Evidence-Based Communication Interventions for Persons with Severe Disabilities

National Joint Committee for the Communication Needs of Persons with Severe Disabilities (NJC)

What is the evidence base for communication interventions for school-age individuals with severe disabilities?

Method

Electronic Databases Searched:

- CINAHL
- Combined Health Information Database
- ERIC
- Education Abstracts
- Exceptional Child Education Resources
- Health Source: Nursing
- Linguistics and Language Behaviour Abstracts
- PsycARTICLES
- PsycINFO
- PubMed
- Science Citation Index
- ScienceDirect
- Social Science Citation Index

Search Criteria:

- English language only
- Date of publication 1975 to 2006
- No case studies
- Intervention studies only
- Participants having a severe disability- including persons with severe to profound mental retardation, autism, and other disorders that result in severe socio-communication and cognitive communication impairments

Search terms included:

Augmentative or Alternative Communication (AAC); Augmentative Communication; Communication; Emergent communication; Nonsymbolic communication; presymbolic communication; Emergent symbolic communication; Intentional communication; Speech Generating Devices (SGDs); Mental Retardation; Autism; Autistic Spectrum Disorders (ASD); Pervasive Developmental Disorders (PDD, PDD-NOS); Rett's Syndrome; Childhood Disintegrative Disorder; Developmental Disabilities; Handicap; Traumatic Brain Injury; Cognitive impairment; Severe disabilities; Severe and/or profound disabilities; Multiple disabilities; Sociocommunication; cognitive communication impairment; Early intervention; Literacy; Language – verbal, nonverbal, expressive, receptive, written…

47 studies that met above criteria and that had at least one participant of school age (birth to 21) were reviewed for this poster

- An annotated bibliography for all 47 articles is available from the ASHA website.

Article review procedures

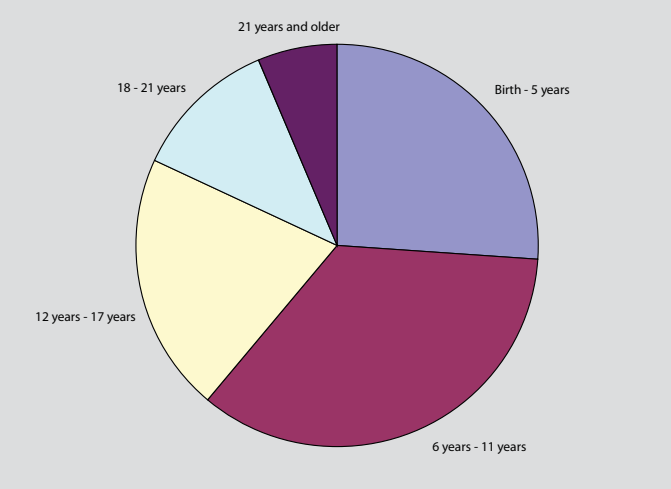
- Each committee member reviewed 5 articles and entered results into Zoomerang© Survey Software.
- Reliability established for 20% articles using consensus procedures

Results

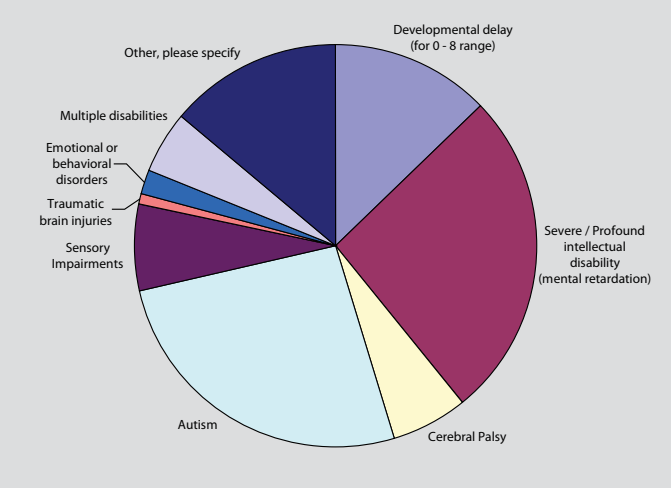
When were the studies published?

