

The Experiences and Preferences of Speech and Language Therapists Regarding Aphasia Therapy Apps

Pauline Cuperus, Dörte de Kok, Vânia de Aguiar and Lyndsey Nickels

EasyChair preprints are intended for rapid dissemination of research results and are integrated with the rest of EasyChair.

September 7, 2021

The experiences and preferences of speech and language therapists regarding aphasia therapy apps

Pauline Cuperus^{1, 2, 3*}, Dörte de Kok¹, Vânia de Aguiar¹, & Lyndsey Nickels²

¹ Center for Language and Cognition, Faculty of Arts, University of Groningen, Groningen, The Netherlands

 ² Department of Cognitive Science, Macquarie University, Sydney, Australia
³ International Doctorate for Experimental Approaches to Language and Brain (IDEALAB), Newcastle University, Newcastle upon Tyne, UK; Macquarie University, Sydney, Australia; University of Potsdam, Potsdam, Germany; University of Groningen, Groningen, The Netherlands

*Corresponding author, p.a.cuperus@rug.nl

Word count: 498

Introduction

People with aphasia (PWA) benefit from speech and language therapy that is administered frequently and preferably over a long period of time (Brady et al., 2016). In reality, this is often difficult to achieve for reasons including therapist availability, financial load, and physical impairments. Using aphasia therapy apps could be a means of meeting clinical recommendations related to dose and frequency (Brady et al., 2016). We currently know little about speech and language therapists' (SLTs) experiences and perceptions of using therapy apps. This information is, however, essential in order to design products that meet the users' needs (Bannon, 1986; Norman & Draper, 1986; Swales et al., 2016) and that are therefore more likely to be used in clinical practice. The current study therefore aimed to answer three main research questions:

- 1. What are SLTs' current experiences with regards to aphasia therapy apps?
- 2. What are SLTs' perceptions of PWA's smartphone/tablet use and the suitability of online, independent therapy for this target group?
- 3. What do SLTs perceive to be facilitators and barriers to the use of aphasia therapy apps?

Method

Participants were recruited from Australia and The Netherlands. All respondents self-identified as SLTs and/or clinical linguists. The survey contained 4 open and 12 multiple choice questions pertaining to our research questions and was presented in Qualtrics (Qualtrics, Provo, UT).

Results

Our survey respondents consisted of 29 Australian (mean age=35.5 years, 28 female) and 35 Dutch SLTs (mean age=36.2 years, 32 female).

Table 1 shows the responses to those multiple choice questions most relevant to our research questions.

[Place Table 1 about here]

The open questions resulted in extensive feedback regarding current experiences with therapy apps and SLTs' opinions regarding future therapy apps. The most frequently cited facilitators for increasing the use of aphasia therapy apps were user-friendliness, targeting different language modalities and using apps as an addition to regular therapy. The most frequently reported barriers were the costs, the client potentially not owning a tablet and the client's computer (il)literacy.

Conclusion

To summarise, surveyed SLTs were very positive towards aphasia therapy apps. Encouragingly, they report frequent smartphone/tablet use even in their relatively elderly caseloads and were confident in their clients' abilities to use aphasia therapy apps independently at home. We therefore conclude that there is plenty of support in the SLT community for increasing the use of aphasia therapy apps, and this could be a means of meeting clinical recommendations regarding intensity and dose of treatment (Brady et al., 2016).

Nevertheless, our respondents also quite clearly indicated some barriers that they had experienced regarding the use of therapy apps. While it is not within researchers' power to tackle all of these, the onus is on aphasia researchers and app developers to listen and respond to SLTs' experiences and feedback and to improve the design of their digital therapies accordingly. In line with Swales et al. (2016), the extensive feedback that we have received clearly underlines the importance of directly involving clinicians in the aphasia app development process.

References

- Bannon, L. J. (1986). Issues in Design: Some Notes. In D. A. Norman & S. W. Draper (Eds.), User centered system design. Lawrence Erlbaum Associates, Inc., Publishers.
- Brady, M. C., Kelly, H., Godwin, J., Enderby, P., & Campbell, P. (2016). Speech and language therapy for aphasia following stroke. *Cochrane Database of Systematic Reviews* 6(1)
- Norman, D. A., & Draper, S. W. (Eds.). (1986). *User centered system design*. Lawrence Erlbaum Associates, Inc., Publishers.

Qualtrics, Provo, UT, USA. https://www.qualtrics.com.

Swales, M. A., Hill, A. J., & Finch, E. (2016). Feature rich, but user-friendly: Speech pathologists' preferences for computer-based aphasia therapy. International Journal of Speech-Language Pathology, 18(4), 315–328.

Table 1

Overview of responses to some of the multiple choice questions

Question	Responses							
Are you generally open to using aphasia therapy apps?	Not at all	A little	Quite a bit	Definitely				
	AU ^a - 0% NL ^b - 0%	6.9% 2.9%	17.4% 31.4%	75.9% 65.7%				
For how many of your clients do you use apps as part of the aphasia therapy?	None	Some	Most	(Nearly) all				
	AU - 0% NL - 11.4%	58.6% 60.0%	24.1% 20.0%	17.2% 8.6%				
In your experience, how often do people with aphasia use smartphones / tablets	Never	Monthly	Weekly	Daily	Multiple times per day			
	AU - 3.4% NL - 3.0%	3.4% 3.0%	24.1% 30.3%	58.6% 51.5%	10.3% 12.1%			
How frequently do you think a person with aphasia would be able to practice therapy material independent- ly using a	Never	Monthly	Once a week	2-3 times per week	> 3 times per week			
	AU - 0% NL - 5.7%	0% 0%	3.4% 0%	10.3% 28.6%	86.2% 65.7%			

therapy app?			

^a AU = Australian responses ^b NL = Dutch responses