



Grammatical Reconstructions and Tense Errors Made by Children with SLI During Imitation Tasks



Stacy K. Betz¹ M.S., Mabel L. Rice¹ Ph.D., J. Bruce Tomblin² Ph.D., and Su Dong Chen¹ M.S.

University of Kansas¹ and University of Iowa²

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Abstract

Errors on sentence imitation tasks are often considered errors in storage and retrieval. This study explored the possibility that errors are caused by the child's reconstruction of sentences according to his or her underlying grammatical representations. A total of 324 kindergarten children participated: 98 control children, 126 with Specific Language Impairment (SLI), and 100 with Non-specific Language Impairment (NLI). Previous analyses revealed that the affected children perform at lower levels than the controls on grammatical tense marking, with the NLI group lower than the SLI group (Rice & Tomblin, 1999). All children completed the Sentence Imitation Subtest of the *Test of Language Development (TOLD-P:2)* (Newcomer & Hammill, 1991). Initial analyses confirmed that the affected groups performed at lower levels on the sentence imitation task than the control group, with no difference between affected groups. Detailed error analyses revealed that more than half of the children's responses were grammatical clauses, with no difference between groups. Further analyses found that about 16-27% of noncredit responses contained an error allowable within an immature child grammar, with affected children more likely to make child grammar errors than controls. Roughly 30% of the noncredit responses containing child grammar errors involved an omitted finiteness error, with no group differences. Overall, the findings point toward grammatical reconstructions as an important part of the story for poor performance on sentence imitation tasks. This pattern holds for children with language impairments as well as the control children.

Background

- Sentence imitation (SI) tasks are widely used as part of language assessments to identify children with language impairments
- Often low performance is attributed to difficulty processing or recalling the linguistic input, or breakdowns in retrieval mechanisms, i.e., memory failures
- An alternative interpretation is that children filter the input through their grammatical system and generate grammatical reconstructions that are consistent with a child grammar
- Among the features of an immature child grammar is a tendency to omit grammatical finiteness markers (FIN) from clausal contexts

Purpose

- 1) Do children with language impairments perform less accurately than controls on TNS measures?
- 2) Do affected children perform less accurately than controls on SI?
- 3) Do children's noncredit responses show grammatical generativity (i.e. do they generate grammatical alternatives to the target items)?
- 4) Are control children more likely than affected children to make grammatical errors?
- 5) What proportion of noncredit items from each group contain child grammatical errors?
- 6) What proportion of noncredit items that contain child grammatical errors are classified as errors of omitted FIN?