- 5 between 1975-1985
- 16 between 1986-1995
- 26 between 1996-2006

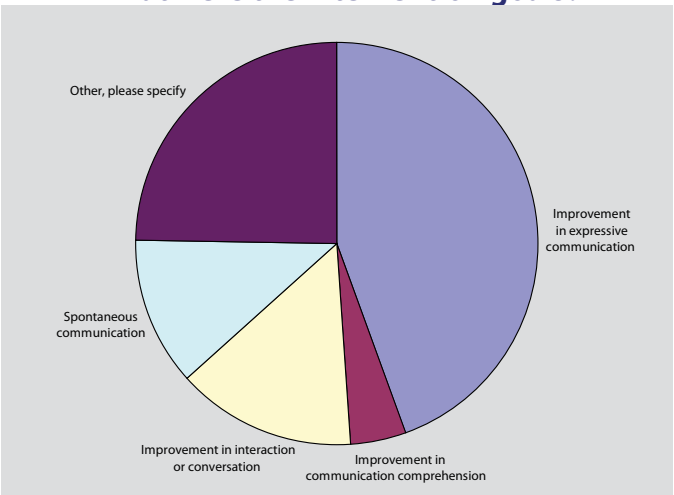
Chronological ages



Type of Disability (note these categories are not exclusive)

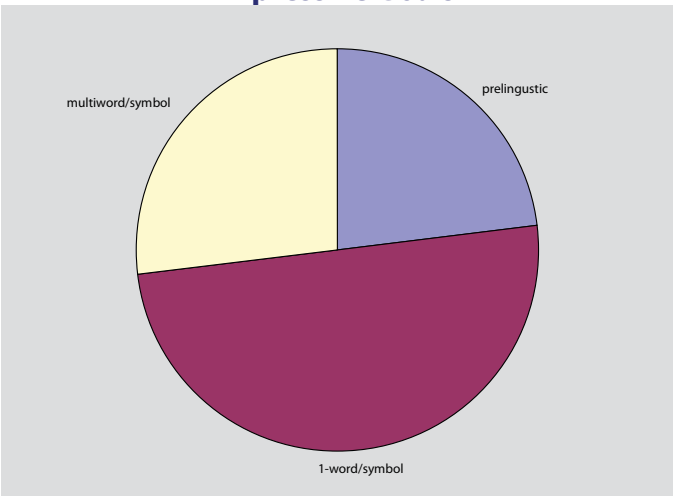


What were the intervention goals?

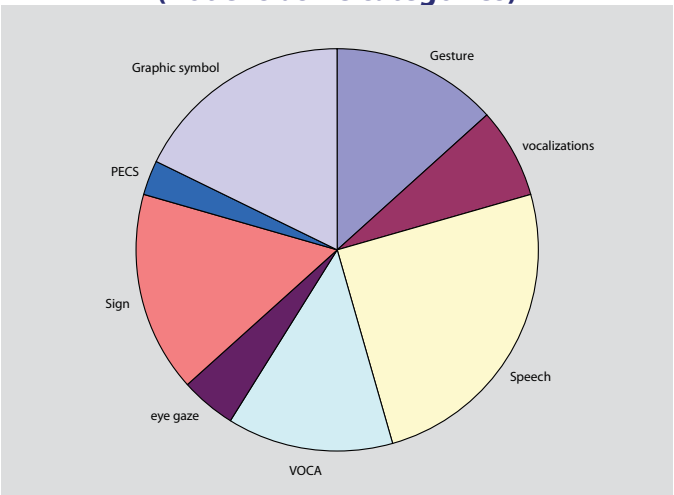


Six articles also measured conversational goals such as initiating questions, turn taking or maintenance of interaction

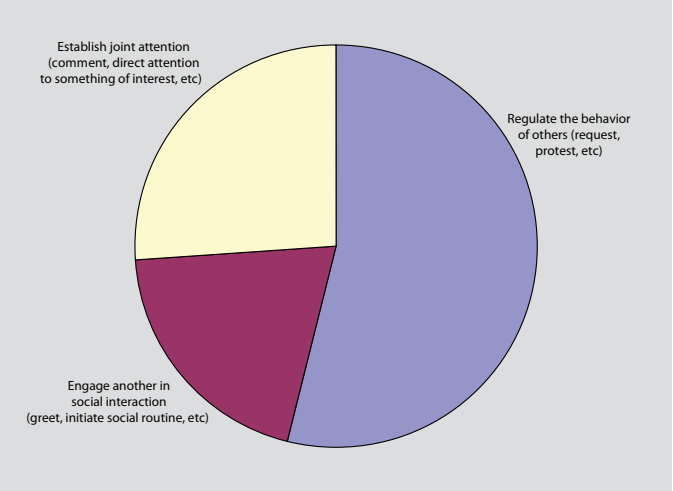
Expressive Goals



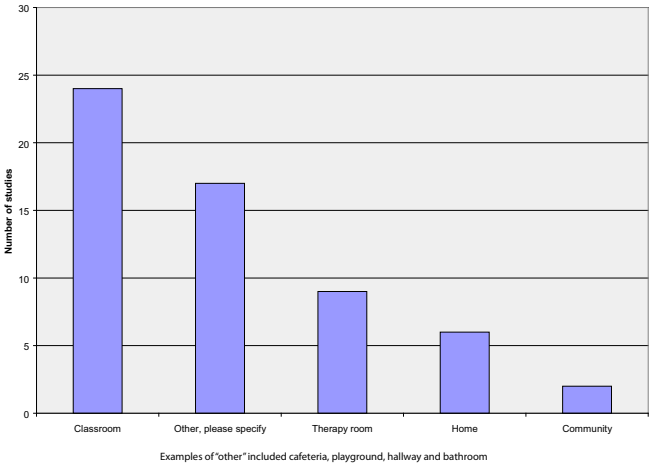
Communication forms targeted (not exclusive categories)



