Critical Review: The effectiveness of narrative-based intervention on increasing the production of narrative forms in preschool and school-aged children

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This critical review examines the effect of direct narrative-based intervention approaches on increasing the ability to produce narrative forms amongst preschool and school-aged children. A literature search was completed, and yielded the following article types: one randomized controlled trial, three quasi-experimental designs, one case study, and several informational articles. Overall, the literature provides reasonable support for clinicians who wish to implement narrative-based intervention approaches with their clients. However, such interventions merit further research involving standardized intervention and outcome measures, larger sample sizes, randomization and follow-up data.

Introduction

The relationship between early narrative abilities and literacy, as well as its impact on academic success has been well researched. Oral narratives can be defined as "storytelling – a method of verbally recapitulating past experiences and as a means by which people organize and make sense of the events in their lives," (Crais & Lorch, 1994). Narratives encompass a broad range of language abilities that have been shown to impact a child both within the classroom and in social situations. Children may be expected to produce oral narratives in order to describe, explain or interpret events. Crais and Lorch report that a child's success in these activities reflects the degree to which they understand the academic material, both to their teachers and peers. Research also indicates that oral narrative abilities are a powerful predictor of long term language and literacy skills (Davies et al., 2004; Gillam, 1995).

Fewer research studies have been completed on the efficacy of providing direct narrative-based intervention, particularly to children with language impairments for improving their skills. Not only do children with language impairments have a limited ability to understand and tell stories (Davies et al. 2004), their oral narratives have been shown to differ from those of their typically developing peers in many ways. These include: fewer total words and different words, fewer story grammar components, fewer complete episodes, fewer protagonist attempts, fewer story openings and closings, improper amounts of information, fewer successful repairs, fewer accommodations to uninformed listeners and more incomplete cohesive ties (Crais & Lorch, 1994).

According to previous research, it has been assumed that improvement in narrative abilities would have a positive effect on the child, both academically and socially (Gillam et al., 1994; Crais & Lorch, 1994; Johnston, 2008). Research also suggests that teaching children to organize language in a story telling format provides a structured intervention approach that will allow the child to generalize the information and carry it over into the classroom (Klecan-Aker, 1993). As speech-language pathologists, it is important to consider this research and its implications for clinical practice in order to provide the best intervention for children with language impairments.

Objective

The primary objective of this paper is to provide a critical evaluation of the existing research on the effects of narrative-based intervention approaches in preschool and school-aged children. In doing so, evidence-based recommendations regarding the incorporation of these approaches into clinical practice will be discussed, as well as areas for further research.

Methods

Search Strategy

Computerized databases, including, CINAHL, Medline-OVID, Proquest Education and PsychInfo, were searched using the following search terms:
((narrative) OR (story grammar)) AND (intervention) AND (children)

The search was limited to articles written in English between 1985 and 2008. Additionally, relevant literature within acquired articles was sought.

Selection Criteria

Studies selected for inclusion in this critical review were required to evaluate narrative-based intervention approaches for improving children's ability to produce oral narratives. Authors of the research employed a variety of different intervention techniques that utilized story grammar components to facilitate understanding of oral narratives and the organization of the child's production of their own narratives. No limits were set on the demographics of research participants.

Data Collection

Results of the literature search yielded the following types of articles congruent with the aforementioned objectives and selection criteria: randomized controlled trial (1), quasi-experimental designs (3), case study (1), and informational articles (3).

Results

Klecan-Aker (1993) conducted a case study measuring the effectiveness of an intervention program designed to increase the ability of a language/learning disabled child to tell a story. The participant, an 8-year old male, took part in two, one hour sessions each week for twelve weeks directly targeting oral narrative skills. The researcher examined two oral and written stories elicited one week apart both pre-test and post-test. The researcher used the number of t-units, words/ t-unit, clauses/ t-unit and words/ clause to determine the level of complexity of the child's narratives.

