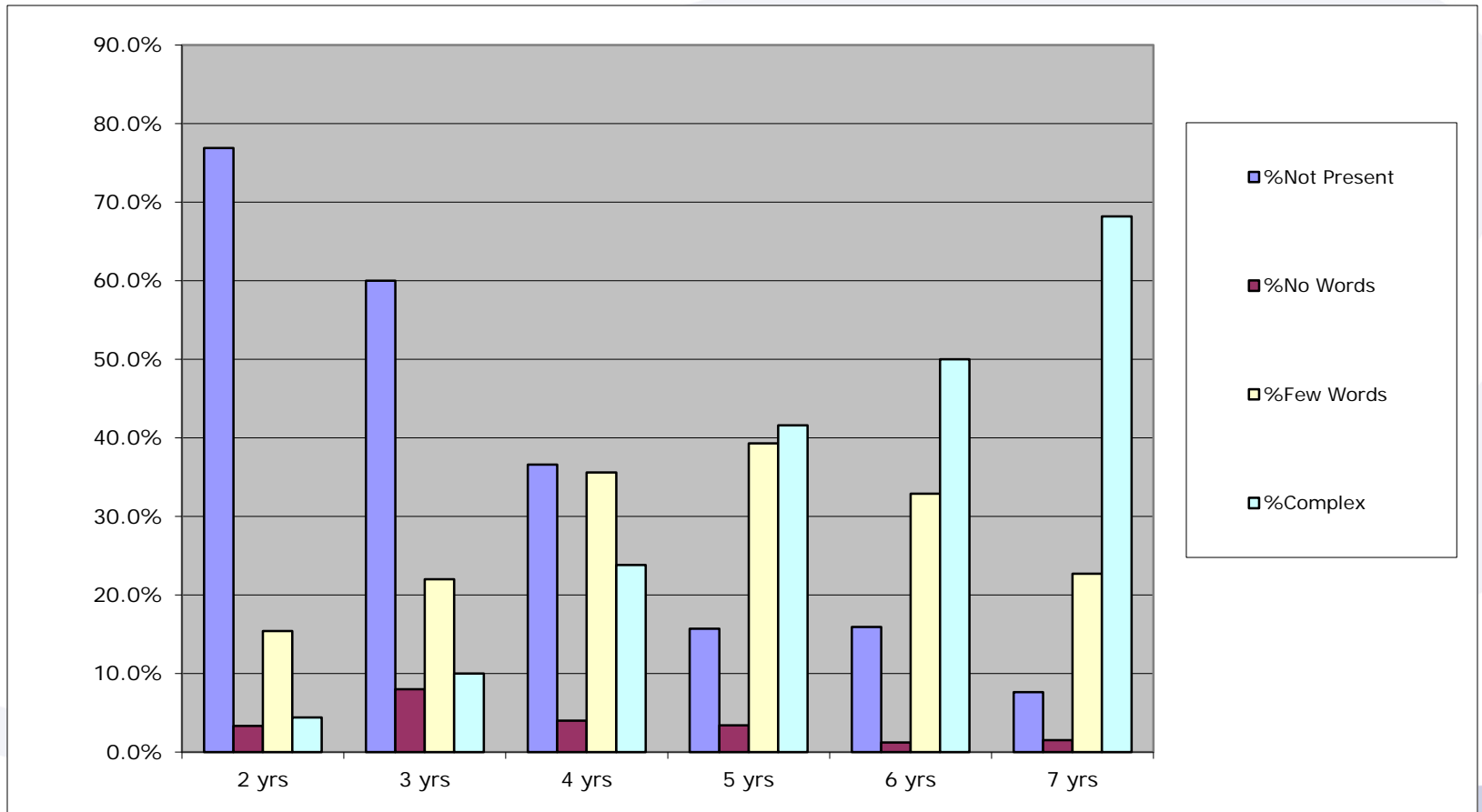
Compares and contrasts similarities and differences of objects/actions/situations