Participants

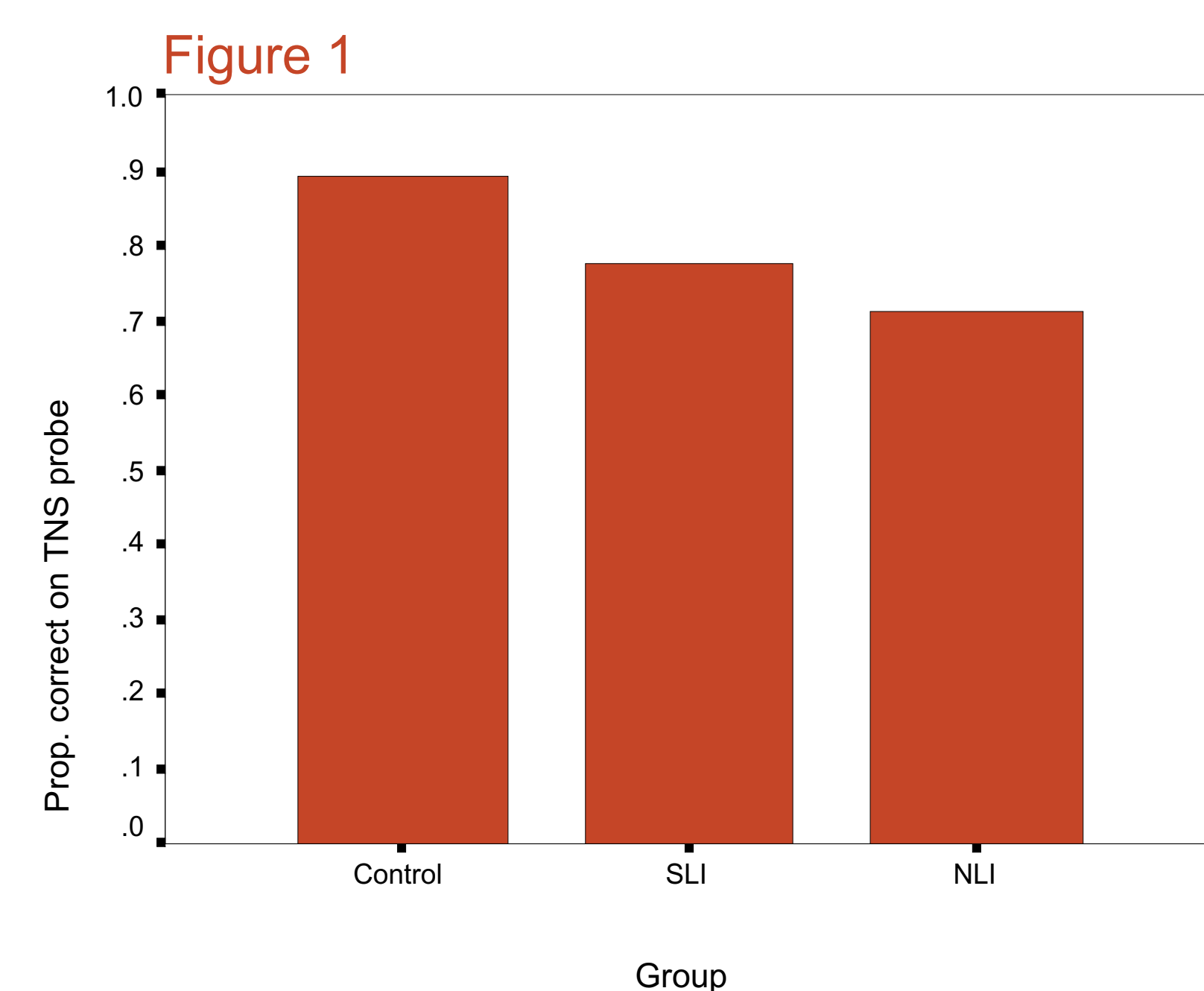
- Cohort 2 kindergarten sample of the Iowa epidemiological study (Tomblin, et al., 1997).
- Based on performance on standardized language testing (*TOLD-P:2*) and performance IQ:
 - 98 children were in a control group
 - 126 with SLI (i.e., IQ normal or above)
 - 100 with NLI (i.e., IQ below 85).
 - Hearing loss, syndromic conditions, and other frank neurological conditions were excluded.

Procedures

- Administration of the SI subtest of the *TOLD-P:2*
- Administration of two experimental probes of TNS, one for 3rd person singular present -s and one for past tense

