

NORA Fellowship Level 3 Paper Requirements

The Level III process is designed to develop a candidate's expertise in an area of neuro-optometric rehabilitation which the candidate has chosen, as well as improve the quantity and quality of information in neuro-optometric rehabilitation in the clinical and scientific literature. Below, you will find information that will be helpful in the process of completing Level III. The specific guidelines are listed at the end of this document.

1. Where to begin?

You should start by choosing an area of particular interest in neuro-optometric vision rehabilitation. The candidate should peruse journals in optometric and related literature to research the topic and see how successfully published papers are formatted and written.

2. Writing Guidelines

The candidate should carefully read the two referenced papers by Dr. Ciuffreda and colleagues and the sample of a well-written case report found below.

Writing a Publishable Paper- Where Do I Start? A Perspective

Kenneth J. Ciuffreda, OD

Barry Tannen, OD

Diana Ludlam, BS, COVT

<http://pubs.covd.org/VDR/issue2-1/index.html>

How to Read a Research Paper? A Perspective

Kenneth J. Ciuffreda, OD

Diana Ludlam, BS, COVT

Naveen Yadav, BS Optom

<http://pubs.covd.org/VDR/issue2-3/index.html>

Well Written Case Report Sample

[Hemi-Spatial Neglect as a Consequence of Acute Cerebrovascular Accident: a Teaching Case Report | The Journal of Optometric Education \(opted.org\)](#)

Other Recommended Resources

https://www.amazon.com/Writing-Health-Professions-Karl-Terryberry-dp-1711472182/dp/1711472182/ref=dp_ob_title_bk

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5686928/>

The candidate will write a title and outline with abstract on their potential manuscript topic. The outline needs to be reasonably detailed regarding the proposed content, and the paper must, in the end, be a reasonable approximation of the outline, although certainly, as you research a topic your knowledge and ideas may well change, and this will often be reflected in the direction of the paper. You will then **email the title/outline/abstract to the FNORA chair for approval: FNORAOfficial@gmail.com.**

NOTE: The Fellowship candidate must be first author.

3. Mentorship

Once the candidate has received topic approval for the Level 3 paper and submitted a well-written outline/abstract, it is recommended (but not mandatory) the candidate ask a FNORA member to be a mentor during the writing process. Attendance at an annual NORA meeting is a great time to meet colleagues and ask about a mentoring relationship. It is the responsibility of the mentor to offer general comments for improvement and be conservative in editing, as the candidate needs to learn the writing process.

4. Article Submission

Once the candidate and mentor determine the paper is suitable for peer-review, the candidate will email the article to the Chair at FNORAOfficial@gmail.com. The FNORA Fellowship Chair will submit the paper to the Level 3 peer-review committee for evaluation, comments, and approval before submitting it to a journal. Prior publications are not eligible.

Once the article has been accepted by the peer-review committee, the candidate can then submit to an approved peer-reviewed journal. It is understood that reviewers and editors at the publication will sometimes require changes in the manuscript, and these do not require review by the Level 3 committee following official submission for publication. The candidate must receive written confirmation of acceptance to publication and inform the FNORA Fellow Chair prior to the last step of the Level 3 requirement, make a 25-30 minute PowerPoint presentation of the FNORA Level 3 paper at the NORA pre-conference. Once all requirements have been met, the fellowship shall be awarded to the candidate.

Suggested types of papers

1. A retrospective study.

An example retrospective study reviews cases where you prescribed yoked prism, matched for functional level or for site of injury, and determined whether the patients continued to require the same prism over time, or whether it changed. If it changed, what were changes related to?

Another example retrospective study reviews cases with various combinations of neglect and hemianopsia based on scientifically supported criteria and looks at recovery with treatment (prisms or therapy).

2. A prospective study.

A prospective study observes outcomes, such as the development of a dysfunction, during the study period and relates this to other factors such as suspected risk or protection factor(s). This type of study usually involves taking a cohort of subjects and watching them over a period of time.

3. A detailed, unique case report.

A case report should include the scientific underpinnings of the condition (e.g., a summary of the radiologist's report findings) and intervention (relating the treatment to the clinical and/or theoretical science supported in the literature).

4. A detailed, well-documented case series

The case series should include a common underlying theme and scientific reinforcement. For instance, concentrically constricted visual fields, PTVS, visual-spatial neglect cases, or hemianopia, with and/or without neglect, looking at recovery and variables affecting recovery.

6. A literature review

Example, a critical literature review that integrates vision or rehabilitation literature in a new way and improves our (or that of other health care professionals involved in brain injury rehabilitation) insight into the nature of some aspect of vision rehabilitation. It cannot just be a review that looks at the history of a particular aspect of literature and says 'this person did this, and the next study did that, etc.' with no depth/critical component.

Another example, a critical literature review about a particular aspect of vision deficit in neurological compromise, and presents specific therapies to address that deficit, relating the therapies to scientific and conceptual underpinnings of the deficit.

Below are article formats to help you. However, before beginning your writing, you should decide on the journal, where you will submit the work and look online, or in a copy of the journal for author instructions that will guide you specifically on how to format the article for submission to that journal.

Suggested Format Guide

Research article

1. Title---short, clear, and descriptive.
2. Abstract (not more than 1 page)---purpose, methods, results, and conclusions.
3. Introduction (3-5 pages)---why did you do the study? Provide background information with citations. Start broad and get more specific as you proceed.
4. Methods (3-5 pages) ---what did you do?---it should be explicit like a 'recipe' for baking a cake---3 sections---subjects, apparatus, and procedures.
5. Results (3-5 pages)---what did you find?---figures, tables, stats, along with a narrative---start with your most important finding.
6. Conclusions (3-5 pages)---what do you think it means? Discuss related sciences.
7. References---20-40.
8. The paper should help others become/remain cognizant of the multidisciplinary nature of brain injury rehabilitation.

Case studies, or retrospective case series

1. Title---short, clear, and descriptive.
2. Abstract (not more than 1 page)---purpose, methods, results, and conclusions.
3. Introduction (3-5 pages)---Describe the neuro-optometric rehabilitation importance of the case report or series, with a critical review of the existing literature providing context for the case report or series. Provide background information with citations. Start broad and get more specific as you proceed.
4. Case study or case series (3-5 pages)
 - a. Patient history--- patient initial intake data, including the nature of the neurological compromise. In the case of a case study, review the general rehabilitation completed with the patient when the neuro-optometrist became involved.

- b. Neuro-optometric data gathered--- be careful to write for a general rehabilitation, OD or OMD audience defining terms that are not commonplace mainstream medical terms.
 - c. Treatment---describe your treatment modalities. Compare initial neuro-optometric data with ending data. Figures, tables, stats, are helpful if available, along with the narrative. Start with your most important finding.
5. Conclusions (3-5 pages)---what do you think the data means.
6. References---20-40.
7. The paper should help others become/remain cognizant of the multidisciplinary nature of brain injury rehabilitation.

Suggested Journals

It is best to think about where you would like your paper to be submitted early in the process, as each journal has a different format in terms of content they publish, length of articles, reference formatting, etc. that it will help to know at the outset of your writing.

Examples of appropriate journals would be in the areas of :

- Optometry
 - Optometry and Vision Science
 - Optometry and Vision Development (COVD Journal)
 - Journal of Behavioral Optometry (OEP Journal)
- Physiatry
 - Archives of Physical Medicine and Rehabilitation
- Occupational Therapy
 - American Journal of Occupational Therapy
- General Neurological Rehabilitation
 - NeuroRehabilitation
 - Journal of Rehabilitation Research and Development
 - Brain Injury Professional
- Journals in the areas of physical therapy, vestibular, neurological case management, neuro-ophthalmology, rehabilitation nursing, and life care planning
- More scholarly, rather than clinical journals in the areas of psychology, brain, vision
 - Brain Injury
 - Brain and Cognition
 - Vision Research
 - Investigative Ophthalmology and Visual Science

