



APPLICATION OF THE RESPONSE ELABORATION TRAINING (RET) METHOD ON NARRATIVE ABILITY IN APHASIA PATIENTS IN SURAKARTA CITY

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ABSTRACT

Aphasia is the loss of language function due to brain damage in an area associated with language comprehension and production. Patients with aphasia need a method that can be used to aid language recovery, one of which uses the method of response elaboration training (RET) by providing a stimulus for narrative ability through speech prompting. The purpose of this study was to determine the effectiveness of the application of the Response Elaboration Training (RET) method on storytelling ability in aphasia patients in Surakarta City. This study experimental with a one-group pretest-posttest design and five intervention using the response elaboration training (RET) method. The total sampling technique with the of respondents in this study amounted to 15 respondents with aphasia. The Wilcoxon test was used for data analysis. Results of the Wilcoxon test obtained a *p*-value (Sig.) of 0.001 (*p*-value <0.05), so it can be concluded that there is an efficacy of the aphasia training. There is an effectiveness of the application of the response elaboration training (RET) method on the narrative ability of aphasia patients in Surakarta City.

Keywords: aphasia; narrative ability; response elaboration training method (RET)

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INTRODUCTION

Aphasia is the loss of language function due to a brain lesion in an area associated with language comprehension and production. The most common cause of aphasia is stroke, or cerebral vascular accident (CVA). Other aetiologies include accidents, tumours, infections, toxicity, and metabolic and nutritional disorders that affect brain function. The brain is the most complex organ in the body. Different regions and structures of the brain have different responsibilities, but work together intricately through a complex network of nerves and synapses. The brain integrates all aspects of language and damage to one part of the brain often affects all language modalities to some extent. Each person will experience a variety of different factors, including the location of the lesion, severity and individual uniqueness (Shipley & McAfee, 2021). Some researchers have found that sufferers can differ drastically from one another, making it difficult to clearly explain aphasia in terms of a range of behaviours and deficits. Although there is much variation from patient to patient.

The damage occurs in the language-dominant brain hemisphere; for most of us, this is the left hemisphere. An adult (or a child or adolescent who has already acquired language) with aphasia has a basic disorder of understanding and using language in its various forms. More specifically, aphasia is a syndrome that causes language deficits due to damage to cortical tissue and is characterised by one or more symptoms, the first of which is an impairment in the reception and decoding of symbolic material through auditory, visual or tactile channels. Although the individual can still hear and see, he or she has difficulties in decoding the associations of learned messages. Secondly, impairment of the core processes of meaning, word selection and message

formulation. And thirdly, impairment in the expression of symbolic material through speech, writing or gestures.

Language is a tool for transmitting information. Over a period of time a certain amount of information is transmitted through language. Aphasia affects the transmission of information, i.e. information can only be received and expressed in a limited amount and more slowly. Aphasia affects one or more levels: lexical-semantic, morphosyntactic and phonological. These three levels give rise to the underlying disorders of aphasia; these disorders are at the basis of the difficulties that people with aphasia have.

The most common cause of aphasia is stroke. According to the National Aphasia Association, approximately 25%-40% of stroke patients have aphasia. It is estimated that 35-40% of adult patients receiving acute care in hospital are diagnosed with aphasia (ASHA, Clinical Topics).

The prevalence of aphasia in the United States shows that 100,000 people a year suffer from aphasia. About 82.37% of aphasia patients suffer from speech disorders. Aphasia, as a type of speech disorder, has a prevalence of 30.25% to 42.4%. In Indonesia, data based on medical records, journals and websites are very limited. The reason for this limitation is that hospital medical records classify diseases according to medical diagnosis and aphasia is difficult to detect.

According to data obtained from the medical records section of Dr Moewardi Hospital, the number of stroke cases in 2020 amounted to 584 cases, in 2021 to 595 cases, in 2022 from January to May to 277 cases and in 2023 from January to June to 745 cases. So it is possible that out of the large number of patients obtained each year about 10%-15% of stroke patients experience aphasia.

Storytelling is an activity that someone performs orally to others with or without tools about what is conveyed in the form of messages, information or simply a story to be heard (Yulinda & Abubakar, 2020). Storytelling can also be one of the oral deliveries by telling something about images, actions or events and delivered orally with the aim of sharing information, experiences, stories and knowledge with others. Storytelling is a manifestation of speech.

According to Nurgiyantoro (2001: 289), storytelling exemplifies a person's ability to tell a story is a test of oral competence aimed at assessing a person's ability to communicate effectively in everyday situations. A person attempts to communicate his or her thoughts and feelings to others through speech.

Response Elaboration Training (RET) is a therapeutic programme used to increase the amount of information contained in individuals speech in people with aphasia. Response Elaboration Training (RET) improves the syntactic performance of individuals diagnosed with chronic Broca's aphasia. RET also has broad appeal for the treatment of patients with Broca's aphasia. RET relies on increasing the amount of verbal information contained in the spoken discourse of patients with Broca's aphasia. Response Elaboration Training (RET) has the goal, namely; to increase the amount and variety of information contained in oral speech patients with aphasia. RET is used in patients with Broca's aphasia (Dissertation--rehabilitation & Husak, 2011).

