Defining social communication in autism spectrum disorders: A scoping review

Amy Curtis Stone, BS(SLP) [A], Brittany Reed, BS(SLP) [A], Mary Jo Cooley Hidecker, Ph.D., CCC-A/SLP[A], Byron Ross, Ph.D., CCC-SLP[B], Briano Di Rezze, MSc.(OT)[C], Lonnie Zwaigenbaum, MD[D], Peter Rosenbaum, MD[E]

[A] Department of Speech-Language Pathology, University of Central Arkansas; [B] Department of Communication Sciences and Disorders, University of Houston; [C] School of Rehabilitation Science, McMaster University; [D] Department of Paediatrics, University of Alberta; [E] Department of Paediatrics, McMaster University,

Background

- Autism spectrum disorder (ASD) diagnostic criteria based on DSM-IV include social & communication skills.[1]
- Proposed collapse of social and communication into one criterion in DSM-V. Also propose a separate Social Communication Disorder.[2]
- Issue: What aspects of social communication in ASD differentiate levels of functioning?
- It is unclear how clinicians and researchers define 'social communication'.
- Synthesizing treatment outcomes across social communication may be difficult.
- This scoping review[3,4] maps key concepts of 'social communication' in ASD.

Study Objective

- To conduct an **exploratory scoping review**[4] of the literature to examine the defining characteristics of social communication construct in children with ASD.
- **Research question**: "How is social communication defined and operationalized for children with ASD?"

Methods

Search Strategy
- Iterative search strategy conducted with electronic bibliographic databases (e.g., CINAHL, ERIC, PsycINFO, & MEDLINE) with 'ASD' and synonyms as MeSH terms and 'social communication' as a keyword in the abstract or title.
- Sources meeting inclusion criteria described "social communication" involving children and/or youth.

Selection Process
- Sources included primary research (e.g., descriptive, qualitative or quantitative) and other research and clinical work (e.g., theses, books).
- Two reviewers independently assessed sources for descriptions of social communication. Any discrepancies were resolved by discussion.

Charting the data
- Data were charted by two reviewers (AC & BR) in a matrix listing descriptive information (e.g., professional area, diagnosis, age) and social communication definitions.

Content Analysis
- Charting process: Concepts from experts provided a starting point for discussions. Members discussed the definitions of social communication from the literature and examined themes. Themes were re-evaluated (relevance and theme development) as sources were reviewed.

Results

Descriptive Content Themes
- **155** sources: **136** journal articles, **11** books, and **8** theses met inclusion criteria.
- Age ranges within the sources: 36% infant/toddler (0-36 months), 42% preschool (3-5 years), 43% school-age (5-12 years), 23% adolescent (12-18 years), 9% adult (18+ years). (Some sources included more than one age range.)

From the review, 4 themes emerged. 37 sources (24%) contained >1 theme

Theme 1: defined social communication through **standardized assessments**. Most frequently used: *SCQ, ADOS, ADI-R, Early Social Communication Scales;* & *Communication and Symbolic Behavior Scales* (58% of articles)

Theme 2: defined social communication as **'social interaction skills'**, i.e., eye contact, turn taking, topic maintenance, & appropriateness. Social interaction skills varied across sources. *(27% of articles)*

Theme 3: defined social communication as **synonymous with 'joint attention/joint referencing.'** Some sources defined this as sharing attention with another person. Some listed behaviors associated with joint attention, i.e., eye gaze, pointing & gesturing. *(25% of articles)*

Theme 4: **social communication lacked a definition**; authors used 'social communication' without defining or operationalizing. *(17% of articles)*

Table 1: Number of sources categorized by profession mapped onto each theme

Professional area	Theme 1 (n=85)		Theme 2 (n=48)		Theme 3 (n=41)		Theme 4 (n=26)	
Education	3	4%	6	13%	3	7%	8	31%
Medical (but not Psychiatry)	14	16%	3	6%	2	5%	3	12%
Psychiatry	25	29%	8	17%	10	24%	3	12%
Psychology	26	31%	15	31%	15	37%	8	31%
Speech-Language Pathology	8	9%	11	23%	7	17%	1	4%
Other	9	11%	5	10%	4	10%	3	12%

Note: Professional area was determined by journal type or first author

Table 2: Number of sources categorized by diagnosis mapped onto each theme

Diagnosis	Theme 1 (n=85)		Theme 2 (n=48)		Theme 3 (n=41)		Theme 4 (n=26)	
Autism	80	94%	41	85%	36	88%	20	77%
Asperger	43	51%	19	40%	14	34%	18	69%
PDD-NOS	62	73%	25	52%	27	66%	13	50%

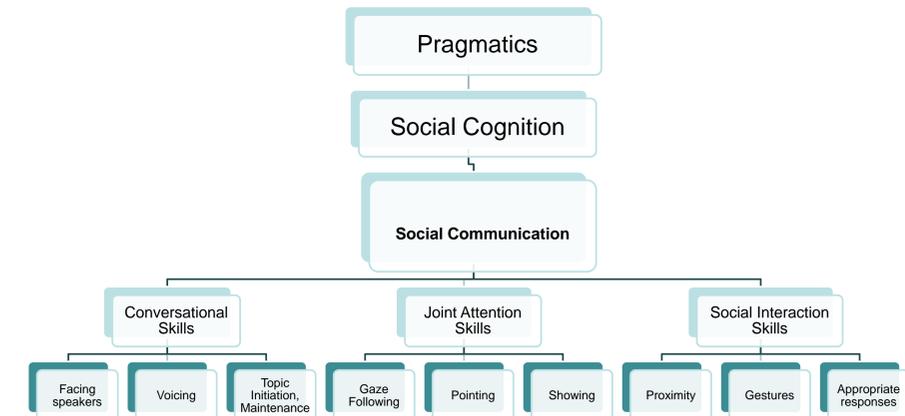**Note:** Some sources contained more than one diagnosis

Figure 1: Conceptual map of social communication construct in ASD

Discussion & Conclusions

- Based on the themes, social communication is a multi-faceted construct, which is not always specified clearly in the literature.
- Some sources focus on one aspect of social communication, but may exclude other characteristics from the overall concept of social communication.
- Overall, themes showed terms were used interchangeably to represent both conceptual and observable characteristics of social communication.
- Conceptual map of the construct of social communication is our attempt to illustrate the initial relationship between concepts of social communication; this will continue to be refined with subsequent analyses.

Future Directions

- Search procedure will be replicated using additional "social" terms to understand their relationship with social communication.
- Book reviews, internet sites of key ASD stakeholders, and further consultations with stakeholders will occur to shape themes and the emerging model.
- Standardized assessment items (Theme 1) are being linked to the WHO ICF-CY[5] framework to consider possible components of social communication.
- Functional implications of the various definitions of social communication will be analyzed. This work will support the emergence of a unifying model to be used for the development of a function-based understanding of social communication to create a classification tool of ASD functioning.

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