Communication functions targeted

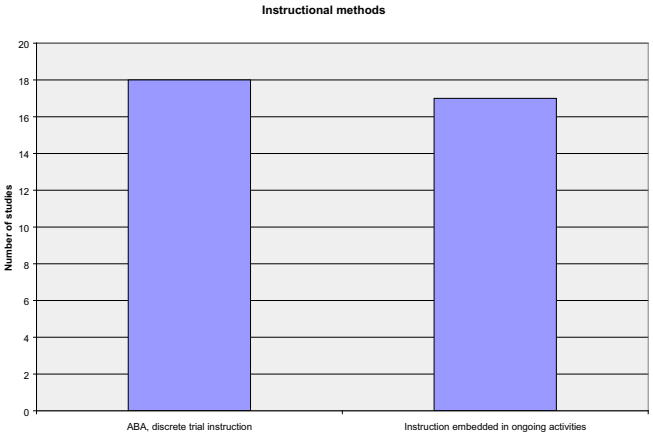


Where did intervention take place?

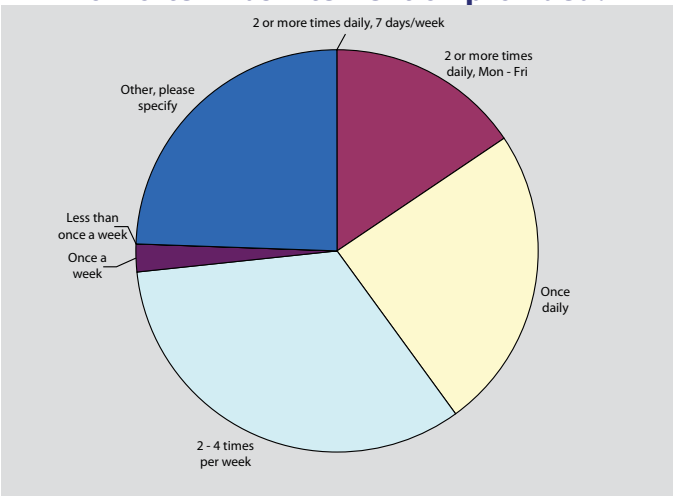


Examples of "other" included cafeteria, playground, hallway and bathroom

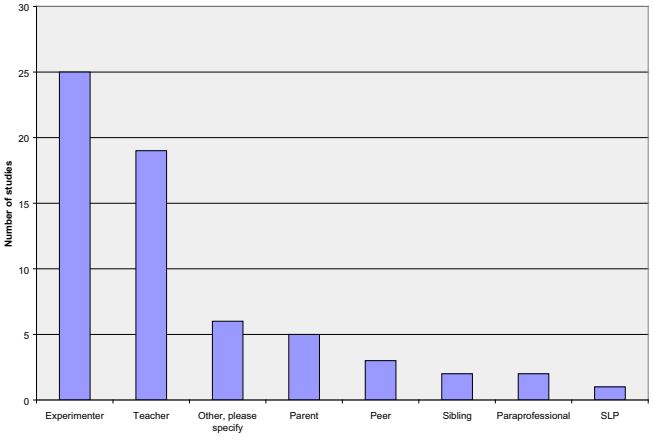
What were the characteristics of the interventions?



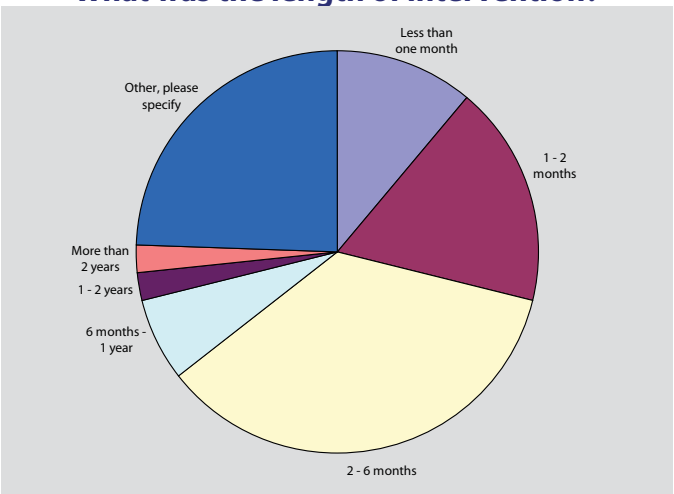
How often was intervention provided?