The results of this case study showed overall gains in the ability of the participant to tell a story. The number of t-units, number of clauses/ t-unit, and the level of complexity all increased post-intervention. The participant also showed an increase in the form and complexity of his written narratives, although this was not directly targeted in intervention. A strength of this study was that qualitative data was collected from the participant's teachers who reported a significant increase in his creativity and writing ability in story tasks.

Although this study indicated that the child's ability to tell a story improved following intervention, statistically significant data was not reported. Other noteworthy limitations of this study included: the lack of reliability measures between each elicited story and the absence of a control.

Despite these limitations, this study provides support for the implementation of narrative focused intervention methods, particularly for clinicians working within a classroom setting.

Hayward and Schneider (2000) conducted an exploratory study to evaluate the effectiveness of teaching story grammar components to pre-school children. The researchers also evaluated whether the quality of the children's narrative productions were influenced by familiar versus unfamiliar listeners. Thirteen preschool children with moderate to severe language impairments participated in this study. Researchers utilized both a single-subject and a mixed group design. All children were individually assessed pre- and post-intervention. Group data was collected to evaluate the overall effectiveness of the intervention. Specifically, researchers evaluated the complexity of the children's narratives and the number of story information units included. A two-way analysis of variance (ANOVA) was used to compare the group pre- and post-intervention results using two variables: time (pre- and post-intervention) and listener conditions (familiar and unfamiliar). While single- subject data showed considerable variation, the results of the mixed group design indicated statistically significant improvement in the children's narrative productions ($p<0.001$). There was no effect reported for listener conditions. Qualitative reports indicated unexpected transfer of the skills into classroom activities as reported by the participants' teachers.

There were two main limitations to the Hayward and Schneider (2000) study. Firstly, the sample size selected was very small, consisting of only 13 participants. Secondly, all of the participants were enrolled in a classroom-based language intervention program with a focus on narratives while simultaneously receiving direct narrative intervention. Thus separating the effects of the classroom-based program from the effects of the direct narrative intervention is difficult. A control group including children who had only participated in the classroom-based program would have greatly increased the strength of the results.

Despite these limitations, this study was very well designed. The researchers controlled for baseline effects and researcher biases. Further,

individual data for each participant was provided as well as a detailed description of the intervention plan, making future reproduction of this study possible. Overall, this study provides support for practicing clinicians to use narrative-based intervention in their clinical practice.

Davies, Shanks and Davies (2004) looked at the effects of a collaborative teaching model on targeting language skills within a group setting. Specifically, researchers looked at the effects of intervention developed to improve the oral narratives of children with delayed language development. Thirty-one children with delayed language development, aged five to seven years old, participated in this study. Children were taught to recognize the structure of their own narratives, as well as the narratives of others, by focusing on the use of Wh-Questions. Children were seen for treatment three times each week by a Speech-Language Pathologist or trained learning support assistant, for a period of two months. Researchers assessed each participant's narratives pre- and post-intervention, evaluating the amount of information included in the child's narrative, the episodic complexity, the story type classification and any additive, temporal or causal connections.

Statistically significant improvement in the quality of the children's narratives between the pre- and post- assessments ($p < 0.001$) were reported. Qualitative data was also collected. Reports from teachers and learning support assistants indicated significant improvements in the children's confidence, listening skills, independence, task completion and overall participation in the classroom.

There were several limitations to this study. The first limitation was that the researchers used age–related scores to compare the standardized measures pre- and post-intervention. Age-related scores must be interpreted with caution as they do not take into account natural maturation that would have occurred without intervention. Another major limitation was that a large majority of the children selected were from families of low socio-economic status. This may not have been truly representative of the population at large. Finally, lack of a control group makes it difficult to determine how much of the children's progress was actually due to the intervention provided.

Despite these limitations this study also had several strengths. The researchers followed up with the children three months post-intervention. They also included qualitative data from the teachers and learning support assistants. One of the more important outcomes of this study was the finding that an increase in narrative skills improved the children's ability to benefit from everyday classroom activities. Overall this study provides positive support for the implementation of narrative-based intervention within clinical practice.

