

Neuropsychological Rehabilitation (PSYC33H3 S)
University of Toronto – Scarborough Campus
Winter 2006

Course Instructors: Dr. Guy Proulx

Office Hours: 1 hour before class

Teaching Assistant: Genevieve Quintin

Office Hours: By appointment

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Course Website: <http://intranet.utoronto.ca>

Class Time and Location: Thursdays 10:00 a.m. – 12:00 p.m. in (Rm # = HW 402).

Objective: In this course, methods of neuropsychological rehabilitation used to treat cognitive deficits in a variety of domains (e.g., attention, memory, language, praxis, sensory-perception, and executive function) will be examined. The importance of using a combination of theory of brain behaviour relations with scientific methodology and clinical relevance in the rehabilitation process will be emphasized.

Required Readings: See reading list on course website.

Recommended Text: Publication Manual of the American Psychological Association, 5th ed.

Supplemental Text: Paul J. Eslinger (Ed.). (2002). Neuropsychological Interventions: Clinical Research and Practice. New York: The Guilford Press.

Evaluation	Date	Content	Weight
Midterm Exam	Feb. 16	Lectures + required readings	35 %
Research Paper	Apr. 6	6 page paper detailing the design and evaluation of an intervention to rehabilitate a neuropsychological deficit. This can be a case or group study from topics covered in class.	30 %
Final Exam	TBA	Lectures + required readings	35 %

Exam Format: Midterm and final examinations will include multiple choice, short answer, and essay questions.

Missed Exam Policy: Students who miss the midterm exam will have their grade prorated over the research paper and final exam. The prorating option will NOT be granted unless the instructor(s) receives appropriate documentation, such as a signed medical certificate or college registrar's note within one week of the missed exam.

Penalty for lateness: The research paper is due on April 6. Hand in the paper to the Psychology Department main office. The penalty for lateness is 5% per day.

Course Schedule

Date	Lecturer	Topic(s)	Assigned Reading
Jan 12	Dr. G. Proulx	Overview of the field of neuro-psychological rehabilitation, course content, and marking scheme.	Taub, E., et al., (2002). Nature Reviews: Neuroscience, 3, 228-235. Wilson, B.A. (2002). Neuropsych. Rehab. 12, 97-110.
Jan 19	Dr. K. Murphy	Sensory - Perceptual	Francis, D.R., et al., (2002). Neuropsychological Rehabilitation, 12, 1-26. Jutai, J.W., et al., (2003). Top Stroke Rehabil., 10, 77-106.
Jan 26	Dr. G. Proulx	Attention	Cicerone, K.D. (2002). Brain Injury, 16, 185-195. Park, N.W., et al., (1999). Neuropsychological Rehabilitation, 9, 135-154.
Feb 2	Dr. B. Richards	Memory – Amnesia	O'Connor, et al., (1995) In Baddeley, Wilson & Watts (Eds.) Handbook of Memory Disorders.
Feb 9	Dr. B. Richards	Memory – Memory Link Program	Kessels, R.P.C. & de Haan E.H.F. (2003) J Clin Exp Neuropsych, 25, 805-814.
Feb 16		MIDTERM	
Feb 23		READING WEEK	
Mar 2	Dr. L. Leach	Program evaluation	Cicerone, K. D. et al., (2000). Arch Phys Med Rehabil, 81, pp 1596-1615. Cicerone, K.D. et al., (2005). Arch Phys Med Rehabil, 86, 1681-1692. Cappa, S.F. et al., (2003). European Journal of Neurology 10 : 11-23.
Mar 9	Dr. A. Troyer	Memory Intervention Programs for Older Adults	Troyer, A. (2001) Aging, Neuropsych. & Cognition, 8, 256-268. DeKosky, S. (2003). Alzheimer Dis Assoc Disord, 17, Supple 4, S99-S104
Mar 16	Dr. D. Rewilak	Executive dysfunction	Park, N.W., et al., (2003). Neurocase, 9, 51-62. Turner, G.R. & Levine, B. (2004). In Ponsford, J (Ed) Cognitive and Behavioral Rehabilitation. (pp 224-268)
Mar 23	Dr. G. Proulx	Motor Praxis	Herbert, D. & Roy E. (2002). Geriatrics & Aging, 5, 15-21
Mar 30	R. Jokel (SP)	Language	Avent, J.R. & Austermann, S. (2003). Aphasiology, 17, 397-404. Hillis, A.E. (1998) J Int. Neuropsych. Society, 4, 648-660.
Apr 6	Dr. G. Proulx	EXAM REVIEW & PAPER DUE	

Reading List

January 12

Taub, E., Uswatte, G. & Elbert T. (2002). New treatments in neurorehabilitation founded on basic research. Nature Reviews: Neuroscience, *3*, 228-235

Wilson, B.A. (2002). Towards a comprehensive model of cognitive rehabilitation. Neuropsychological Rehabilitation, *12*, 97-110.

January 19

Francis, D.R., Riddoch, M.M. & Humphreys, G.W. (2002). "Who's that girl?" Prosopagnosia, person-based semantic disorder, and the reacquisition of face identification ability. Neuropsychological Rehabilitation, *12*, 1-26.

Jutai, J.W., Bhogal, S.K., Foley, N.C., Bayley, M., Teasell, R.W. & Speechley M.R. (2003). Treatment of visual perceptual disorders post stroke. Topics in Stroke Rehabilitation, *10*, 77-106.

January 26

Cicerone, K.D. (2002). Remediation of 'working attention' in mild traumatic brain injury. Brain Injury, *16*, No. 3, 185-195.

