Assessment of metapragmatic skills in children with typical language development and children with language disorders

Dr Catherine Adams
Clinical Senior Lecturer in Speech and Language Therapy

Anna Collins
Research Speech and Language Therapist

School of Psychological Sciences
University of Manchester, UK
Outline

Pragmatic language impairment: definition and description

The Social Communication Intervention Project SCIP (UK): a randomised controlled trial of intervention for one type of social communication impairment

Metapragmatic ability: a mediator of intervention?

Methods of metapragmatic assessment and implications for further work
**Pragmatic Language Impairment (PLI)**

- A type of social communication impairment

- “a condition which is intermediate between autism and language disorder” *Bishop (2000)*

- PLI children
  - do not exhibit significant symptomatology in all three aspects of the autism triad
  - possess a distinct difficulty in social communication
  - place heavy demands on SLT and educational services
Main characteristics of PLI

Variety of pragmatic behaviours
Domination of conversation
Verbosity
Topic switching

Language impairment features
Word-finding difficulties
Narrative organisation
Comprehension of text

Some have features of mild autism
Social immaturity & relationship problems
Perceptual and sensory features
Dislike of change in routines
Experimental studies

Little evidence for disproportionate difficulty in PLI with inference or non-literal language (compared to SLI) *Bishop, Chan, Adams, Hartley & Weir, 2000; Botting & Adams, 2005; Norbury 2005*

Language impairment has consequences early in development for social ability and possibly social cognition *Shields et al 1996*

Children with autism spectrum disorders have underlying language impairments *Norbury 2005*

Descriptive rather than a categorical label
Pragmatic language disorder: diversity

Blurring of traditional diagnostic boundaries

Heterogeneous group with needs across:

social development
pragmatic development
language development

Considerable long term needs for intervention and educational/personal support

Variable provision of services
Evidence for PLI interventions

Formal evidence base is limited

No randomised trials

Methodological problems

Some general pragmatics studies with other populations

Case studies of social communication interventions:
- useful for sharing of clinical expertise
- positive outcomes on a small scale
  Adams, 2001; Olswang, Coggins & Timler, 2001; Timler, Olswang & Coggins, 2005
The Social Communication Intervention Project

A randomised controlled trial of intervention

Catherine Adams and Elaine Clarke
University of Manchester, UK

Funded by the Nuffield Foundation, London UK
Purpose of project

• Effectiveness of an intervention for children who have PLI

• Develop theoretically influenced framework and manualise intervention

• Exploration of what factors in the child and what factors in the intervention predict success
SCIP 2007-2009

- Trial of intervention on 99 children who have PLI
- Ages 6-11 years
- Intensive intervention in one school term
- Assistant or therapist delivered
- 2 treatment:1 control randomisation
- Individualised treatment programme derived from manual
Potential mediators in PLI intervention?

Enhancement of *metapragmatic* skills?

Relatively little in literature on this subject

Important to predict who will do well in intervention
Metapragmatics

- Anna Collins
  - Psychologist
  - Speech and Language Therapist

- PhD Thesis: exploring the role of metapragmatic awareness in children with pragmatic language impairment
Metapragmatics

Aim: To discuss current knowledge of the development of metapragmatic awareness in children

Objectives:
- To define metapragmatic awareness and the role of metalinguistic ability
- To outline current research findings and gaps in knowledge
- To describe the Video Assessment of Metapragmatics
- To outline some preliminary results
Metapragmatic awareness (MPA)

- “Metapragmatic awareness is “the ability to talk about a whole speech act or the coordinates of a given speech act [and] develops later and separately from pragmatic competence.”” (Savich, 1983)

- “MPA includes that ability to reflect on appropriate [] behaviours, to judge them, and to modify and produce them in hypothetical situations” (Wilkinson & Milosky, 1987).
Metapragmatics

To report and reflect on the rules of conversation necessitates an ability to report speech.

- Speech can be reported in a variety of ways
  - Direct quotes (framed and unframed)
  - Indirect quotes
  - Nonexplicit descriptions
  - Local mixtures

- Examples of reported speech in children taken from Maya Hickman (1993)
Reporting speech

Unframed direct quotations: “You look sad today”
Framed direct quotations: The raccoon said (to the dog) “You look sad today.”