Who provided intervention?



What was the length of intervention?



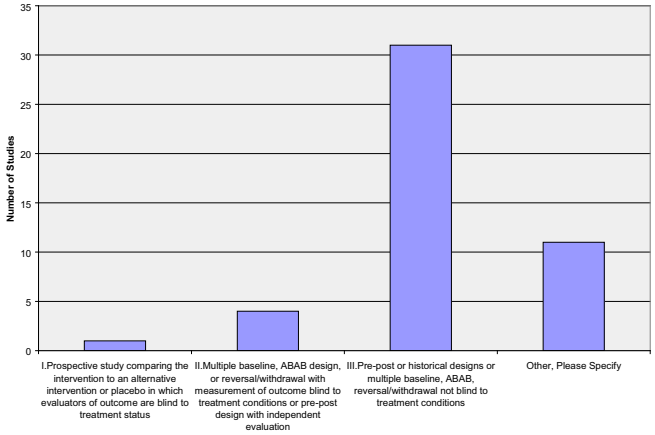
"Other" included a number of sessions or trials to criterion without corresponding calendar length

Study Design Elements

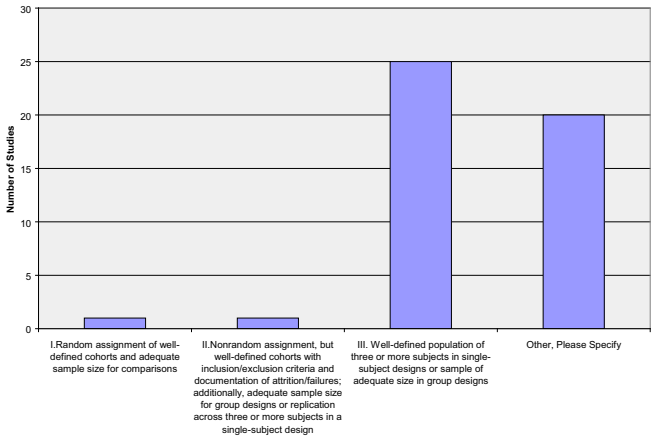
- 91% studies reported inter and/or intra rater reliability
- 20% studies measured social or ecological validity
- 33% studies measured fidelity of treatment

What is the quality of evidence according to National Research Council Standards (National Research Council, 2001)?

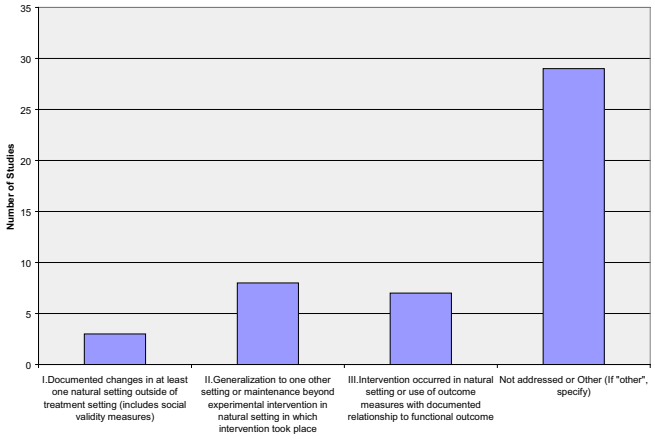
Internal Validity: Control for factors such as maturation, expectancy, experimenter artifacts



External Validity/Selection Biases



Generalization



"Other" included generalization to another teacher in same setting

Summary and Conclusions

- In this sample, most participants were under 11, male and had severe to profound disabilities and/or autism
- Interventions were usually provided: in the classroom, by an experimenter or teacher, between 2-5 days per week, over a course of 1-6 months.
- Intervention targets were typically single word, sign or symbol responses and rarely focused on linguistic productions
- Inter- or intra- reliability was typically reported but social validation and generalization data typically were not reported
- The majority of studies used single subject designs with well-defined populations of 3 or more participants, but did not specify that measures were obtained from individuals blind to treatment conditions
- This partial review suggests a need for intervention studies that include measures from blind observers and better controls for threats to internal and external validity, and that address generalization and maintenance of targeted communication responses
- Further review of extant literature is needed to identify, describe, and compare effective interventions for persons with severe disabilities

References

National Research Council. (2001). *Educating children with autism: Committee on educational interventions for children with autism. Division of behavioral and social sciences and education*. Washington, DC: National Academy Press.

For more information about the NJC including products available, please visit

www.asha.org/njc/