Park, N.W., Proulx, G-B., & Towers, W.M. (1999). Evaluation of the attention process training programme. Neuropsychological Rehabilitation, *9*, 135-154.

February 2

O'Connor, M., Verfaellie, M. & Cermak, L.S. (1995). Clinical Differentiation of Amnesic Subtypes. IN A.D. Baddeley, B.A. Wilson & F.N.Watts (Eds.) Handbook of Memory Disorders. (pp 53-80) Cambridge: John Wiley & Sons Ltd.

February 9

Kessels R.P.C. & de Haan E.H.F. (2003). Implicit learning in memory rehabilitation: A meta-analysis on errorless learning and vanishing cues methods. Journal of Clinical and Experimental Neuropsychology, *25*, 805-814.

March 2

Cicerone, K.D., Dahlberg, C., Kalmar, K., et al., (2000). Evidence-based cognitive rehabilitation: Recommendations for clinical practice. Archives of Physical and Medical Rehabilitation, *81*, 1596-1615.

Cicerone, K.D., Dahlberg, C., Malec, J.F., et al., (2005). Evidence-Based Cognitive Rehabilitation : Updated Review of the Literature From 1998 Through 2002. Archives of Physical and Medical Rehabilitation, *86*, 1681-1692.

Cappa, S.F., et al. (2003). EFNS Guidelines on cognitive rehabilitation : report of an EFNS Task Force. European Journal of Neurology *10*, 11-23.

March 9

Troyer A.K. (2001). Improving memory knowledge, satisfaction, and functioning via an education and intervention program for older adults. Aging, Neuropsychology, and Cognition, *8*, 256-268.

Dekosky, S. (2003). Early intervention is key to successful management of Alzheimer disease. Alzheimer Disease and Associated Disorders, *17*, Supplement 4, S99-S104.

March 16

Park, N.W., Conrod, B., Hussain, Z., Murphy, K.J., Rewilak, D. & Black, S.E. (2003), A treatment program for individuals with deficient evaluative processing and consequent impaired social and risk judgement. Neurocase, *9*, 51-62.

Turner, G.R. & Levine, B. (2004). Disorders of executive functioning and self-awareness. In J. Ponsford (Ed) Cognitive and Behavioral Rehabilitation: From Neurobiology to Clinical Practice. (pp 224-268).

March 23

Herbert, D., & Roy E. (2002). Limb apraxia: A clinical perspective. Geriatrics and Aging, *5*, 15-21.

March 30

Avent, J.R. & Austermann, S. (2003). Réciprocal scaffolding: A context for communication treatment in aphasia. Aphasiology, 17, 397-404.

Hillis, A.E. (1998). Treatment of naming disorders: New issues regarding old therapies Journal of the International Neuropsychological Society, 4, 648-660.

Research Paper

Objectives

Writing a research paper will help you achieve three important objects: (1) To expand your knowledge of neuropsychological invention by focusing on an area that is of particular interest to you, (2) To further develop your skills as a critical reader of psychological research, (3) To develop your scientific writing skills.

General Requirements

In the research paper you should critically review an area of neuropsychological rehabilitation with respect to behavioural interventions designed to treat a neuropsychological deficit covered in the course. Choose from the general topics of attention, memory, language, motor, executive, perceptual, etc. and decide on a deficit within one of these domains to address with a neuropsychological intervention. You will design an intervention to rehabilitate the neuropsychological deficit of interest, evaluate the efficacy of your intervention (in which you will generate mock data) and critically discuss your findings in the context of the current literature in the field. A list of research topics to choose from will be provided in the coming weeks.

Specific Requirements

- The research paper should be 6 double-spaced pages in length (not including abstract, references, and any tables or figures generated). Page lengths for each section are suggested below.
- Use 12 point font.
- You must have a minimum of 3 primary sources (journal articles) in your reference section. The references should be mainly from the 1990s and 2000s.
- Write your paper in either the first (e.g., "I predicted") or third person (e.g., "It was predicted").
- Use the past tense for your paper, because you are writing about a study that you have completed.

Required Sections of the Research Paper

The research paper must contain the following sections. Use the section labels below to organize your paper.

Abstract. One paragraph, approximately 150 words in length, that briefly describes the area of investigation, type of participant(s), the presenting problem, the nature of the intervention and lastly the results and the significance of those results. Put the abstract on a separate page immediately following the title page.

Introduction. This section should describe the research area and findings from previous studies. The literature review should also discuss an issue or question that needs to be addressed in that area and provide a rationale for the research conducted. (Suggested length: 1 1/2 to 2 double spaced pages).

Method. This section should include a brief description of the participant(s) and their presenting problem, a description of any equipment and how it was used, as well as a description of how the intervention was applied and specific description of the independent and dependent variables measured. (Suggested length 2 double spaced pages).

Results (mock data you generate). This section should describe your findings. You will generate mock data based upon what you might reasonably expect to have happened. Provide a table or a graph to represent the data along with a verbal explanation of the results. (Suggested length 1 double spaced page).

Discussion. Discuss and review your findings in the context of what is currently known in the field. Try to highlight the significance / contribution of your research to the field and suggest future investigations. (Suggested length 1 1/2 to 2 double spaced pages).

References. You must have at least 3 primary sources (journal articles). The references should be mainly from the 1990s and 2000s. You must format your references using the guidelines developed by the American Psychological Association's (APA) Publication Manual (5th edition).

NOTE: for the title page, please use APA format (i.e., a title and a running head).

Use APA Format

You should use the guidelines for scientific writing that have been developed by the American Psychological Association (APA). It is recommended that you consult the Publication Manual, 5th edition of the APA to determine the appropriate methods for citing research in your research paper and for creating your list of references.