- Framed indirect quotations: The raccoon said (to the dog) that he looked sad (that day).
- Nonexplicit descriptions:
  - The raccoon thought that the dog looked sad (that day).
  - The dog looked sad (that day).
- Local mixtures
  - The raccoon said to the dog that he looks sad today.
  - The raccoon thought that the dog looks sad today.
  - The dog looked sad today. (Hickman, 1993 p70)
Unframed quotations

“You look sad today” (Hickman, 1993 p70)

• Unframed quotations report the original speech exactly, including the original indexicals.
• The reported speech is not framed.
• Unframed quotations did not explicitly mark a *metalinguistic boundary* between the reported speech and the act of reporting (Hickman, 1993 p71)
Direct quotations

The raccoon said (to the dog) “You look sad today.” (Hickman, 1993 p64)

• Include *framing* clauses (“the raccoon said to the dog,”) that contain a verb of saying e.g. “say”, “ask”
• Clauses indicate that the quoted speech came from another situation which happened in the past.
• Indexicals are linked to the original situation e.g. first/second person pronouns (you), time (today).
Indirect quotations

The raccoon said (to the dog) that he looked sad (that day). (Hickman, 1993 p65)

- Also include *framing* clause (“the raccoon said to the dog,”)

- Indexicals now shift the reference point from the original situation to the story being told e.g. third person pronouns (he)
Direct and indirect quotations explicitly refer to reported speech

- Direct quotations “reproduce the quoted speech event as a whole, presenting not only what was said, but also how it was said”

- Indirect quotations “typically focus on the propositional content of the original message and incorporate other aspects of the original utterance into the narrative message”. (Hickman, 1993 p65)

- Direct and indirect quotations explicitly marked a *metalinguistic boundary* between the reported speech and the act of reporting
Other forms of indirect reporting

Nonexplicit descriptions: *The raccoon thought that the dog looked sad (that day).* (Hickman, 1993 p70)

- Speech can be reported in less explicit ways e.g. propositional attitudes (e.g. hope, think, know) rather than verbs of saying (Vendler 1972).
- Verbs of attitude/state do not directly report the speech act but rather the speaker’s internal thoughts, attitudes, emotions etc.
- Nonexplicit descriptions did not explicitly mark a *metalinguistic boundary* between the reported speech and the act of reporting (Hickman, 1993 p71)
120 children participated in the study aged 4, 6, 7 years

- 9 scenarios were presented to each child as film or text. In each scenario two animals discussed how to solve a problem. One animal thought of a solution that the other animal agreed with and they went off to solve the problem (Hickman, 1993 p68).

- The children were asked to report or act out the scenario to a naïve listener
Metalinguistic development

Results (Hickman, 1993)

4-year-old children
- Re-enacting mode or descriptive mode,
- Neither of these modes marked explicit boundaries between reporting and reported messages.

7 and 10-year-olds
- Direct reporting mode in narrative situations
- Re-enacting mode in the acting-out situation

Developmental progression in how children learn to report speech.
- The use of metalinguistic framing devices is key to this progression.
Metapragmatic development - Preschool

Metapragmatic comments and questions have been observed in 3 year olds (Becker, 1988)

- Conversation intrusions to silent and talking addressees in 3-5 year olds. Younger children do not alter their responses between silent and talking addresses, whereas older children do.
- The children also responded to a metapragmatic judgment about these requests.
- These responses on the metapragmatic task did not predict children’s behaviour in the actual request task (Sachs, 1991).
Metapragmatic development – school age

- Idiom comprehension in 6- and 9-year-olds (Laval, 2003)
- Promise comprehension in 3-4, 6-7 and 10-11 year olds (Bernicot & Laval, 1996)
- Polite and impolite requests according to degree of familiarity among participants (Baroni & Axia, 1989)
- Politeness, effectiveness and likelihood of direct and indirect requests in 8-12 year olds (Garton & Pratt, 1990).
- Appropriateness of the request made in 5, 7, and 9 year olds (Bernicot, 1991).
Bridging the gap

Paucity of information regarding the development of MPA in typically developing and impaired children

- This information would inform therapist decisions about the level of impairment
- Lack of knowledge regarding the potential mediating role of MPA in therapy outcomes
- This information may inform prioritisation decisions / intervention pathways
- Lack of clinical assessments for MPA
Current MPA assessment – Research Tools

- Observation in unstructured conversation
- Performing a pragmatic task
- Story completion
- Rating scales
- Listened to story and made a judgement

- No standardised MPA assessment tool in Britain
Video Assessment of Metapragmatics

- Video Assessment of Metapragmatics – used as part of the SCIP intervention project
- Video scenarios – In each scenario two children are talking. One of the children breaks a conversational rule and the other child reacts to this.
- Conversational rules include linguistic, paralinguistic and nonverbal rules.
- The children watch each video and are asked a battery of questions relating to the video.
Video Assessment of Metapragmatics