Results

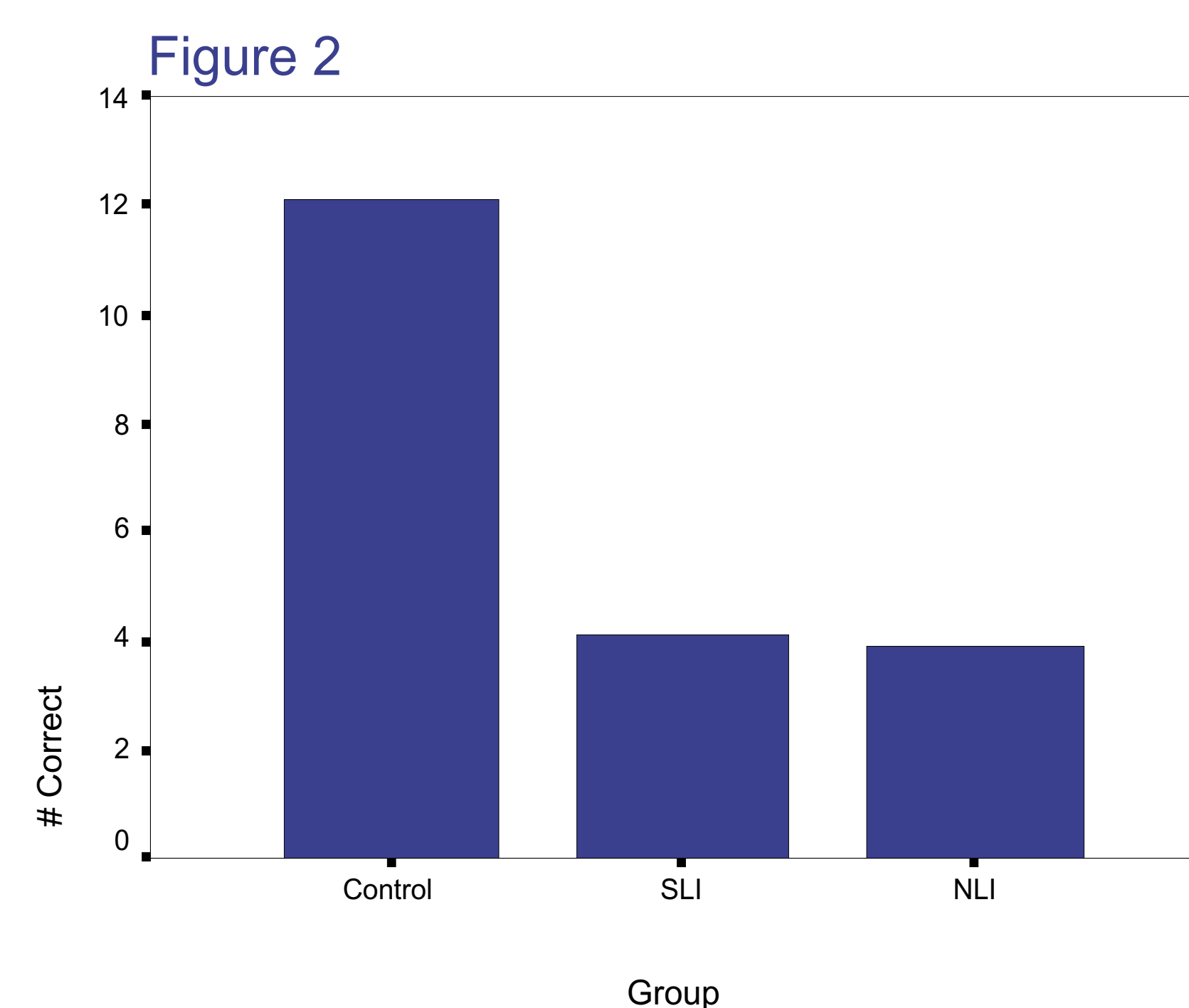
- Question 1: Previous report of lower performance on TNS probes by the affected groups, with NLI < SLI < Controls.



Results Cont.

- Question 2: Number correct on the SI task

Outcome: NLI = SLI < Controls (ANOVA: Sig. group effect, NLI < Controls; SLI < Controls)

