

EVIDENCE-BASED PRACTICE IN COMMUNICATION DISORDERS

AUD 7339. SPRING. 2014

Course Information

Time: Monday, 10:00 a.m. - 12:45 p.m.
Location: Callier Dallas, Room J204
Course Credits: 3

Professor Contact Information

Instructor: Andrea Warner-Czyz, Ph.D.
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Office Hours: Wednesday, 10:00 a.m. – 12:00 p.m., or by appointment

Course Pre-requisites, Co-requisites, and/or Other Restrictions

Honest uncertainty about one or more aspects of clinical practice in communication disorders and a willingness to think critically.

Course Description

This course concerns an expanded version of the framework known as evidence-based practice (EBP), in which credible evidence derived from scientific research, from clinical practice, and from patients themselves is identified and incorporated into clinical decision-making. Students will learn how to ask strong and answerable questions about evidence, how to find potentially valuable evidence, how to appraise evidence critically, and how to design, present and defend a strong and credible study of their own. This course is open to all graduate students; it has been designed to ensure that students in audiology and speech-language pathology demonstrate required knowledge and skills as outlined in the Standards and Implementation Guidelines for the Certificate of Clinical Competence in their respective areas as described below.

Student Learning Objectives/Outcomes

1. Describe the origins, characteristics, strengths and limitations of evidence-based practice (AUD Std IV-B15; SLP Std III-F)
2. Conduct efficient and effective electronic searches for external scientific evidence (AUD Std IV-B15, E12; SLP Std III-F)
3. Define and apply the criteria for appraising the validity of evidence (AUD Std IV-B15, E12; SLP Std III-F)
4. Define and apply the criteria for appraising the importance of evidence (AUD Std IV-B15, E12; SLP Std III-F)
5. Describe a systematic approach to integrating evidence from external scientific research, from clinical practice, and from patients into clinical decision-making (AUD Std IV-B15, E12; SLP Std III-D, F)
6. Plan a research study consistent with EBP principles and criteria (AUD Std IV-B15; SLP Std III-F)

Required Textbook

Wong, L., & Hickson, L. (2012). Evidence-based practice in audiology: Evaluating interventions for children and adults with hearing impairment. San Diego: Plural Publishing.

Additional Required Readings

- Beeson, P. M. & Robey, R. R. (2006). Evaluating single-subject treatment research: lessons learned from the aphasia literature. *Neuropsychological Review*, 16, 161-169.
- Browning, G. G., Rovers, M. M., Williamson, I., Lous, J., & Burton, M. J. (2010). Grommets (ventilation tubes) for hearing loss associated with otitis media with effusion in children (Review). *The Cochrane Library*, 10, 1-45. Accessible at <http://www.thecochranelibrary.com>.
- Coleman, C. I., Talati, R., & White, C. M. (2009). A clinician's perspective on rating the strength of evidence in a systematic review. *Pharmacotherapy*, 29, 1017-1029.
- Dollaghan, C. A. (2007). *The handbook for evidence-based practice in communication disorders*. Baltimore: Brookes. Chapters 5-7.
- Ertmer, D. J., & Maki, J. E. (2000). A comparison of speech training methods with deaf adolescents: spectrographic versus noninstrumental instruction. *Journal of Speech, Language, and Hearing Research*, 43, 1509-1523.
- Hardonk, S., Bosteels, S., Desnerck, G., Loots, G., Van Hove, G., Van Kerschaver, E., Vanroelen, C., & Louckx, F. (2010). Pediatric cochlear implantation: a qualitative study of parental decision-making processes in Flanders, Belgium. *American Annals of the Deaf*, 155, 339-352.
- Horner, R. H., Carr, E. G., Halle, J., McGee, G., Odom, S., & Wolery, M. (2005). The use of single-subject research to identify evidence-based practice in special education. *Exceptional Children*, 71, 165-9.
- Honeth, L., Bexelius, C., Eriksson, M., Sandin, S., Litton, J. E., Rosenhall, U., Nyrén, O., & Bagger-Sjöbäck, D. (2010). An internet-based hearing test for simple audiometry in nonclinical settings: preliminary validation and proof of principle. *Otology and Neurotology*, 31, 708-14.
- Krahn, M., & Naglie, G. (2008). The next step in guideline development: Incorporating patient preferences. *Journal of the American Medical Association*, 300(4), 436-438.
- Murad, M.H., Montori, V.M., & Guyatt, G.H. (2008). Incorporating patient preferences in evidence-based medicine. *Journal of the American Medical Association*, 300(21), 2483-2484.
- Neufeld A., Westerberg, B. D., Nabi, S., Bryce, G., & Bureau, Y. (2010). Prospective, randomized controlled assessment of the short- and long-term efficacy of a hearing conservation education program in Canadian elementary school children. *The Laryngoscope*, 00, 000-000. DOI: 10.1002/lary.21185.
- O'Connor A. M. & Jacobsen, M. J. (2007). Decisional conflict: Supporting people experiencing uncertainty about options affecting their health. Ottawa Hospital Research Institute (OHRI), accessible at https://decisionaid.ohri.ca/ODST/pdfs/DC_Reading.pdf
- Robey, R.R., & Dalebout, S.D. (1998). A tutorial on conducting meta-analyses of clinical outcome research. *Journal of Speech, Language, and Hearing Research*, 41(6), 1227-1241.
- Rosnow, R.L., & Rosenthal, R. (2009). Effect sizes: Why, when, and how to use them. *Journal of Psychology*, 217(1), 6-14.
- Van Kleeck et al. (2010). Should We Use Telegraphic or Grammatical Input in the Early Stages of Language Development With Children Who Have Language Impairments? A Meta-Analysis of the Research and Expert Opinion. *American Journal of Speech-language Pathology*, 19, 3-21.