• Questions:
  – The conversational rule that was broken
  – The interlocutor’s behaviour
  – The interlocutor’s feelings
  – The conversational behaviour that should have occurred
  – The type of person who breaks the rule
Research Questions – Normative Study

- How does metapragmatic ability develop in school aged children with typically developing language?
Research Questions – Intervention Study

- Does metapragmatic ability function as a mediating or moderating variable in speech and language intervention for children with pragmatic language impairment?
- Mediating variable: a variable which is changed to improve the outcome of therapy e.g. metapragmatic awareness
- Moderating variable: a variable that is present at the beginning of therapy which affects the outcome e.g. age, IQ, language skills
Research Questions – Comparison Study

- Do children with pragmatic language impairments (cwPLI) demonstrate poorer metapragmatic skills than a group of children with typical language development?
- Do cwPLI demonstrate poorer metapragmatic skills than a group of children with specific language impairment?
- Do cwPLI demonstrate poorer metapragmatic skills than a group of children with high functioning autism?
Research Questions – Associated Factors

- Language development was the most powerful predictor of metalinguistic awareness (Chaney, 1994).
- What, if any, is the correlation between MPA and language skills?
- What is the relationship between MPA and social cognition (theory of mind)?
Research Participants

- 60 children with typical language development
- 60 children with pragmatic language impairment
- 30 children with specific language impairment
- 30 children with autistic spectrum disorder
- Age groups: 6-11 years
Video Assessment of Metapragmatics

- Examples of videos
Preliminary data

Examples of unframed direct quotations

• ?????
Preliminary data

Examples of direct reporting

And then he said, “did you light candles?”
And then he was saying “I don’t know, my mum put eleven on.”
“Yeah but did you blow out the candles?”
And er then he’s saying like “did you have a party?”
And he’s saying “there were party bags for everyone”

(No meshing between 1st and 2nd part)
Examples of direct reporting

The girl said “are you still coming round tomorrow night for tea?”
And the other one said “yeah”
And then the other one said “do you want sausage or pizza?”
And the other girl went “yeah”
And she went “sausage or pizza?”
And then that girl said “we’re having pizza”

(Ambiguous response to question)
Preliminary data

Examples of indirect reporting

The boy was talking about Spiderman and the girl kept on saying Spiderman was boring

(Obsessive topic)
Preliminary data

Examples of non-explicit descriptions

The boy was lying to the girl
(Hyperbole)

The girl thought she was talking about the football but she was talking about the car races
(Tangential topic shift)
Examples of local mixtures

“Bit silly because the boy was asking if he could sit next to you and you could play and she said “pardon” and shook her head”
(Practice 3 – Whispering)
Preliminary data

Examples of gestures
“The boy kept going like this (imitates the action of moving head forward like the boy did on the clip)
“And she was like (acted out looking uncomfortable)”

Examples of verbalizations
“Say it all gone and she went like this (imitates a sigh)”
“The girl was like all “hey” (loud voice)”
Preliminary data

Rules - when, not allowed, because, it’s called

“You’re not allowed to talk about something else if your friend’s talking”
“You’re not allowed to talk loud”
“You’re not allowed to walk away when someone’s talking”
“Because you have to behave”
“It’s called being silly”
Preliminary data

Examples from own behaviour

“She was poking at her and she was going back and I don’t do that. It’s called being silly”

Examples from other’s behaviour

“Not allowed to walk away when someone’s talking to you. My brother does sometimes.”
Analysis

- Why is it interesting / what will come out of it
Next Steps

Knowledge of metapragmatic skills explored as potential mediator

Relationship to conversational skills

Analysis of Language Impaired Children’s Conversation (ALICC)

Bishop & Adams 1989
Conversational ability and metapragmatics

- Are the children who have many problems with conversation the same children who have problems with the metapragmatic awareness task, or is there a dissociation:
  - if the *same* – an underlying lack of knowledge of pragmatic ‘rules’ stemming from impaired cognitive ability?
  - If *different* – knows the ‘rules’ but cannot inhibit unusual conversational abilities
  - Will require different intervention approaches
Limitations of mediator/moderator analysis

Mediating and moderating analyses require large amounts of data

Exploratory analysis only

Constraints of analogical medical methodologies

Potential for contribution to theory as well as well-being of CwPLI
SCIP website

www.psych-sci.manchester.ac.uk/scip

Contact email

catherine.adams@manchester.ac.uk

anna.collins@manchester.ac.uk
Metapragmatic intervention