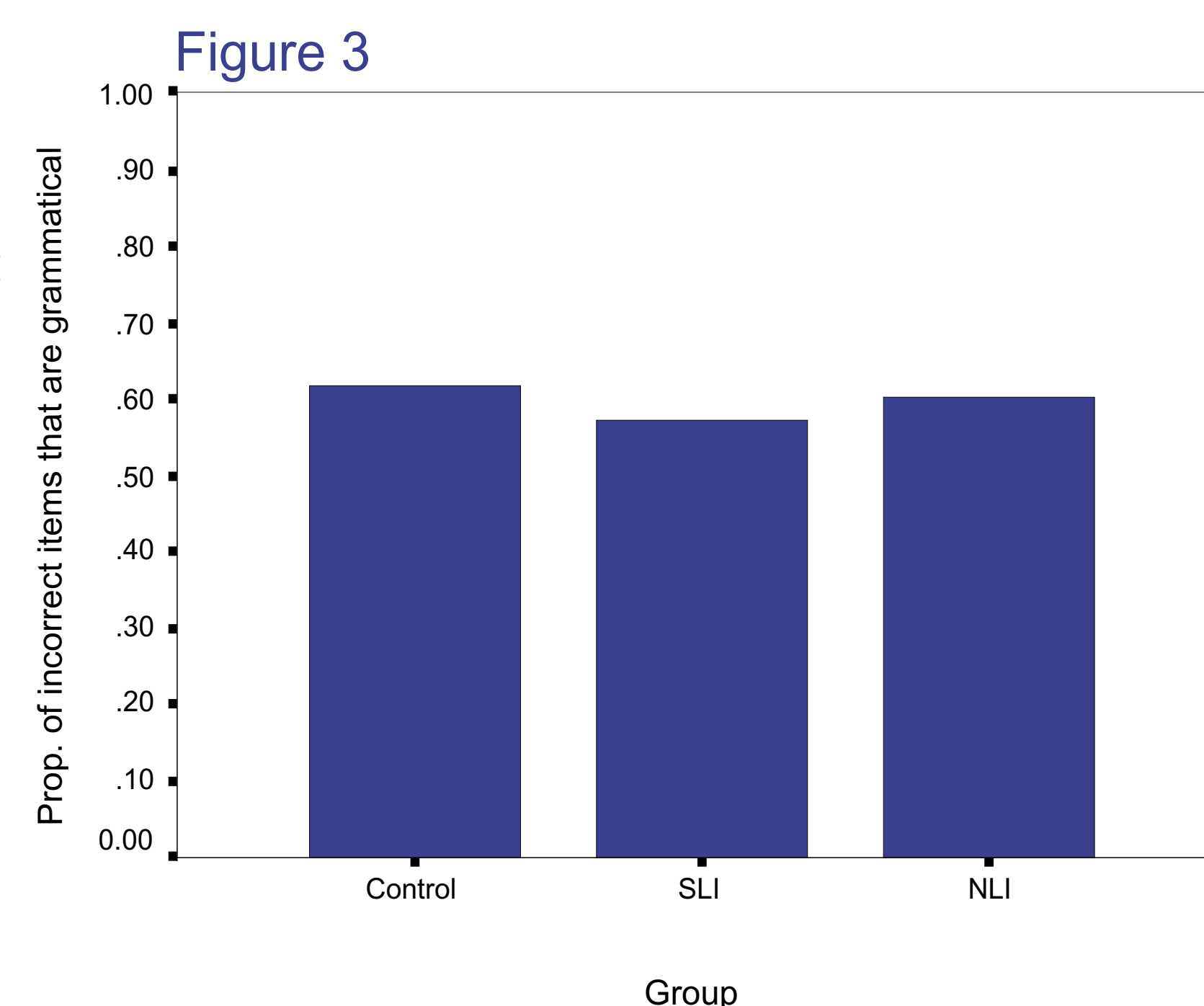


- Question 3: Proportion of noncredit items that are GRs (GR = grammatical reconstruction; response is grammatical according to an adult or child grammar)

Outcome: All groups made GRs (see figure 3 below)

