Discourse Analysis for TBI: Linguistic Measures
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LITERATURE REVIEW

Discourse Analysis. Coelho (2002) states that, “…carefully selected discourse analysis procedures can serve as a highly useful adjunct to traditional diagnostic procedures” (p. 1246) in reference to identifying areas of deficit in individuals with TBI. Additionally, this analysis allows for the use of more complex tasks that provide insight into cognitive and linguistic areas affected (Stout et al., 2000). A specific discourse genre to be analyzed is narrative discourse. Due to the executive function demands narratives require, it is appropriate for use with the TBI population (Biddle, McCabe, & Bliss, 1996).

Method

Subjects. Participants involved 30 individuals who had incurred a TBI and 30 NBI controls. These groups were originally a part of previous studies (Stout et al., 2000; Zeches, 1992) and a subset of the discourse productions generated by these groups was analyzed for the current study.

Procedure. Pre-existing transcripts of narrative story retells were utilized. In the original study, subjects listened to an audiorecording of a fable (Mice & Weasels, Reeves, 1985) via headphones. The fable was 219 words in length, 90 seconds in duration and at a fourth-grade reading level. Instructions to subjects were: “you will be listening to a short story; immediately following the story, I will ask you to retell it to me.” There were no time limitations.

Analysis. The occurrence of propositions were identified and then coded as implicit or repeated. For story structure, absence and presence of characters, setting, problem, and solution were analyzed (Core Knowledge, 2003). For thematic coherence, the framework of the NAP was applied by conducting analysis in the six areas described and then judged based on the level of appropriateness. Interjudge reliability was calculated for 20% of the transcripts across measures with adequate reliability found for measures of thematic coherence and good reliability for story structure measures. Reliability for measures of propositional analysis were poor for both interjudge (50% overall) and intrajudge (58% overall).

RESULTS

Propositional analysis yielded a significant difference between groups with the control group having increased productions of implicit propositions using the Mann-Whitney U Test (z = -2.56, p > 0.01, df = 58). Overall, story structures occurred less in the TBI group than the NBI controls. Also, less appropriate thematic coherence categories were seen in all areas for the TBI group with the NBI group omitting the referent due to more compensatory manner of relating to more cohesive discourse that was easier to follow.

Discussion

Propositional Analysis. The TBI group had significantly fewer implicit propositions when compared to NBI control group. It is proposed that this difference occurred secondary to:

- increased opportunities for implicit propositions to occur in NBI groups’ discourse productions based on the overall greater length of story retells
- less content overall in the TBI group
- the TBI group consistently naming what was referred to in a compensatory manner
- the NBI group omitting the referent due to more cohesive discourse that was easier to follow

Clinical Implications. The code sheet developed during this study could be used as an assessment tool when analyzing narrative discourse with a patient with TBI. The specificity of information received from this type of analysis allows for treatment to be targeted for the individual. However, caution should be exercised when applying propositional analysis due to the low interjudge and intrajudge reliability found in this study.

SELECTED REFERENCES


Core Knowledge: National conference, All about Aesop, 1(1), 14-25.


Purpose and Research Questions

Purpose: Determine if subjects with TBI perform differently than non-brain injured (NBI) subjects on narrative discourse tasks. Specifically:

- Is there a difference on the microlevel linguistic measures of the: occurrence of implicit and repeated propositions (propositional analysis)?
- Is there a difference on macrolevel linguistic measures of occurrence of story structures and level of appropriateness (thematic coherence)?

Thematic Coherence. The TBI group consistently displayed less coherence in all areas except referencing and conjunctions. It can be speculated that this occurred due to:

- decreased occurrences of implicit propositions for the TBI subjects, making referencing more appropriate
- increased length of NBI subjects story retells creating less appropriate occurrences of conjunctions

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Thematic Coherence. Hough and Barrow (2003) found that this macrolinguistic measure was reduced in patients with TBI. A specific measure for thematic coherence was the Narrative Assessment Profile (NAP) (McCabe & Bliss, 2003). Discourse components in the NAP include: topic maintenance, informativeness, event sequencing, referencing, conjunctions, and fluency.


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