

## **Abstract**

### **Background**

Discourse analysis as a clinical tool in speech and language therapy remains largely limited to research and within academic settings, at least partly because of the time-consuming nature of the process of transcription that currently precedes it. If transcription-less discourse analysis were valid and reliable, then there would be the clinical opportunity to use this method in order to describe a person's communication impairment (for example aphasia), to help plan therapy and as an outcome measure.

There is evidence available now on the reliability of transcription-based DA, e.g., Brady, Mackenzie & Armstrong (2003); Brady, Armstrong & Mackenzie (2005), from which the work described below may be considered as a natural development. Our recent research also in relation to turn-taking in participants with dysarthria (Comrie, Mackenzie & McCall, 2001) and involving the use of gesture in people with right hemisphere brain damage (Brady & Mackenzie, 2001) has indicated the potential of a transcription-less method of DA. In Comrie, Mackenzie and McCall (2001), the turn-taking analysis undertaken directly from audio-recordings was based on 'slow careful listening to the recordings' as this approach was deemed to be 'more viable in standard clinical settings' (p. 387). Transcription was used however when analysis was difficult (i.e., when there were overlapping turns). Both intra-rater and inter-rater reliability of this transcription-less method were measured using subsets of the conversational samples. For the former a respectable mean of 90% agreement (range = 75-96.7%) was achieved over seven aspects of turn-taking, while for the latter the result was slightly lower (mean = 86.7%, range = 72.6-97.5%). The lowest agreement for both sets of reliability data was for frequency of within turn pauses. Brady and Mackenzie (2001) profiled gesture use following right hemisphere damage directly from video-recordings. They report intra-rater reliability at between 88% and 99%.

A transcription-less approach to DA would make this method of analysis more accessible to SLTs working in clinical practice with people with aphasia (or indeed with other communication-disordered client groups). The utility of analysis of disordered communication beyond single word or sentence level is now well-recognised and promoted (e.g. Royal College of Speech and Language Therapists, 2005). Increased accessibility of DA within everyday clinical settings would in turn drive more functionally relevant outcomes, i.e., better identification of deficits evident in everyday inter-personal interactions as well as more appropriate and finely-tuned targeting of therapy interventions and of evaluation of the effectiveness of those interventions. The decreased time required for transcription-less DA approaches would also facilitate the inclusion of greater numbers of participants in SLT clinical experimental investigations, thereby potentially increasing the statistical power to detect smaller treatment effects, which might still be worthwhile clinically.

### **Aim**

This study aimed to address the potential of transcription-less discourse analysis as a valid and reliable procedure for the measurement of gesture use, topic use, turn-taking, repair, conversational initiation, topic initiation and concept use.

### **Methods & Procedures**

Ten individuals with aphasia were audio- and video-recorded participating in a number of discourse tasks from three different discourse genres (conversation, procedural and picture description). Two researchers undertook the transcription-based analyses. Following a five hour training programme, five final year undergraduate SLT students undertook the transcription-less analysis. With the same analytical frameworks, the analyses using transcription-based discourse analysis and transcription-less methods were compared. Inter- and intra-rater reliability was also investigated.

## Results

### Reliability of the transcription-based method

For both intra-rater and inter-rater reliability of the transcription-based analysis there were no statistically significant differences found between the original and second analysis for the subset of samples re-analysed nor between the original analysis and that carried out by the second rater for the subset of samples analysed. This finding confirms our earlier research, which demonstrated the reliability of this approach.

### Validity and reliability of the transcription-less method

Overall the results establish the validity and inter-rater reliability of a transcription-less approach to DA. None of the measures gave significant differences between scores from the two methods, thus demonstrating validity. The main non-significant disparities related to some aspects of gesture use and repair. The inter-rater reliability of the transcription-less method was also acceptable in general: it was strongest for the gesture totals and varied among the attributes of turn-taking and repair. For the categorical measures (topic and conversation initiation and concept analysis) the percentage agreement was very good.

The inter-rater reliability of the transcription-less method was also acceptable in general. Reliability was measured by the intraclass correlation coefficient (ICC) for the continuous measurements: it was strongest for the gesture totals and varied among the attributes of turn-taking and repair. For the categorical measures (topic and conversation initiation and concept analysis) the percentage agreement was very good. The validity and reliability results overall do indicate the potential for a transcription-less method of discourse analysis, but some of the discourse features measured produced more encouraging results than others.

### Outcomes

This study included a range of discourse genres and discourse features as well as an adequate sample length and demonstrated further evidence of reliability of the transcription-based method, some initial evidence on inter-rater reliability of transcription-less DA as well as validity of the transcription-less method. The results therefore do indicate the skills of SLTs as expert listeners and observers of communicative interaction.

The main limitations of this study were (a) the small number of raters involved in the analysis and (b) arguably, that different raters were used for the two types of DA. These factors might restrict the generalisability of findings from the study. However it did achieve its aim, to begin to address the question of whether transcription-less discourse analysis is valid and reliable, and its objective, to compare transcription-less and transcription-based analyses of the same discourse samples, using the same measures, elicited from people with aphasia.

These findings imply that in the future DA could be used as an everyday clinical tool, as the need for time-consuming task of transcription prior to analysis could be abolished. That is not to say however that clinicians would necessarily dispense with transcription wholesale. They may continue to choose to transcribe sections of discourse samples for particular reasons, such as detailed grammatical analysis.

Many research questions remain in the evaluation of transcription-less DA as a valid and reliable clinical tool. These include the intra-rater reliability of the method (which will be measured more effectively in a study involving a larger number of raters), the content and length of training required for qualified clinicians (possibly especially in terms of repair and

gesture use) and the wider applicability of the method to other SLT client-groups (both developmental and acquired) who present with problems at discourse level.

### Conclusions

These results indicate the potential availability of a valid and reliable transcription-less approach to analysis that speech and language therapists can apply to analyse their clients' discourse.

### References

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