The Hebrew University of Jerusalem

Syllabus

LEARNING AND DYSLEXIA A' - 51306

Last update 11-09-2016

HU Credits: 2

Degree/Cycle: 2nd degree (Master)

Responsible Department: psychology

Academic year: 0

Semester: 1st Semester

Teaching Languages: Hebrew

Campus: Mt. Scopus

Course/Module Coordinator: Merav Ahissar

Coordinator Email: msmerava@mscc.huji.a c.il

Coordinator Office Hours: By appointment

Teaching Staff:

Prof Merav Ahissar

Course/Module description:
We shall review the current research on Dyslexia

Course/Module aims:
Presenting Dyslexia in general, discussing recent topics in Dyslexia, critical reading and discussions, including in writing.

Learning outcomes - On successful completion of this module, students should be able to:
Understanding of current topics in the study of Dyslexia.

Attendance requirements(%):
85% (11 out of 13 classes)

Teaching arrangement and method of instruction: Oral presentations and discussion, students' presentations and written homework assignments.

Course/Module Content:
Dyslexia is a persistent and substantial difficulty in acquiring adequate reading skills in spite of within-normal (or beyond) general reasoning skills. Namely – a large discrepancy between one's potential reading skills and actual proficiency, in spite of adequate education. Dyslexia has a large genetic aspect (likelihood of having a learning deficit given that a first degree relative has a learning disability is ~50%), and is obviously not completely specific to reading (an evolutionary novel skill). It comes with a range of other language perceptual characteristics whose functional role in the etiology is still disputed.
The seminar will briefly review previous "classical" perspectives on Dyslexia based on main manifestations at the level of single word reading – poor phonological decoding.

Required Reading:
1.Hulme and Snowling, 2016. Reading disorders and dyslexia. Current Opinion in Pediatrics.
2.Clark et al., 2014. Neuroanatomical precursors of dyslexia identified from pre-

reading through to age 11. Brain 2014: 137; 3136–3141.
3.Nash et al., 2016. Are the literacy difficulties that characterize developmental dyslexia associated with a failure to integrate letters and speech sounds? Developmental Science.
4.Power et al., 2016. Neural encoding of the speech envelope by children with developmental dyslexia. Brain & Language, Vol. 160, Pages 1–10.
5.Vandermosten et al., 2015. A DTI tractography study in pre-readers at risk for dyslexia. Developmental Cognitive Neuroscience, Vol. 14, 8-15.
6.Ahissar et al., 2006. Dyslexia and the failure to form a perceptual anchor. Nature Neuroscience, Vol.9, 1558 - 1564.
7.Jaffe-Dax et al., 2015. A Computational Model of Implicit Memory Captures Dyslexics' Perceptual Deficits. The Journal of Neuroscience, 35(35): 12116-12126.
8.Boros et al., 2016. Orthographic processing deficits in developmental dyslexia: Beyond the ventral visual stream. NeuroImage, Vol. 128: 316-27.
9.Moll et al., 2014. Cognitive mechanisms underlying reading and spelling development in five European orthographies. Learning and Instruction, Vol.29, 65-77.
10.Habib et al., 2016. Music and Dyslexia: A New Musical Training Method to Improve Reading and Related Disorders. Frontiers in Psychology, Vol.7, Article 26.

Additional Reading Material:

1. Kraft et al., 2015. Cortical differences in preliterate children at familiar risk of dyslexia are similar to those observed in dyslexic readers. Brain.
2. Skeide et al., 2016. NRSN1 associated grey matter volume of the visual word form area reveals dyslexia before school. Brain.
3. Snowling and Melby-Lervag, 2016. Oral language deficits in familial dyslexia: A meta-analysis and review. Psychological Bulletin, 142(5): 498–545.
4. Goswami et al., 2016. Perception of Filtered Speech by Children with Developmental Dyslexia and Children with Specific Language Impairments. Frontiers in Psychology. Vol. 7, Article 791.
5. .Schurz et al., 2015. Resting-State and Task-Based Functional Brain Connectivity in Developmental Dyslexia. Cerebral Cortex.
6. Agus et al., 2014. Perceptual learning of acoustic noise by individuals with dyslexia. Journal of Speech, Language, and Hearing Research, Vol. 57, 1069-1077.
7. Daikhin et al., 2016. Auditory stimulus-processing and task-learning is adequate in dyslexia, but benefits from regularities are reduced. Journal of Speech, Language, and Hearing Research.
8. Law at al., 2014. The relationship of phonological ability, speech perception, and auditory perception in adults with dyslexia. Frontiers in Human Neuroscience, Vol.8, Article 482.
9. Martin et al., 2016. Dyslexic Brain Activation Abnormalities in Deep and Shallow Orthographies: A Meta-Analysis of 28 Functional Neuroimaging Studies. Human Brain Mapping, 37(7):2676-99.
10. Wolff, 2016. Effects of a Randomized Reading Intervention Study Aimed at

9-Year-Olds: A 5-Year Follow-up. Dyslexia, 22(2):85-100.

Course/Module evaluation:
End of year written/oral examination 0 %
Presentation 0 %
Participation in Tutorials 0 %
Project work 0 %
Assignments 0 %
Reports 0 %
Research project 0 %
Quizzes 0 %
Other 100 %
see additional information

Additional information: