

Interventions for Minimally Verbal School-Aged Children with Autism Spectrum Disorder: A Systematic Review

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Background and Study Aims

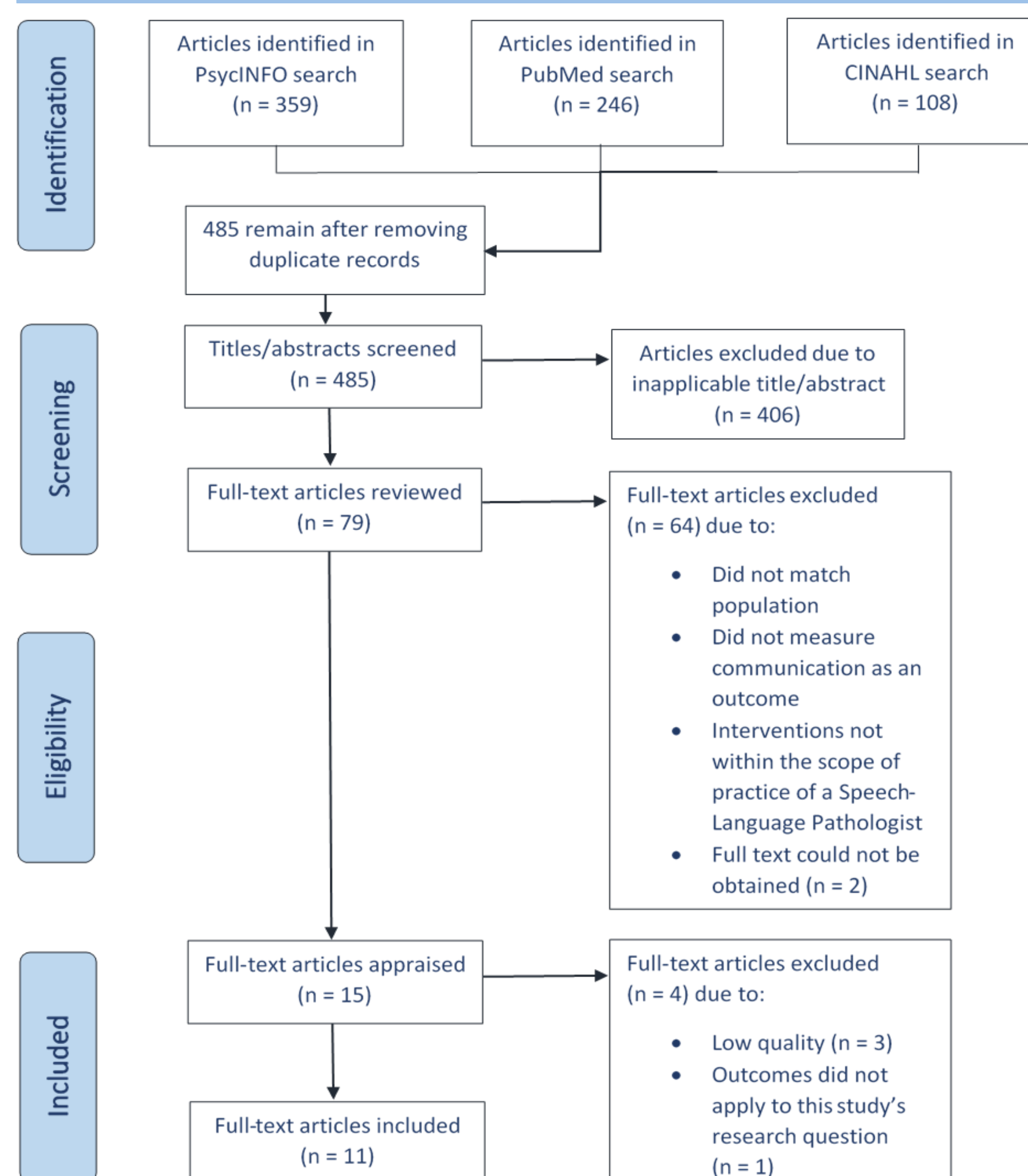
Background:

- The diagnosis of Autism Spectrum Disorder (ASD) has been on the rise in recent years
- 25-30% of children with a diagnosis of Autism Spectrum Disorder (ASD) remain minimally verbal through school-age, yet there has been little research addressing how to best increase communication for these children
- Recently, agencies have encouraged researchers to close this gap in research about minimally verbal children with ASD

Research questions:

- What intervention techniques exist in the literature for promoting communication for minimally verbal school-aged children with ASD?
- What intervention techniques have evidence of efficacy in improving communication?
- How is minimally verbal defined in communication intervention studies?

Study Selection



Inclusion Criteria:

- School-aged (5-17) ≥3 participants
- Formal diagnosis of ASD Minimally verbal
- Interventions within the scope of SLP
- Communication-related dependent variable

Search Strategy

Search Limitations:

- English
- Subjects < 18
- Peer-reviewed
- Human subjects
- Published from January 1996 - January 2017

Search Terms:

("minimally verbal" OR "minimal verbal" OR "low functioning" OR non-verbal OR nonverbal OR "low verbal" OR nonspeaking OR non-speaking) AND (autis* OR ASD) AND (intervention\$ OR treat* OR therapy OR therapies OR program\$ OR technique\$ OR strateg*) AND (language OR communic* OR pragmatic\$ OR speech)