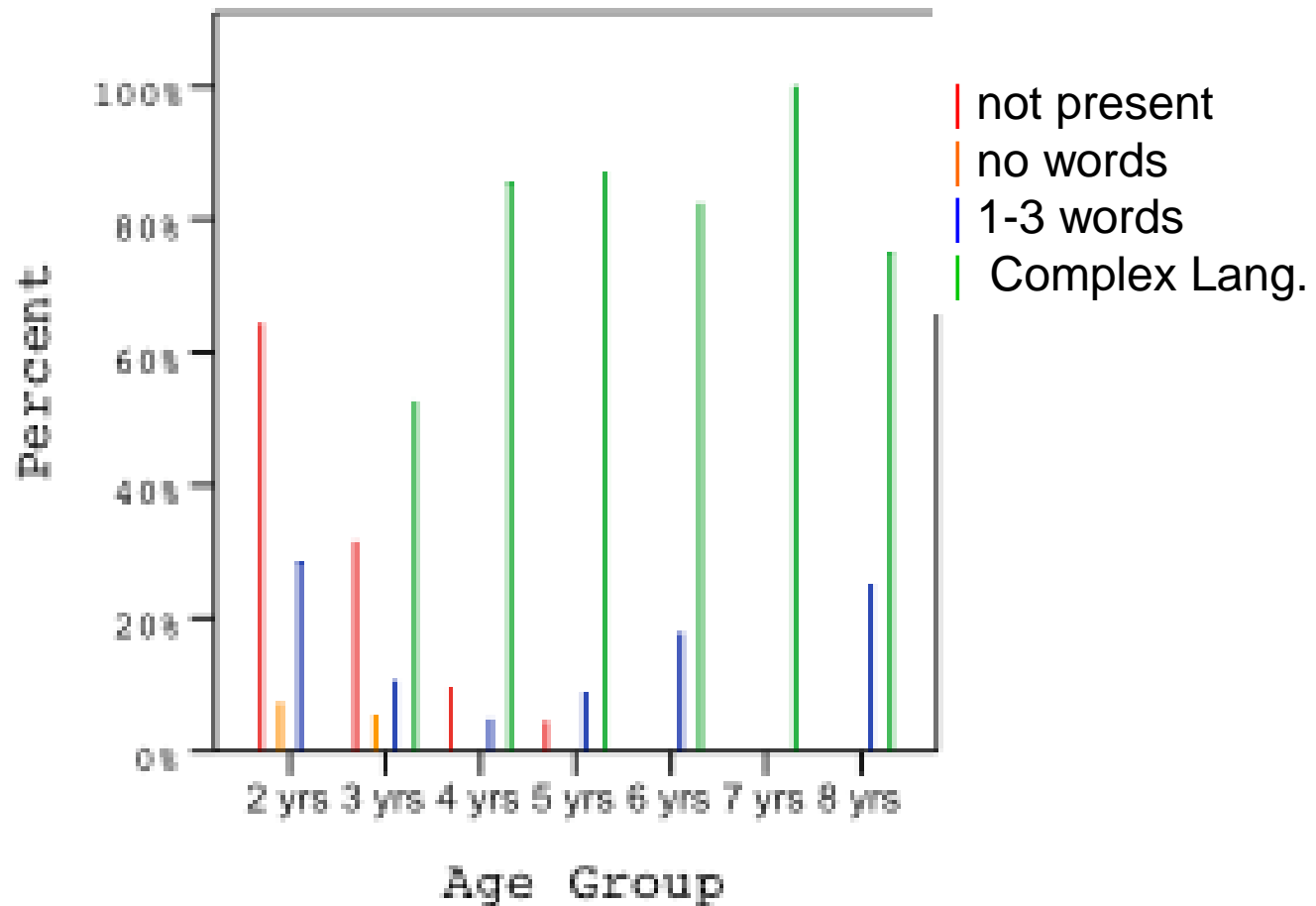
Compares and contrasts - Hearing



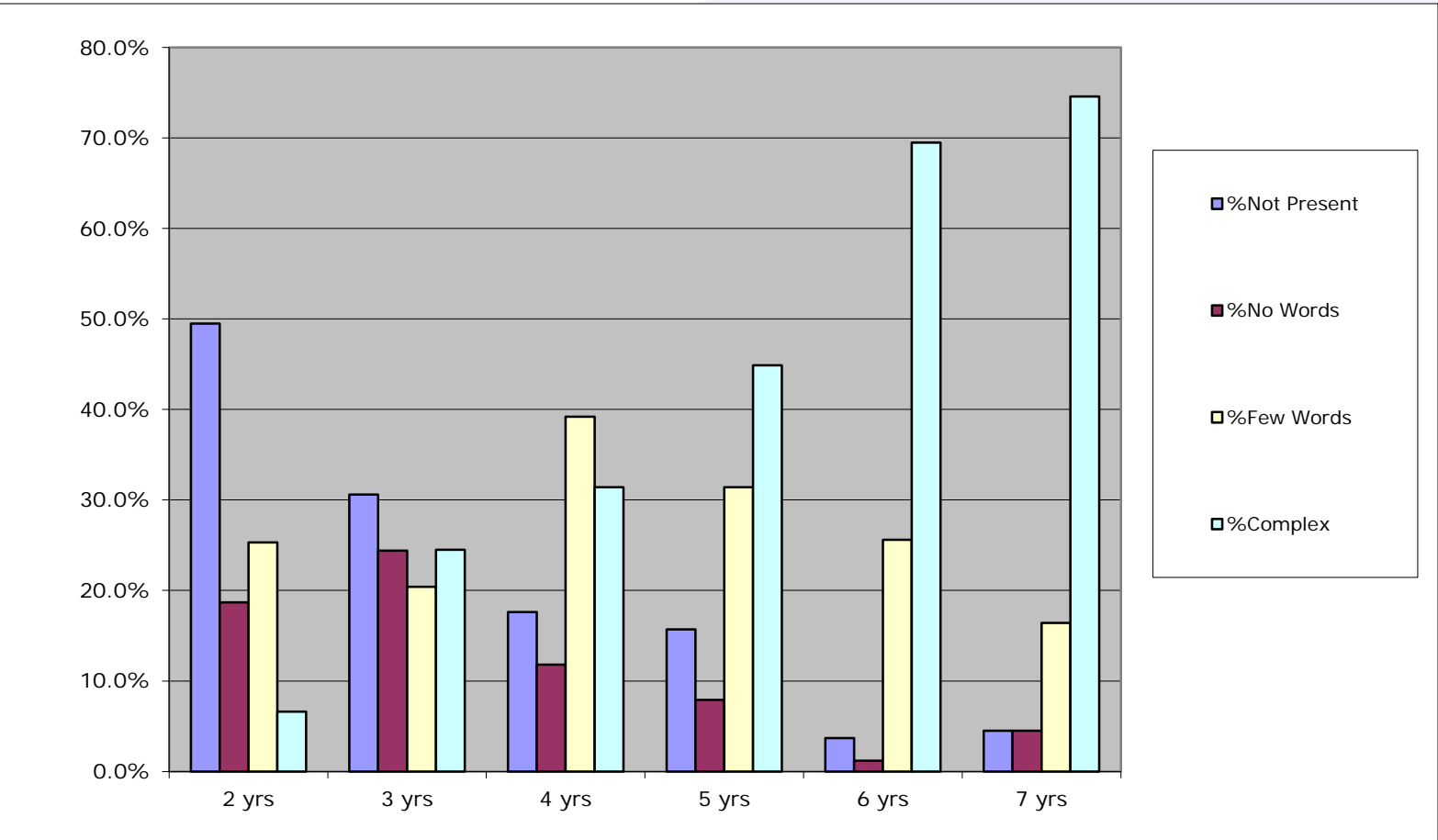
Tells a lie



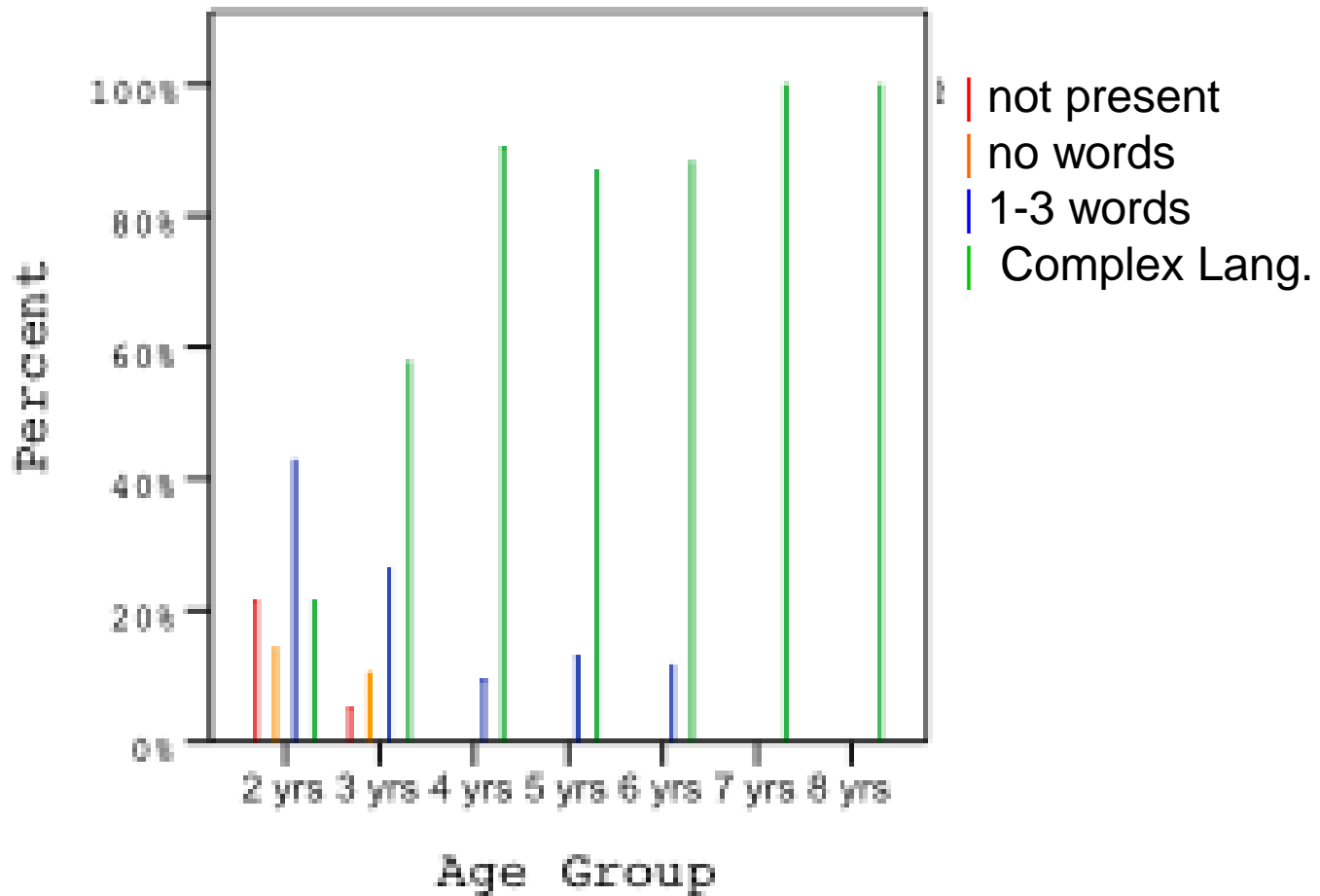
Tells a lie - Hearing



Expresses humor/sarcasm



Expresses humor/sarcasm - Hearing



Recognizing a falsehood

- Understanding truth versus a lie
- Understanding a trick
- Learning not to be gullible – preventing social victimization
- Pretending to be “coyote” – the trickster
- Should I believe coyote – how do I know when to believe someone

Persuasion

- In social situations – when you want to convince your parents to let you go to a party, a game??
- How do you persuade your parents to let you go?
- You want to persuade some children to let you play- what do you do?

Elaboration

- Knowing vocabulary words
- Learning more about the concept
- Learning the schema
 - ▣ Thanksgiving
 - ▣ Football
 - ▣ Church
 - ▣ Holiday
 - ▣ No School
 - ▣ Meal
 - ▣ Activity
 - ▣ Regionally specific-Macy's parade, skiing

Summary

- Children with hearing loss need services that will enable them to maintain age-appropriate or cognitive appropriate language levels
- Modifications and adaptations that are appropriate and beneficial to many subgroups of typically developing children will help them in their development

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