



Getting All the Pixels: How can we Increase the Evidence?

Susanne Cook*

Speech-language Pathologist and Researcher, Fairfax County Public Schools, Sisskin Stuttering Center, USA

*Corresponding author: Susanne Cook, Speech-language Pathologist and Researcher, Fairfax County Public Schools, Sisskin Stuttering Center, USA, Tel: 703-426-6492; Email: susanne.cook@me.com

Received date: February 16, 2016; Accepted date: February 18, 2016; Published date: February 20, 2016

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Editorial

The American Speech-Language-Hearing Association (ASHA) advocates that all Speech language pathologists must include the principles of evidence-based practice (EBP) in their clinical decision-making to ensure the provision of high quality interventions [1]. EBP is a trilateral construct consisting of external evidence, the clinical expertise of the clinician, and the needs of the client. Recently, consideration of the needs of the client, the so-called social evidence, has become increasingly important, especially in the discussion of quality [2]. However, when considering the three elements of EBP, the external evidence frequently receives the highest emphasis. In the context of communication disorders, randomized controlled trials (RCT), studies that are viewed as the best source of the highest level of evidence, are considered by many as the “gold standard” of treatment efficacy studies [3]. RCT studies are often difficult to conduct, as they are expensive and time-consuming. In the area of fluency disorders, there are few RCTs available, and we often have to rely on expert opinion rather than efficacy studies [4]. However, if such studies were the only evidence clinicians could rely on, it would be like having a high definition television and only receiving a limited number of pixels. Imagine the output, if all the red pixels were missing – the picture or evidence would be blurry! One option to increase the fidelity of the overall picture would be to take other evidence into account, for example a well-designed and well-reported case study. Such studies may not have the highest level of evidence, but could guide the speech-language pathologist when making clinical decisions. Smaller well-reported studies are not invalid and although they will not receive the highest rating of evidence they still can lead to well-informed clinical decision-making. But a far more important question is, could we widen the evidence base for these types of studies? How can the pixilation, the data sets that are available for these studies, be improved? Can the “gold standard” for lesser-investigated therapy methods be reached by increasing the data collected?

In an ever-interconnected world perhaps we should be taking greater advantage of the growing population with access to online services. There are already several initiatives in place to gather data collectively, such as ASHA's National Outcomes Measurement System [5] project which collects data to show the value of speech-language pathology services, the “TalkBank” project [6], an international database collecting language data for different populations including the Child Language Data Exchange System [7], or the database of speech samples of stuttered speech at University College London [8]. These examples show, that it is possible to pool resources in order to get stronger data.

Specifically in the area of fluency disorders, it should be possible to include wider participation of clinicians across the community by utilizing technology to enhance data availability through such tools as electronic questionnaires. Although there may be questions as to the

variance between digital and written data collection, they could be deemed equally as valid [9]. But even more desirable would be the broader data collection and consistent evaluation of lesser investigated therapy concepts or participants who were outliers in existing RCTs, for whom a classical therapy concept was unsuccessful. Clearly, for such a critical endeavor it is vital to ensure standardization of collection methods. In order to address this specific issue, the Interdisziplinäre Vereinigung der Stottertherapeuten (ivs, www.ivs-online.de), a German association for stuttering therapists, formulated minimal diagnostic standards for stuttering therapy; to standardize data collection methods for initial data collection and continuous evaluation of therapy progress. If consistent temporally (e.g., initial evaluation, quarterly follow up data) and thematically (e.g., follow up data after completion of a therapy phase) with agreed data collection points, then data from multiple clinicians could be pooled to increase sample sizes. The data could be shared in a cloud-based repository, which would allow both uploading and access to data for research projects. One obvious advantage is that clinicians with small client bases could share their data, and instead of studies based on low sample sizes larger studies with greater statistical power could be conducted. If the creation of such a database was achievable-ethically, technically and logistically-it would enable a first step towards improving more practice-based evidence, and then could lead to an increase in studies and feedback regarding the effectiveness of different treatment approaches on a wider basis [10-12].

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