Assignments & Academic Calendar

Course topics and tentative schedule

Date	Topic	Due at the class (email to instructor or bring to class session)
01/13	Introduction	Notes (important questions/comments) on Chapters 1-2. Be prepared to talk about a research question of your choice, keeping PICO in mind.
01/20	No class (MLK Holiday)	
01/27	Questions and searches	Complete PubMed tutorial at http://www.nlm.nih.gov/bsd/disted/pubmedtutorial/ Conduct a search on a PICO question of your choice via PubMed clinical query function; turn in your question, a summary of your search results, and comments

02/03	Validity of evidence	Notes on Horner et al.(2005) Find and describe a study with relatively good internal validity and a study with relatively poor internal validity. Contrast their strengths and weaknesses and describe how the weaknesses could have been avoided.
02/10	Importance of evidence	Notes on Dollaghan Chapter 5 (pp. 47-62) Notes on Rosnow & Rosenthal (2009) Prepare a 5-slide powerpoint presentation leading through the introduction to your PICO question.
02/17	Importance of evidence	Notes on Wong & Hickson Chapter 10 (237-266) Calculate the <i>d</i> value as in Beeson & Robey (pp. 164-165) for the SD target data in Figure 3 and for p. 1516 of Ertmer & Maki (2000).
02/24	Designing a research study	First draft of introduction (background and rationale) for your paper, including outline of planned methods
03/03	Individual meetings	
03/10	<i>Spring Break – no class</i>	
03/17	Critical appraisal of systematic reviews	Notes on Dollaghan Chapter 6 (pp. 63-80) Notes on Coleman (2009)
03/24	Meta-analysis	Notes on Robey & Dalebout (1998) Notes on van Kleeck et al. (2010)
03/31	Writing a methods section	Outline of planned methods, description of materials and methods.
04/07	Critical appraisal of treatment, diagnosis/screening evidence	Notes on Dollaghan Chapter 7 (pp. 81-104) Complete CATE form for Neufeld et al. (2010) and CADE form for Honeth et al. (2010); explain reasoning for each rating briefly. First draft of methods section
04/14	Incorporating patient preferences	Notes on Krahn & Naglie (2008) Notes on Murad et al. (2008) Questions, comments, links from Hardonk et al. (2010)
04/21	Decision aids	Notes on Wong & Hickson Chapter 3 Notes on decision aid for hearing aids at http://decisionaid.ohri.ca/AZinvent.php
04/28	EBP and CPG	Wong and Hickson Chapter 13 Final paper due

Recommended sections for papers (papers should substantially exceed poster presentations)

I. Background and rationale, including at least one PICO question and a summary table listing quality feature ratings from your critical appraisals of at least 5 key studies discussed in your background and rationale

II. Planned methods (Participants, procedures, measures, analyses; include research design, plans for sampling, reliability and validity of measures, alpha level, estimates of statistical power, effect size, and sample size and discuss how you will avoid threats to internal validity)

IV. Table/graph/text summarizing hypothetical results and resulting conclusion

V. References (American Psychological Association format)

Depending on the clarity and quality of the final paper you submit, you may be asked to revise it during finals week before receiving a grade for the course.

Grading Policy

Grades will be determined according to the following elements:

- 50% Active participation in all class sessions, including attendance and timely, thoughtful completion of assignments
- 25% Poster presentation

ASHA STANDARDS ADDRESSED IN THIS CLASS: How knowledge is conveyed and how knowledge and skill acquisition will be demonstrated

Speech-language pathology Standard III-D

The applicant must possess knowledge of the principles and methods of prevention, assessment and intervention for people with communication and swallowing disorders

- *Knowledge will be conveyed via class lectures and readings.*
- *Acquisition will be demonstrated via class discussions and assignments.*

Speech-language pathology Standard III-F

The applicant must possess knowledge of processes used in research and the integration of research principles into evidence-based clinical practice

- *Knowledge will be conveyed via class lectures and readings.*
- *Acquisition will be demonstrated via class discussions and assignments.*

Audiology Standard IV-B15

The applicant must demonstrate knowledge of principles and practices of research, including experimental design, statistical methods, and application to clinical applications.

- *Knowledge will be conveyed via class lectures and readings.*
- *Acquisition will be demonstrated via class discussions and assignments*

Audiology Standard IV-E12

The applicant must have the knowledge and skills necessary to assess efficacy of interventions for auditory and balance disorders

- *Knowledge will be conveyed via class lectures and readings.*
- *Acquisition will be demonstrated via class discussions and assignments*

Students will demonstrate the following skills:

1. Critically appraise external scientific evidence on diagnosis and screening
Measured by: assignments
2. Critically appraise external scientific evidence on treatment
Measured by: assignments
3. Critically appraise evidence from meta-analyses and systematic reviews
Measured by: assignments
4. Synthesize current best evidence on a clinical question
Measured by: poster presentation and paper
5. Use principles of evidence-based practice to design a study of a clinical question
Measured by: poster presentation and paper

Course Policies

Extra Credit - Extra credit will not be offered.

Late Work - Late work will not be accepted.

Class Attendance - Required for all sessions.

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.