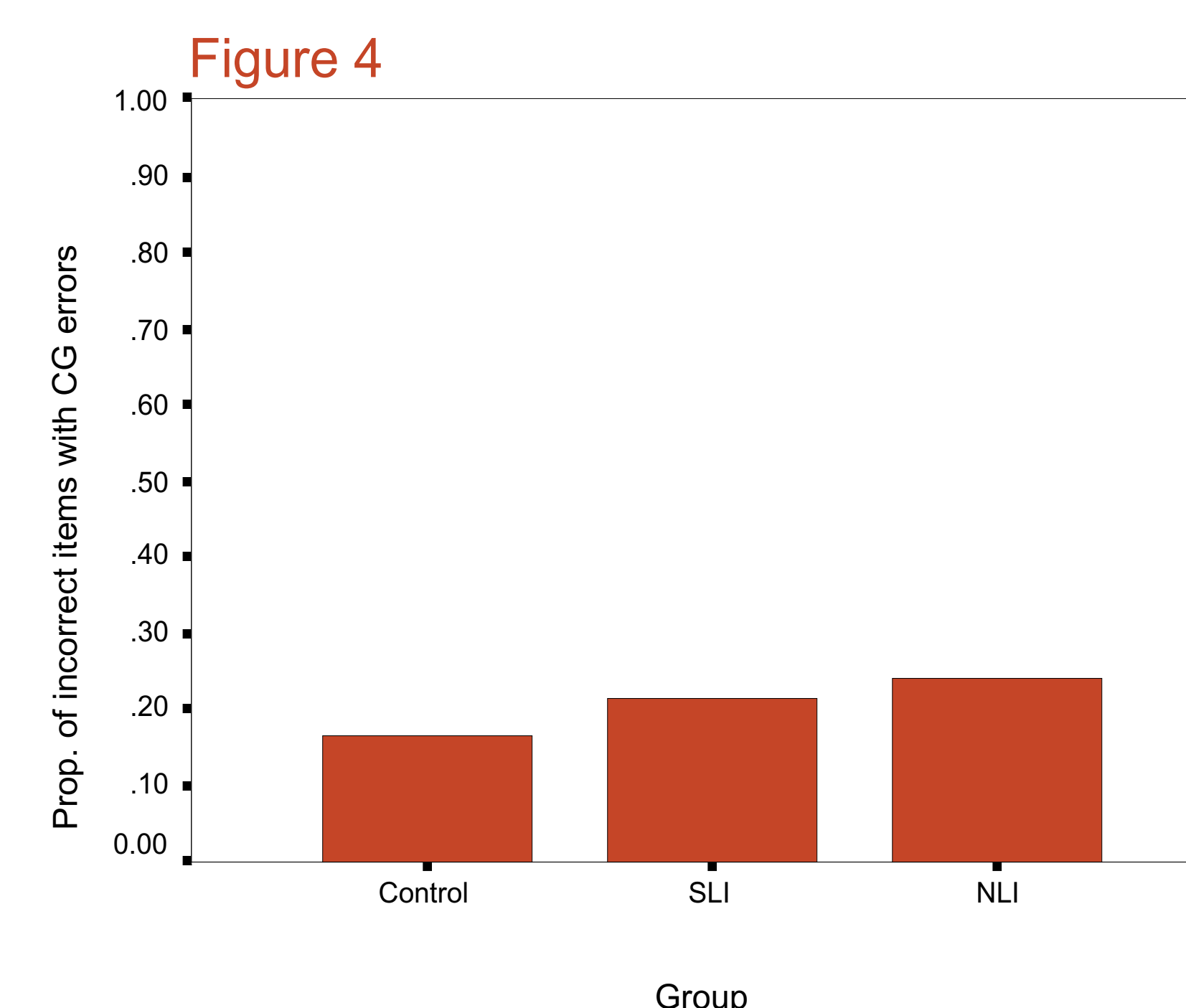
- Question 4: Proportion of noncredit items that are GRs

Outcome: NLI = SLI = Controls (No significant group differences)