Based on the above discussion, the researcher is interested in conducting a research with the title 'Application of Response Elaboration Training (RET) method to storytelling ability in aphasia patients'. The researchers conducted an investigation in the city of Surakarta by taking

samples from several adult patients suffering from aphasia. The purpose of the research was to determine the effectiveness of the application of the Response Elicitation Training (RET) method on storytelling ability in aphasia patients in Surakarta city.

METHOD

This research is a quantitative study with a pretest-posttest group research design and an intervention provided during 5 consecutive meetings using the RET method. The data analysis in this study used the Wilcoxon test. While the technique used in this study is total sampling technique and the sample size is 15 respondents experiencing aphasia. The results of the overall data were collected and processed using SPSS version 21.0 software. The validity test results of RET cards vary greatly from 0.412 to 0.897 and the value obtained in Cronbach's alpha is 0.956 with a total of 53 stimulus cards, but only 10 selected stimulus cards were used in this study.

RESULT

The results of the research conducted there are categories based on age, gender, stroke duration and type of aphasia. In addition, there are pre- and post-intervention results. There are results of bivariate pre-test and post-test analyses and the results of the significance of the effectiveness of the application of the response elaboration training (RET) method. The number of respondents in this study was 15, with characteristics that can be seen in the table.

Table 1.
Respondent characteristics (n= 15)

| Respondent characteristics | f | % |
|----------------------------|----|------|
| Age | | |
| <30 years | 1 | 6.7 |
| 40-50 years | 4 | 26.7 |
| 51-60 years | 4 | 26.7 |
| 61-70 years | 6 | 40 |
| Gender | | |
| Male | 6 | 40 |
| Female | 9 | 60 |
| Stroke duration | | |
| 0-1 years | 1 | 6.7 |
| >1 years | 14 | 93.3 |
| Aphasia category | | |
| Anomis | 2 | 13.3 |
| Transcortical Motor | 4 | 26.7 |
| Broca | 7 | 46.7 |
| Mixed Transcortical | 1 | 6.7 |
| Global | 1 | 6.7 |

In table 1, the results showed that the age category was less than 30 years with 1 respondent (6.7%), 40-50 years with 4 respondents (26.7%), 51-60 years with 4 respondents (26.7%) and 61-70 years with 6 respondents (40%). In the male category there were 6 respondents (40%) and 9 respondents (60%) were female. In the category of stroke duration from 0 to 1 year there was 1 respondent (6.7%) and more than 1 year there were 14 respondents (93.3%). In the category of anomalous aphasia 2 respondents (13.3%), in transcortical motor aphasia 4 respondents (26.7%), in broca aphasia 7 respondents (46.7%), in transcortical mixed aphasia 1 respondent (6.7%) and in global aphasia 1 respondent (6.7%).

Table 2.
Frequency Distribution Before Getting Intervention (n= 15)

| Scoring Pre-test | f | % |
|------------------|---|-----|
| 4,84 | 1 | 6.7 |
| 4,88 | 1 | 6.7 |
| 6,00 | 1 | 6.7 |
| 11,59 | 1 | 6.7 |
| 12,00 | 1 | 6.7 |
| 21,14 | 1 | 6.7 |
| 21,62 | 1 | 6.7 |
| 27,92 | 1 | 6.7 |
| 29,52 | 1 | 6.7 |
| 30,94 | 1 | 6.7 |
| 38,10 | 1 | 6.7 |
| 38,36 | 1 | 6.7 |
| 43,50 | 1 | 6.7 |
| 77,14 | 1 | 6.7 |
| 78,40 | 1 | 6.7 |

Based on table 2 results before being given treatment on storytelling ability, there were 13 respondents who had below-average scoring results, and there were 2 respondents who had above-average scoring results.

Table 3.
Frequency Distribution After Getting the Intervention (n= 15)

| Scoring Pre-test | f | % |
|------------------|---|-----|
| 4,84 | 1 | 6.7 |
| 4,88 | 1 | 6.7 |
| 6,00 | 1 | 6.7 |
| 6,67 | 1 | 6.7 |
| 76,03 | 1 | 6.7 |
| 76,63 | 1 | 6.7 |
| 76,67 | 1 | 6.7 |
| 77,14 | 1 | 6.7 |
| 77,23 | 1 | 6.7 |
| 77,84 | 1 | 6.7 |
| 77,88 | 1 | 6.7 |
| 78,00 | 1 | 6.7 |
| 78,17 | 1 | 6.7 |
| 81,03 | 1 | 6.7 |
| 81,43 | 1 | 6.7 |

Based on Table 3 the results from after being given treatment on storytelling skills, there were 14 respondents who had an above-average scoring result, and there was 1 respondent who had a scoring score that did not increase below the average.