Swanson, Fey, Mills and Hood (2005) conducted a preliminary study to examine the feasibility of narrative-based intervention for school-aged children with specific language impairment (SLI). Ten children ages seven to eight years old participated in a 6 week intervention program. They were seen three times each week. Speech-language pathologists targeted both narrative and grammar goals.

The results indicated that 8 out of 10 participants showed statistically significant improvements in the quality of their narratives ($p < 0.014$). Qualitative reports indicated that children also increased in their self confidence in regard to their narrative production. They also exhibited an increased level of eye contact and increased vocal volume when speaking within groups.

There were several limitations to this study. Similarly to Hayward and Schneider (2000), the sample size collected was quite small, consisting of only 10 participants. Another limitation was the short intervention period of only six weeks. There was also no control group or any follow-up data collected on the treated children's progress. A further limitation was that many of the children were concurrently receiving services from their school-board speech-language pathologist, making this difficult to determine how much of the progress was due to the narrative-based intervention.

Several strengths were noted in this study. The scorers were blind to the children's profiles during transcription of their narratives. The researcher's provided detailed descriptions of the intervention procedures making future reproduction possible. In addition, suggestions were made about how to modify the author's procedure for future studies. Overall this preliminary study illustrates the need and value of further investigation. Overall this

study provides support for practicing clinicians to use narrative-based intervention.

Nathanson, Crank, Saywitz and Ruegg (2007) evaluated the effectiveness of narrative elaboration training (NET) on a group of 39 children ages 7 to 12 years old who were learning disabled. NET is an instructional program with the goal of aiding in the organization and retrieval of information of a past event. This study utilized visual cues representing various categories to assist in the recall of personal narratives of the children with learning disabilities. A 30 minute history lesson was used as the stimulus. Children were then randomly assigned to the NET or control group. Children in the experimental group participated in two thirty minute sessions prior to the recall task.

A post-test-only control group design was utilized to assess the completeness and accuracy of the children's oral narratives. A one-way fixed effects model analyses of variance (ANOVA) was conducted. Results indicated that children who received the NET stated significantly more correct information (p=0.01) than those in the control group. Overall children in the experimental group recalled 40% more information than those in the control group.

One limitation of this study was that no data was collected prior to intervention to establish a baseline. This was explained by the researchers as a method to reduce practice effects. Researchers also did not collect any long term follow up data on the children's progress.

A major strength of this study was the inclusion of a control group and randomization. Additionally, all sessions were videotaped to ensure reliability of transcription. Twenty-five percent of the data was re-coded for inter-rater reliability and ninety-two percent agreement was reported.

Overall this research shows promising results in support of narrative elaboration training as a method to enhance the oral narratives of children within clinical practice.

Discussion

Overall, the evidence for narrative based intervention indicates improvement in the participant's oral narrative abilities following various forms of direct intervention.

Several concerns were apparent regarding the design and methodology of the research reviewed. It is recommended that further research should include the following to provide higher levels of evidence: an increase in the number of participants in the study, random assignment of participants, a control group, both pre-test and post-test measurements and data on generalization and long term carryover. Additionally, few studies have compared the relative gains of various intervention approaches to determine which, if any, may result in the best outcomes.

Despite any limitations in the aforementioned designs, every study examined identified positive results for the client following intervention targeting narrative abilities. There were no studies that did not show positive change following this type of therapy. Another important aspect of many of the studies was the inclusion of qualitative data regarding potential changes noted by others and collateral effects. Teacher reports indicated that the child`s confidence levels improved as well as their performance on story tasks within the classroom. Additionally, all the studies were well described making future replication possible.

Clinical Implications

Integrating evidence-based principles into clinical practice is beneficial for clinicians as it improves the outcomes for the client and provides more efficient service. As a group, the articles provide evidence for the effectiveness of narrative based intervention and support for utilization in clinical practice. Particularly relevant, was the qualitative data reported by teachers and family members. This shows that not only are the children directly improving their narrative abilities, they are also generalizing the strategies targeted in intervention into their everyday environments. Keeping this in mind, clinicians should individualize their intervention approach for their clients, drawing on a variety of appropriate strategies in order to benefit each individual child.

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