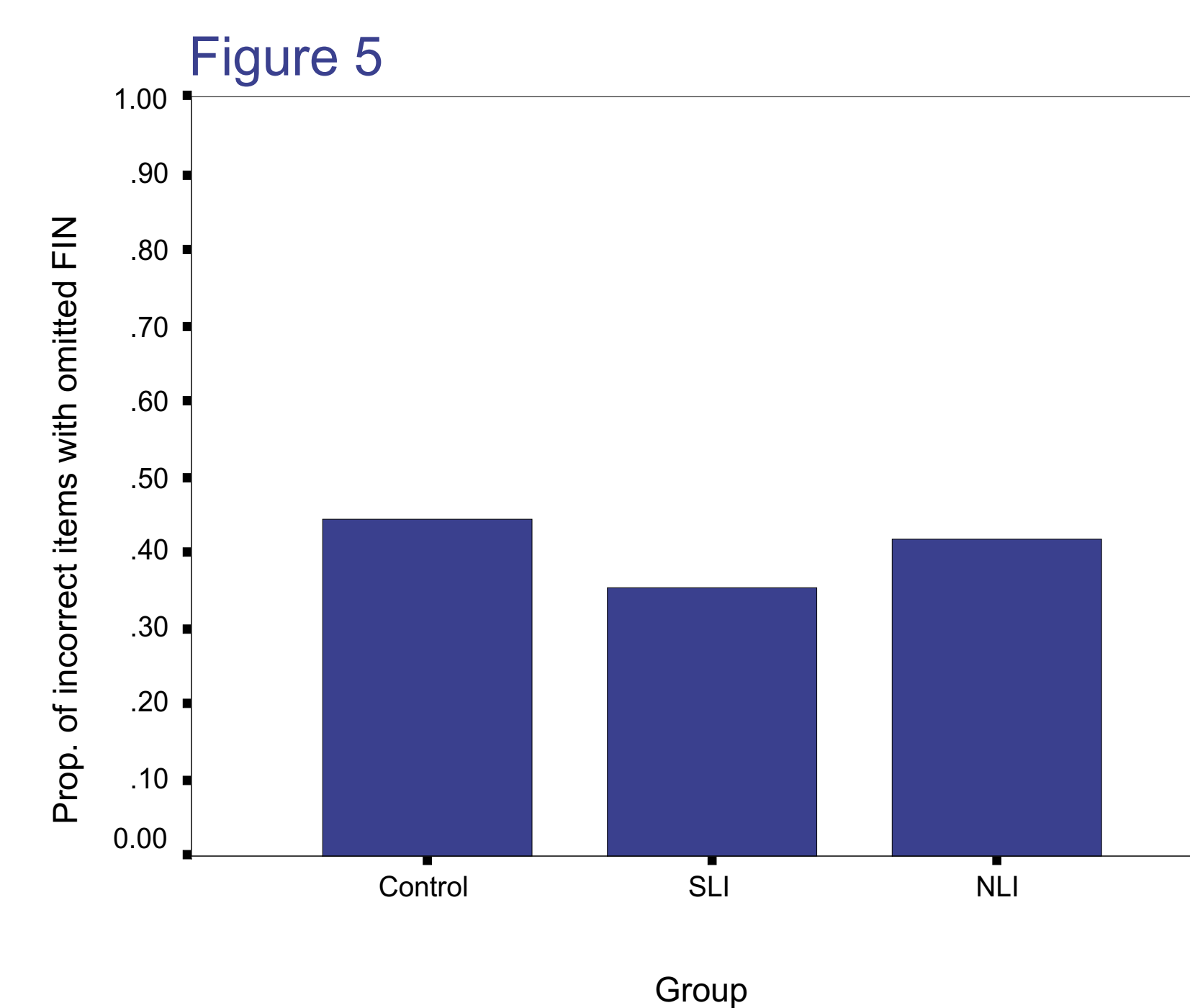
- Question 5: Proportion of noncredit items that contain at least one child grammatical (CG) error

Outcome: NLI=SLI<Controls (ANOVA: Sig. group effect, NLI<Controls; SLI<Controls)



- Question 6: Proportion of noncredit items containing a CG error which is a FIN omission

Outcome: NLI=SLI=Control (No significant group differences)



Summary

- Both TNS probe and SI performance differentiated affected children from control children of kindergarten age.
- On SI tasks, children in all groups showed grammatical generativity in their noncredit responses.
- Approximately 60-70% of the noncredit responses were grammatical reconstructions. This was true of affected children as well as control children.
- Of the noncredit responses, between 16% and 27% involved at least one child grammar error. Affected children made more noncredit responses with CG errors than control children.
- Of the noncredit responses with child grammar errors, roughly 1/3 involved a FIN omission error. This was true of affected children as well as control children.

Implications

- Grammatical reconstructions are an important part of the story for poor performance on sentence imitation tasks.
- This pattern holds for children with language impairments as well as the control children.
- Affected children were more likely to make child grammatical errors which impacted their overall performance.
- Caution is required in strong interpretations of SI performance as solely attributable to the processing and memory requirements of the task.

References

- Newcomer, P.L., & Hammill, D. (1991). *Test of Language Development-Primary 2nd Edition*. Austin, TX: Pro-Ed.
- Rice, M. & Tomblin, J. B. (1999, June). *Clinical indices of language impairment: Grammatical tense compared to conventional testing*. Paper presented at the Symposium for Research on Child Language Disorders, Madison, WI.
- Tomblin, J.B., Records, N. L., Buckwalter, P., Zhang, X., Smith, E., & O'Brien, M. (1997). Prevalence of specific language impairment in kindergarten children. *Journal of Speech, Language, and Hearing Research*, 40, 1245-1260.

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