Pursuing studies on brain-behavior relationships: A guide for undergraduates interested in Clinical Neuropsychology

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South Texas Veterans Health Care System

Society for Clinical Neuropsychology’s Association of Neuropsychology Students in Training (ANST)
Association for Doctoral Education in Clinical Neuropsychology (ADECN)
APA of Graduate Students’ Committee for the Advancement of Racial and Ethnic Diversity (APAGS-CARED)
What is Neuropsychology?

- the study of the relationship between behavior, emotion, and cognition on the one hand, and brain function on the other

**Clinical Neuropsychology**
- is the application of neuropsychological knowledge to the assessment, management, and treatment of people who have suffered illness or injury (particularly to the brain) which has caused neurocognitive problems.

**Other areas:**
- Cognitive Neuropsychology
- Cognitive Neuropsychiatry
What is neuropsychology?

- Neurologist? Psychologist?...maybe a little bit of both

- It’s a way of thinking about human behaviors – that is based on brain functioning

- “brain” experts

- Not your typical psychologist – approach psychological conditions from a bio/physiological perspective

- Many mistakenly think neuropsychology only about tests and assessments....but neuropsychologist also contribute to intervention and treatments.
Neuropsychology in “real life”

Areas
- Clinical
- Teaching
- Research
- Industry

Populations
- Neurological
- Psychiatry
- Rehabilitation
- Adult
- Pediatrics
- Non-clinical
- Animal

Settings
- Hospital
- University
- Private Practice
- Pharmaceuticals Companies
Who am I?

- Tenure Professor of Psychology
- Co-Appointment in Biomedical Engineering
- Department Head of Psychology
- Director of the Applied NeuroTechnology Laboratory
- President, Association of Doctoral Education of Clinical Neuropsychology
- Clinical Neuropsychologist
How did I get here?

- Graduate School: Clinical Focus
- Internship: Clinical
- Post-doctoral focus: Research
  - 1st grant - F32
  - 2nd grant – NIDRR
- Research Faculty – KMRREC
  - Director, Virtual Reality Laboratory
- Research Associate - Drexel
Brief overview of my career

- Clinical neuropsychologist in Rehabilitation Medicine
- Teacher and Mentor – Professor at Drexel University
- Researcher
- Administration – Director of Clinical Training, Department Head
Neuropsychological Training

- Undergraduate
  - Psychology, biology, neuroscience
- Graduate (PhD or PsyD)
  - Most program 4 or 5 years in program
  - +1 year Internship
- Post-Graduation
  - 2 yr. post-doctoral training
- Long Term
  - Board Certification
  - Licensure CE
Neuropsychological Training

- Specialization in Psychology
- Houston Guidelines
  - Primary focus is on Post-doctoral training
  - Foundational guideline for training
- APA Accredidation
  - Training at the Graduate level and Internship guidelines
- APA Taxonomy
  - Major Area of Study
  - Emphasis
  - Experience
  - Exposure
Undergraduate Experience

“How TO MAKE YOURSELF COMPETITIVE”
Many roads lead to neuropsychology…….

- Students can come from a variety of undergraduate majors
  - The most common are psychology, neuroscience or biology
  - Most cases looking for experience with the life sciences
  - Take course relevant to brain-behavior relationships

- GPA matters

- So no matter what your major, strong undergrad GPA is important
- Many schools will use this as a cut-off criteria (i.e., 3.5 or above only)
Gets your hands dirty...

- Important to seek neuropsychology experiences
  - Clinical → volunteer, shadow a neuropsychologist
  - Research → research assistant in neuropsychology lab or doing brain-behavior research
  - Scholarships → look for opportunities to apply to experience that expose you to the field
  - Paid positions → psychometrist

- Allows you learn first-hand what neuropsychologist do
- Helps make your “reason” for applying more believable
Mentorship

- Identify potential mentors in the field of neuropsychology
  - Many student led programs across
  - Within your course work or research experiences
- If you are under-represented minority group—mentorship is key!
- Important because help you understand why want to do this
- Very important for providing LOR
  - The better they know you the better the letter
Combinations: Experience and Mentor

- Key strength for making yourself stand-out
- How this translates:
  - Clearer understanding of the field – suggests more thoughtful decision for applying to graduate program
  - Small field of neuropsychology – everyone knows everyone—positions you got a more focused LOR or word or mouth recommendation
  - If they know your mentor—they know your training
Your Essay

- The more you do in the field—the easier your essay will be
  - Easier to speak to specifics

- Strong essay has clear rationale/pathway to why applying or want to go into the field of neuropsychology

- Strong essay has specifics to the program they are applying to
  - Consider this in how many essays?

- Strong essay has “depth” — gives you a sense of who they are and why they are a “match” to your program
  - Answer short-term goals (how program meets your training interests and long-term goals (how program prepares you for getting to where you want to be professionally)}
Build your CV

- Important to be involved in poster presentation, paper, research, etc
- Many times faculty will not consider someone who does not have at least a couple of presentation or co-authorship

- Participate in Neuropsychology conferences
  - INS, APA, AACN, NAN
  - Volunteer and/or attend to get a sense of what is happening in the field
Take the time to prepare

- Plan your GRE
  - Score important – also commonly used as cut-off
  - Plan to take at least 2x
  - Psych GRE – not all schools look at this

- Start seeking experiences early in undergraduate years
  - Even if not sure – good opportunity to check it out
  - If wait too long – senior year – not enough time to build up CV
What is a strong applicant?

- Undergraduate GPA
  - 3.5 or better - but can vary depending on what school coming from
- GRE score
  - High percentile, many schools look at analytical score
- Strong LOR
  - Writers know the individual and can speak to specifics
- Strong CV
  - Experiences in the field
  - Presentations
  - Publication or exposure to publications, etc.
  - Own research or award a big plus! (shows initiative)
- Strong Essay
The Process

2\textsuperscript{nd} Year
- Begin early and talk to mentors or professors
- Apply, volunteer and become involved in neuropsychology activities

3\textsuperscript{rd} Year
- Become involved in research
- Present at conferences, ask for writing opportunity
- Start planning for GRE
The Process

- **3rd year**
  - Begin to identify potential programs
  - Set up deadlines for application and spreadsheet for the specific requirements of each program
  - Summer after 3rd year – beginning writing your essay

- **4th year**
  - Finalize essay
  - Finalize applications (many programs due around end of fall/early December)
If at first you don’t succeed...

- Not uncommon to not be accepted the first time
  - Extremely competitive → 600 applications for 10 slots

- What do you do with year in between?
  - Many have to work → try for neuropsych related position
  - Volunteer in neuropsychology lab
  - Master’s program
    - Can be beneficial—especially to demonstrate ability to handle graduate level course work
    - Also good for building up CV with presentations and publications

- Set your timeline for applying again
Financial Literacy for Graduate Students

EDDY AMEEN, PHD
DIRECTOR
APA OFFICE ON EARLY CAREER PSYCHOLOGISTS
Overview

- Salary and debt overview
- Tips for managing and repaying debt
- Loan Repayment Programs
Likelihood of Student Loans

This is only for debt accrued during graduate education. (2013-2014 graduates)
Source: Doran et al, 2016
Median Debt by Degree

This is only for debt accrued during graduate education. (2013-2014 graduates)
Source: Doran et al, 2016
NP student debt: Bimodal distrib.; 32.7% had minimal debt, but 45% had debt >$100,000. Source: Whiteside et al, 2016 (The Clinical Neuropsychologist)
# Debt in Repayment

<table>
<thead>
<tr>
<th>50th Percentile</th>
<th>Total Owed w/ Interest After 10 Years</th>
<th>Monthly Payment (10 / 25 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSP-PhD (75,000)</td>
<td>104,000</td>
<td>863 / 521</td>
</tr>
<tr>
<td>HSP-PsyD (200,000)</td>
<td>276,000</td>
<td>2302 / 1388</td>
</tr>
</tbody>
</table>
First-Year Starting Salaries

<table>
<thead>
<tr>
<th>Degree obtained</th>
<th>Minimum</th>
<th>Median</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD</td>
<td>$24,000</td>
<td>$63,000</td>
<td>$140,000</td>
</tr>
<tr>
<td>PsyD</td>
<td>10,000</td>
<td>60,000</td>
<td>130,000</td>
</tr>
<tr>
<td>Master’s</td>
<td>25,000</td>
<td>45,000</td>
<td>100,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health-service provider subfields</th>
<th>Minimum</th>
<th>Median</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counseling</td>
<td>$24,000</td>
<td>$56,000</td>
<td>$130,000</td>
</tr>
<tr>
<td>Clinical</td>
<td>10,000</td>
<td>65,000</td>
<td>130,000</td>
</tr>
<tr>
<td>Clinical Neuropsychology</td>
<td>36,000</td>
<td>72,500</td>
<td>125,000</td>
</tr>
<tr>
<td>School</td>
<td>35,000</td>
<td>60,000</td>
<td>110,000</td>
</tr>
<tr>
<td>Health</td>
<td>24,000</td>
<td>57,500</td>
<td>96,000</td>
</tr>
<tr>
<td>Forensic</td>
<td>27,000</td>
<td>50,000</td>
<td>60,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research and other subfields</th>
<th>Minimum</th>
<th>Median</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial/Organizational</td>
<td>$43,000</td>
<td>$65,000</td>
<td>$120,000</td>
</tr>
<tr>
<td>Social</td>
<td>42,000</td>
<td>63,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Educational</td>
<td>30,000</td>
<td>60,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Developmental</td>
<td>37,000</td>
<td>55,000</td>
<td>75,000</td>
</tr>
<tr>
<td>General</td>
<td>12,000</td>
<td>40,000</td>
<td>50,000</td>
</tr>
</tbody>
</table>

Source: gradPSYCH Magazine (April 2016; based on data in Doran et al, 2016)
Cost of tuition

- All APA accredited programs have a link on their homepage to “student outcomes, admissions, and other data”

<table>
<thead>
<tr>
<th>Description</th>
<th>2012-2013 1st-year Cohort Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition for full-time students (in-state)</td>
<td></td>
</tr>
<tr>
<td>Tuition for full-time students (out-of-state)</td>
<td></td>
</tr>
<tr>
<td>Tuition per credit hour for part-time students (if applicable)</td>
<td></td>
</tr>
<tr>
<td>University/institution fees or costs</td>
<td></td>
</tr>
<tr>
<td>Additional estimated fees or costs to students (e.g. books, travel, etc.)</td>
<td></td>
</tr>
</tbody>
</table>

- Consider your cost of living relative to the amount you’re used to paying now
- Consider housing, food, transportation, childcare, testing Kits or Lab Fees, Health Insurance, Liability Insurance, Personal therapy, membership fees...
Questions to ask

• How many students in the first year are funded?
• Is funding guaranteed each year?
• How much are students typically funded – and how (tuition waiver, scholarship, stipend)?
• How do you determine who gets what assistantships or fellowships?
• How much debt do graduates have? Are loans generally private or federal?
How are people coping?
Loan Repayment/Forgiveness

1. National Health Service Corps Loan Repayment Program: Up to $50,000 (or $30,000) loan repayment for 2 full time years in an underserved area.

2. Public Service Loan Forgiveness Program: Pays off loans after 10 years of employed public service.

3. Additional Funding Sources: See apa.org/apags/resources for the “affording and repaying graduate school” toolkit and the January 2015 gradPSYCH cover story.
Helpful Tips for Getting Funding

1. SAVE your loan paperwork (promissory notes, consolidation materials)
2. Keep up your payments (or deferments), do not get into DEFAULT
3. Meet the DEADLINE!
4. Review the application process the year before, and get as much as you can done
5. Give yourself plenty of TIME to apply
6. Don’t consolidate loans with your partner or with non-educational loans
Budgeting

- Know what you owe
  - Face your federal loan debt at nslds.gov
  - Round up your credit card statements
- Get to know your habits
  - Set a budget
  - Then track your money for two months (paper or app)
  - Compare budgeted vs. actual
- Learn new habits
  - How can you outsmart yourself?
    - Personal experience: I am a better saver when I automate savings, debt, and set dates
  - When do you want to be debt free?
  - Do you have enough for fun and “not-so-fun” times?
Budgeting

- Minimize debt by trying to live frugally
  - Roommate? Biking? Skip the latte? Cook?
  - Cash only diet—hide the credit cards
- Increase income
  - Freelance, dog-sitting, a very part-time job
- For borrowers
  - If you can, pay your interest as it accumulates so it will not be added to your principal loan amount.
  - Look for repayment options before graduating: studentaid.ed.gov
    - Only 18% of eligible borrowers are on income-based!
  - Beware of private (non-federal) loans.
Budgeting

http://tinyurl.com/budgetsheets
Learn More about Costs and Funding for Graduate School

[Website Link: www.apa.org/apags/resources]

Affording and Repaying Graduate School

This frequently-updated APAGS toolkit offers guidance on how to afford and pay for graduate education. It covers four helpful areas: (1) education costs and affordability, (2) aid, grants, and financial aid, (3) loan repayment and forgiveness, and (4) financial fitness. No matter what phase of career you’re in, there’s likely a high-quality and trustworthy link or tool to assist you.

- Education costs and affordability
- Aid, grants, and funding opportunities
- Loan repayment and forgiveness
- Financial fitness toolbox

The Costs of and Paying for Graduate School

Garth A. Fowler, PhD Associate Executive Director
Office of Graduate & Postgraduate Education & Training

[Video Caption: "American Psychological Association 2014, All Rights Reserved."]
For more information

Me:  eameen@apa.org
APAGS:  apags@apa.org
Salary/debt data:  apa.org/workforce
  TEPP – Feb 2016
  APA Monitor – April 2016
Loan repayment:  apa.org/apags/resources
Student aid:  finaid.org  and  studentaid.ed.gov
Resources for underrepresented students and for students with an interest in diverse populations

Octavio A. Santos, M.S., ANST Liaison Officer
Predoctoral intern, Neuropsychology track
South Texas Veterans Health Care System
APA places a high priority on issues related to the education of ethnic minorities, including planning appropriately diverse curricula, promoting psych as a course of study and career option as well as recruitment, retention, advising and mentoring of minority students at all levels of education.

“Ethnic minorities in particular are horrendously underrepresented in neuropsychology,” (Monitor on Psychology, April, 2015, p. 22)

Untestable population with traditional NP toolkit by 2050
Goals

- Recruitment of students and neuropsychologists from diverse backgrounds into the field, AACN, and AACN’s leadership.
- Develop scalable training/clinical strategies for students and early/midcareer neuropsychologists
- Support research and development of multilingual/multicultural assessment methods

Subcommittees

- Tools & Norms, Peer Consultation Network, Diversity Award for Posters, Practicing Neuropsychologists Pipeline, Grants, Annual Diversity Initiative Workshop, and Student Pipeline!

For more info and/or to join, click here and contact Anita Sim, Relevance 2050 Chair
Society for Clinical Neuropsychology’s Ethnic & Minority Affairs Subcommittee (SCN-EMA)

- Time Efficient Advice & Mentorship (TEAM) Program
- Provide information and education on culturally relevant topics in neuropsychology
- Host social hours & talks at APA & INS conventions
- Webinars (e.g., Cross-cultural Neuropsychology: Training and Practice Considerations)
- Maintain a listserv for all who are interested in cross-cultural/multicultural issues in neuropsychology
- To join, contact Dr. Michelle Madore
Hispanic Neuropsychological Society

- Facilitate the development of neuropsychologists & students who are interested in working with Hispanics via networking, mentorship & consultation
- HNS Mentorship & Education Committee offers student grants, a mentoring program and manages training & Spanish test databases
- Assist in the development of training programs
- Develop guidelines & standards with other NP Orgs
- HNS Student Association
- Contacts: Dr. Johanna Rengifo, Student Representative
National Academy of Neuropsychology’s (NAN) Culture & Diversity Committee

- Host Diversity Grand Rounds
- Offer the Diversity Abstract Award & Tony Wong Diversity Award
- Run a student leadership & mentoring program
- Collaborate with the Women in Leadership Committee
- Publish education/guideline papers
- List minority health, use of interpreters, multiculturalism & international resources
- Student Committee
Other neuropsych resources

- The International Liaison Committee of the International Neuropsychological Society (INS). Contact: Dr. Mariana Cherner

- INS Student Liaison Committee (SLC)
APA/APAGS
Resources

JAMES J. GARCIA, M.S.
PH.D. CANDIDATE
UNIVERSITY OF NORTH TEXAS
CHAIR, APAGS-COMMITTEE FOR THE ADVANCEMENT OF RACIAL AND ETHNIC DIVERSITY (CARED)
Finding the right fit

1. APAGS finding the right program:
   https://www.youtube.com/embed/XG3rHn5xLto?rel=0&showinfo=0

2. APAGS Identifying compatible programs:
   http://www.bizvision.com/webcast/prod/79967?group_stream_idx=6694

3. C-20 Data: http://www.psychologygradschool.weebly.com

4. APAGS Doctoral Program Smart Shopping:

5. APAGS Preparing and Applying for Graduate School:
Writing...

1. Personal statement tips:
https://www.psichi.org/?134EyeSum09bSleigh#.V4gAd5MrJmB

2. Writing personal statements:
http://www.bizvision.com/webcast/prod/79967?group_stream_idx=6698
Join APA/APAGS as an Undergraduate Student Affiliate Member at
Resources for Diverse Students

- Psychological Study of Culture, Ethnicity, and Race’s (Division 45) Mentoring Program: [http://division45.org/](http://division45.org/)

- Psychological Study of Lesbian, Gay, Bisexual, and Transgender Issues’ (Division 44) Mentoring Program: [http://www.apadivision44.org/participate/#join](http://www.apadivision44.org/participate/#join)


- Resource Guides for undergraduate students (free):
Thank you for your attendance and support!

This webinar will be available on YouTube and on the ANST Website.