Results

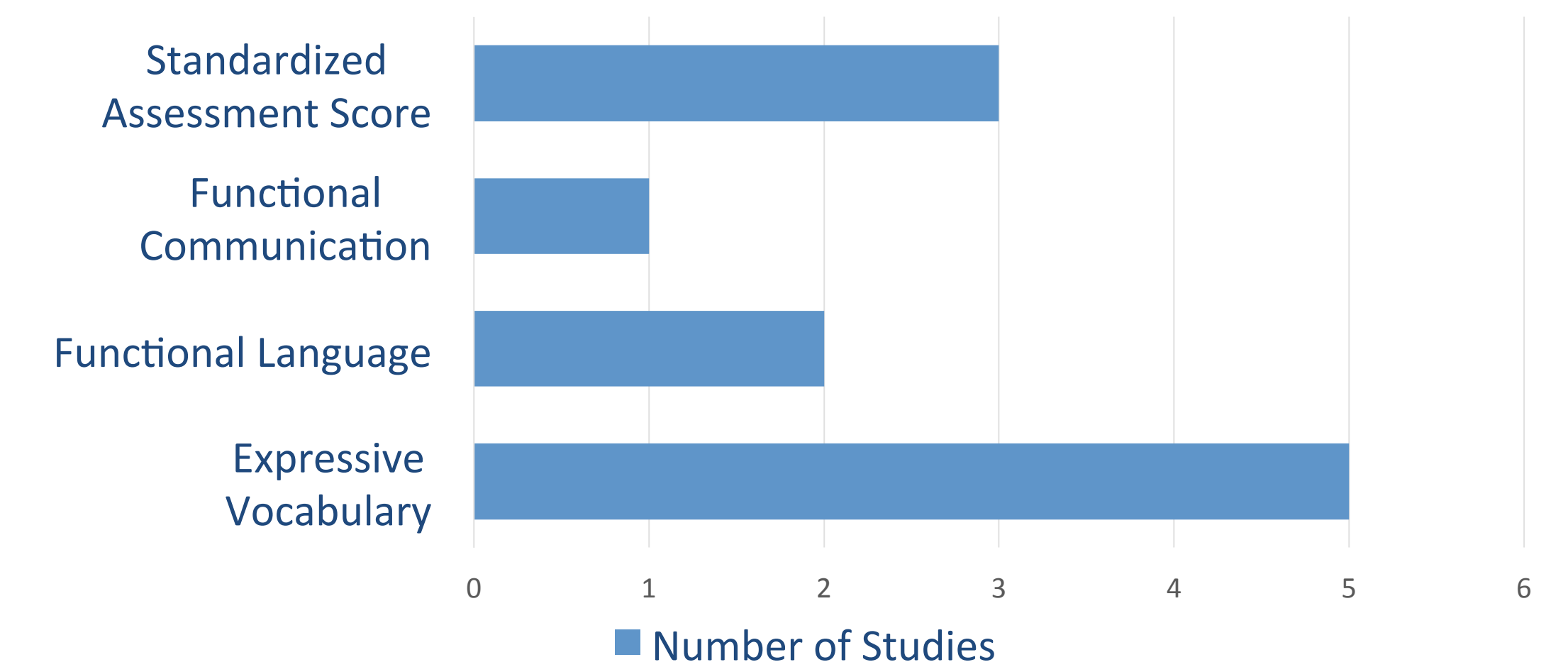
Interventions and Outcomes			
Study	n	Communication Intervention	Evidence Level for Specified Domain <small>none-small-moderate-large</small>
Randomized Control Trials			
Kasari	61	SGD with blended Joint Attention-Symbolic Play/Enhanced Milieu Therapy Intervention	SSC
Gordon	84	Picture Exchange Communication System	SSC R
Sandiford	12	Melodic Based Comm. Therapy	VP
Almirall	61	SGD with blended Joint Attention-Symbolic Play/Enhanced Milieu Therapy Intervention	SSC
Single-Subject Designs			
Franco	6	Prelinguistic Milieu Teaching	SSC
Strasberger	4	SGD with Peer Assisted Communication Application	SSC
Wan	6	Auditory-motor mapping training	VP
Choi	3	Picture exchange or SGD	R
Couper	9	Manual sign (MS), picture exchange, and SGD	R*less evidence for MS
Interventions and Outcomes: Comparative Studies			
Single-Subject Designs			
Flores	3	Picture exchange vs. SGD	R: SGD over PE
Boesch	3	Picture Exchange Communication System vs. SGD	SSC: No difference VP: No difference R: No difference

Key: **SGD** – Speech Generating Device **R** – Requesting
SSC – Spontaneous social communication **VP** – Vocal production

Results, continued

- The majority of studies investigated the effectiveness of picture exchange (PE) and speech generating devices (SGD)
- No significant difference between how efficacious SGD and PE were, but there was a qualitative preference for SGD by students and teachers
- The types of outcomes measured can be grouped into three different categories: spontaneous social communication (SSC), vocal production (VP), or requesting (R)

Minimally Verbal/Low Functioning Definition References



- No consensus number of words in expressive vocabulary (< 0-20)
- No consensus on amount of functional language
- No consensus over choice of standardized assessment or severity

Conclusions & Future Directions

- There is still little consensus regarding the most efficacious intervention for minimally verbal school-aged children with ASD, but findings suggest that alternative and augmentative communication, such as PE and SGD, is effective and may best be used in combination with a behavioral intervention
- Future research design should measure spontaneous communication attempts beyond simple requests/standard responses
- Future research should also conduct interventions at a variety of times and settings

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