Table 4.
Distribution of Bivariate Analysis Results Pre-Test and Post-Test (n=15)

| Pre-test – Post-Test | N | Mean Rank | Sum of Ranks |
|----------------------|----|-----------|--------------|
| Negative Ranks | 0 | 0.00 | 0.00 |
| Positif Ranks | 15 | 8.00 | 78.00 |
| Ties | 0 | | |

Based on table 4 of the data results above using Wilcoxon data analysis, it was obtained that the respondents increased with an average of 8.00 and no respondents experienced a decrease.

Table 5.
Distribution of Results Significance of Effectiveness of Application of Method
Response Elaboration Training (RET)

| | Post-test – Pre-test |
|------------------------|----------------------|
| Z | -3.408 |
| Asymp. Sig. (2-tailed) | .001 |

Based on table 5 the results of the comparative test effectiveness of response elaboration training (RET) method on storytelling skills in aphasia patients in Surakarta City have a value of 0.001 ($p < 0.05$), that there is a significant effectiveness of the response elaboration training (RET) method on the storytelling ability of aphasia patients in Surakarta City.

DISCUSSION

This study aims to determine the comparison of the effect of the response elaboration training (RET) method on storytelling ability in aphasia patients before and after the intervention. The instruments used by the researchers are the Response Elaboration Training Method (RET) and the TADIR Test, especially in the storytelling ability test to assess the respondents' ability, whether they are classified as fluent or not. All respondents took the pre-test and post-test with the TADIR test to check the improvement of storytelling ability in the respondents and carried out interventions during 5 consecutive meetings with stimulus cards that have received up to 10 cards with different pictures.

The results of the pre-test and post-test conducted with Wilcoxon test obtained a significance value of 0.001, which is less than $p < 0.05$, indicating that there is an efficacy of the application of the response elaboration training (RET) method on narration ability in aphasia patients in Surakarta city.

Based on the discussion above the results of the research that has been conducted, the method of response elaboration training (RET) is effective in the ability to tell stories in patients with aphasia. This can be demonstrated by the addition of words in the sentences in each meeting owned by the respondents experiencing aphasia.

Patients with aphasia have difficulty speaking and communicating. Supported by a journal that people with aphasia have difficulty speaking and communicating due to damage to the areas of the brain that regulate language (Husni, 2024). In another study according to Santoso et al (2018) in Bilqis, et al, (2024) aphasia is actually a language problem caused by patients who cannot speak clearly or can no longer speak normally at all, but people with aphasia can still communicate with normal people.

According to Serrat (2003) in White (2023) storytelling is a concrete representation of one's own mind, personal experience and everyday life. Through storytelling strong emotions and perceptions can be evoked. In research by Knox & Svendsen (2015) in White (2023) it has been shown that storytelling has a positive impact on the recovery and quality of life of patients.

According to Bungker et al., (2018) in Taruna, et al. (2022) Based on scientific evidence, RET has been shown to be effective in improving verbal expression skills. In research with meta-analysis studies, RET is known to have a positive effect on verbal expression skills in trained and untrained materials (generalisation effect). Although the generalisation effect was not observed in the extended baseline test data, there may be a within-sequence effect (Bunker et al., 2019). The generalisation effects in this study varied as positive effects for respondents with fluid aphasia such as anomalous aphasia, Wernicke's aphasia, Broca's aphasia, transcortical motor aphasia achieved changes in narrative ability. Meanwhile, respondents with global aphasia did not experience changes in narrative ability. This view is supported by the results of research by Wambaugh et al., (2013) who state that the effect of stimulus generalisation in

elicited speech tasks varies between participants, with positive effects for participants with anomic aphasia, varying performance for participants with conduction aphasia, and no change for participants with Broca's aphasia. In a study conducted in 2000, RET treatment of aphasia patients' storytelling ability by narrating personal experiences or recent events. This may produce a generalisation effect that may influence factors for continuing therapy or not.

The RET method is a retention of verbal production for aphasia designed to increase speech duration. RET was developed on the basis of encouraging creative use of language rather than restricting the speaker's production to predetermined convergent responses. In a study by (Zitteliana, 2003) the effects of RET were measured in a non-treatment task, a sentence production task in which subjects had to include a specific verb in a sentence. Furthermore, the results of this study provide additional support for the generalizability of RET and its lax training procedures. Not only did subjects improve syntactic accuracy, grammatical completeness and other aspects of performance, but two of the three subjects improved their performance before and after treatment on the two picture description tasks, indicating that with treatment subjects' sentences were longer, more complex and more fluent.

CONCLUSION

From the results of the research carried out, it can be concluded that the results of the pre-test and post-test conducted with the Wilcoxon test obtained a significance value of 0.001 which is smaller than $p < 0.05$ so that it can show that there is an increase in storytelling ability in aphasia patients before and after treatment using the response elaboration training (RET) method. It is hoped that families will provide support for families experiencing aphasia to help the language recovery process by using response elaboration training (RET), helping to provide stimulus for the ability to tell stories by talking.

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