INTRODUCTION

Two populations of children who are affected by both limited language skills and social interaction deficits are specific language impairment (SLI) and autism spectrum disorder (ASD). Though language profiles and severity continuums vary within and across these disorders, a possible shared area of linguistic deficit may be use of complex syntactic forms. Though there is extensive, cross-linguistic documentation of morphosyntactic limitations of children with SLI, there are few studies that have reported on complex syntax development in children with the disorder (Schuele & Dykes, 2005). Complex syntax involves use of sentence structures containing one independent and at least one dependent clause. Like children with SLI, children with ASD may have complex syntax deficits, though limited research is available for this population. Research in complex syntax in ASD is derived from studies of narratives of older children (Capps, Losh, & Thurber, 2000).

Research Questions

1) What are the patterns of complex syntax use in a 6 week intensive language intervention group program for participants with SLI and ASD?

2) Do complex syntax use patterns in children with SLI and ASD change following 6 weeks of intensive group intervention, a 6 week break from intervention, and 8 weeks of non-intensive intervention?

METHOD

Participants: Five children with SLI (1 girl, 4 boys, M age = 6.8) and 3 children with ASD (1 girl, 2 boys, M age 7.6) participated in this study. All participants with SLI performed >1.5 SD below the age mean on a standardized language test. Participants in the ASD group were verbal communicators with low-average to slightly above average performance IQ scores. Participants in this group had considerable social interaction and language deficits.

Intervention & Procedures: Participants were enrolled in an intensive summer language group (4 hrs/week for 6 weeks) in a college clinic, led by 2 SLPs and 2 student assistants. Each participant had approximately 4 language goals that were targeted in structured (circle/literacy time, arts and crafts), semi-structured, and unstructured (snack time, free play) contexts daily. Increasing use of complex syntax was a goal for each of the participants. This goal was targeted in structured and semi-structured activities through use of facilitation strategies including focused stimulation, sentence level recasting, and cloze tasks. Specifically, complex sentence types of simple conjoinings and relative clauses were emphasized throughout the program. For research question 1, data were derived from transcripts based on audio recorded samples that were elicited in 3 randomly selected contexts (each 1 for structured, semi-structured, and unstructured) per child. To address research question 2, spontaneous language samples (M length = 120 utterances, SD = 45) were elicited and subsequently transcribed, coded and analyzed. Language samples were elicited 1) prior to beginning intensive 6 week group intervention program; 2) following 6 week intensive group intervention program; 3) following a 6 week summer break from intervention; and 4) following 6 weeks of non-intensive small group or individual clinic-based intervention in which complex syntax continued to be targeted (the same facilitating strategies were used as in the intensive group program). Dependent measures reflected the percentage of total language sample or intervention activity utterances that included complex syntactic forms as well as the percentage of utterances with earlier or later developing complex sentence types (Paul, 1981). A complex syntax profile for each group was organized by the percentage of utterances with complex syntax 1) that were directed toward peers vs. adults; 2) by speaking context (structured, semi-structured, unstructured); and 3) by communication function (commenting, responding, etc.).

RESULTS

1) What are the patterns of complex syntax use in a 6 week intensive language intervention group program for participants with SLI and ASD?

Across speaking partners, tasks, and contexts, children with SLI and ASD were nearly identical in their mean proportionate use of utterances with complex syntax during the 6 week program. SLI M= 13%; SD = 4%; ASD M= 13%, SD = 3%. That is, utterances with complex syntax comprised an average of 13% of total utterances spoken for both groups. Participants’ complex syntax use profiles for speaking partner, speaking context, and communication are displayed in the figures below.

2) Do complex syntax use patterns in children with SLI and ASD change following 6 weeks of intensive group intervention, a 6 week break from intervention, and 8 weeks of non-intensive intervention?

DISCUSSION

Surprisingly, children with ASD and SLI used syntactically complex utterances at remarkably similar rates in intervention activities. Children with SLI are shown to have marked deficits in morphosyntax, whereas children with ASD are shown to have marked deficits in language use. It was therefore predicted that children with SLI would produce fewer complex syntax structures than those with ASD. Because children with ASD had low use of complex syntax in intervention activities (even when this was the goal area being emphasized), this may be an area to consider targeting in intervention.

Across speaking contexts, participants with both SLI and ASD were more likely to use utterances with complex syntax when speaking to adults than when speaking to peers. This finding was not surprising because adults may be more patient listeners and also may serve as better models for complex syntax structure. Also, all the peers in the group program were language disordered and therefore may not have served as optimal complex syntax models.

Implications

Results may provide preliminary evidence that children with ASD may respond better to complex syntax in individual rather than group settings. Clinically, SLPs may benefit from considering contexts and functions of communication that resulted in the highest use of syntactically complex utterances. For both children with ASD and SLI, more syntactically complex forms were used in structured tasks than in semistructured and free play activities. This may suggest that targeting complex syntax may require more direct emphasis that is feasible in more structured tasks. Findings also suggested that participants in both groups were more likely to use syntactically complex utterances when commenting and responding than when communicating for other purposes. Such observations could be incorporated into intervention planning.

Future Research

Future studies could include larger participant groups and could carefully control for and investigate the roles of specific clinician facilitating strategies, peer models, and intervention formats (individual vs. group, intensive vs. non-intensive) as related to complex syntax intervention for children with ASD and SLI.

REFERENCES


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