Literature Search Suggestions

When you are doing background research on your topic, there are resources that may be of value in finding information. Besides your local university library, OEP has multiple materials. The suggested reading list for the curriculum is helpful. However, primary sources from peer reviewed biomedical journals are most easily searched on **PubMed**, the US National Institutes of Health and National Library of Medicine database at www.ncbi.nlm.nih.gov/sites/entrez (it is easiest to just Google PubMed). There are other sites which will have more relevant information to many of the more psychological/perceptual aspects of vision such as **PsychLit** (which again, you can Google). There is a fee which must be paid on an hourly or daily basis, so make sure you know what you are looking for.

Once there, you can search using keywords or phrases. Phrases must be enclosed in parenthesis or the terms will be searched separately. **AND** (in caps) means that the search terms on either side of the AND must be included for the article to be included in the results. For example, hemianopia

AND prism will produce articles that include both the words hemianopia and prism. **OR** means either of the search terms on each side of the OR is sufficient to include the resulting article, e.g. hemianopia **OR** prism will produce articles about hemianopia and, separately, articles about prism. You can also search by author.

Suggested Terminology

Use terms including visual midline shift, abnormal egocentric localization, dorsal and ventral processing, and midbrain systems. Cite well accepted articles and articles that reflect the current thinking.

Sample of a well-written title/abstract

Title:

“Multi-sensory rehabilitation system in the treatment of post-trauma vision syndrome, A Retrospective Case Series.”

Abstract:

Background

Traumatic brain injury patients have a wide variety of symptoms. A portion of these patients do not rehabilitate as quickly or successfully as others with traditional in-office neuro-optometric rehabilitation therapy. There are many factors that can impact their rehabilitation speed and outcomes, including pre-existing conditions, severity of injury, access to treatment, age, time until treatment initiates, as well as many others. One diagnosis that could be impacting their recovery is post-trauma vision syndrome (PTVS). PTVS is a maladaptation in which a patient’s visual spatial orientation/awareness is impaired. These patients are dramatically affected by symptoms that alter their ADLs, ability to work, and ability to coordinate body movements. This article will address how a multi-sensory treatment system known as “The Pinnacle” plays a role in rehabilitating patients with PTVS, and the outcomes of that treatment. Using the Brain Injury Vision Symptom Survey to measure a patient’s subjective symptoms as well as key elements of neuro-optometric examination to measure a patient’s objective visual signs.

Keywords

Post-trauma vision syndrome, multi-sensory rehabilitation system, “The Pinnacle”, Dorsal pathways, Ventral pathways, Magnocellular pathways, Parvocellular pathways, visual motion sensitivity, focal binding, Brain Injury Vision Symptom Survey, FCFTester kinetic color visual fields, Randot Stereotest, Visual Midline Shift, Visual motion sensitivity

Outline

- A. Introduction
 - a. Definitions of mTBI and PTVS
 - b. Prevalence and symptom
 - c. Hallmarks of a diagnosis of PTVS
 - i. Neuro-optometric examination objective measurements

- d. Traditional Treatment options
- e. Non-traditional treatment options

B. Case Series

- a. Patients' case history commonalities
 - i. type of injury, BIVSS,
 - ii. previous treatments completed
 - iii. current state of function, how ADLs are affected by PTVS
 - iv. goals of treatment
- b. Neuro-optometric data gathered
 - i. Acuity
 - ii. Binocular assessment
 - iii. Visual motion sensitivity
 - iv. Visual midline shift
 - v. Ocular motor skills
 - vi. Visual spatial assessment- VO Star
 - vii. Hand-eye reaction time
 - viii. Pupil assessment- Reflex Pro
- c. Treatment
 - i. Pre-treatment data
 - ii. Traditional in-office neuro-optometric rehabilitation therapy
 - 1. Treatment protocols typically followed for PTVS
 - 2. Syntonics
 - iii. Non-traditional in-office neuro-optometric rehabilitation therapy
 - 1. "The Pinnacle" system
 - a. Explanation of different sense stimulated
 - b. Purpose of multisensory stimulation
 - c. Modifications made to "The Pinnacle"
 - d. Ways to measure progress, pre and post survey and testing
 - iv. Post-treatment data

C. Conclusion

- a. Progress made before "The Pinnacle"
- b. Progress made after "The Pinnacle"
- c. Visual graph to show changes in key metrics
 - i. Symptom survey
 - ii. Binocular function and depth perception
 - iii. Visual midline shift
 - iv. Functional visual fields
 - v. Other systemic changes noted

d. What place does the multi-sensory rehabilitation have in an optometry clinic

Research Article Rubric

	EXPERT	PROFICIENT	APPRENTICE	NOVICE
INTEGRATION OF KNOWLEDGE	The paper demonstrates that the author fully understands the topic and has applied NORA concepts. Concepts are integrated into the writer's own insights. The writer provides concluding remarks that show analysis and synthesis of ideas.	The paper demonstrates that the author, for the most part, understands and has applied NORA concepts. Some of the conclusions, however, are not supported in the body of the paper.	The paper demonstrates that the author, to a certain extent, understands and has applied NORA concepts.	The paper does not demonstrate that the author has fully understood and applied NORA concepts.
TOPIC FOCUS	The topic is focused narrowly enough for the scope of this assignment. A thesis statement provides direction for the paper, either by statement of a position or hypothesis.	The topic is focused but lacks direction. The paper is about a specific topic but the writer has not established a position.	The topic is too broad for the scope of this assignment. The writer has omitted pertinent content or content runs-on excessively.	The topic is not clearly defined.
DEPTH OF DISCUSSION	Provides new insight of NORA concepts. In-depth discussion & elaboration in all sections of the paper.	Provides new insight of NORA concepts. In-depth discussion & elaboration in most sections of the paper.	Sometimes ties together information from all sources. No new NORA concepts provided.	No new NORA concepts provided. Cursory discussion in all sections of paper or brief discussion in only few sections.
COHESIVENESS	Ties together information from all sources. Paper flows from one area to the next. Author's writing demonstrates an understanding of the relationship among material obtained from all sources.	For the most part, ties together information from all sources. Paper flows with only some disjointedness. Author's writing demonstrates an understanding of the relationship among material obtained from all sources.	Paper does not flow - disjointedness is apparent. Author's writing does not demonstrate an understanding of the relationship among material obtained from all sources.	Does not tie together information. Paper does not flow and appears to be created from disparate issues. Headings are necessary to link concepts. Writing does not demonstrate understanding any relationships.
SPELLING & GRAMMAR	No spelling &/or grammar mistakes.	Minimal spelling &/or grammar mistakes.	Noticeable spelling & grammar mistakes.	Unacceptable number of spelling and/or grammar mistakes.
SOURCES	More than 5 current sources, of which at least 3 are peer-review journal articles or scholarly books. Sources include both general background sources and specialized sources.	5 current sources, of which at least 2 are peer-review journal articles or scholarly books. All web sites utilized are authoritative.	Fewer than 5 current sources, or fewer than 2 of 5 are peer-reviewed journal articles or scholarly books. All web sites utilized are credible.	Fewer than 5 current sources, or fewer than 2 of 5 are peer-reviewed journal articles or scholarly books. Not all web sites utilized are credible, and/or sources are not current.
CITATIONS	Cites all data obtained from other sources. APA citation style is used in both text and bibliography.	Cites most data obtained from other sources. APA citation style is used in both text and bibliography.	Cites some data obtained from other sources. Citation style is either inconsistent or incorrect.	Does not cite sources.

Adapted from: Whalen, S. "Rubric from Contemporary Health Issues Research Paper"
http://academics.adelphi.edu/edu/hpe/healthstudies/whalen/HED601_r2.shtml