NATIONAL ACADEMY OF NEUROPSYCHOLOGY

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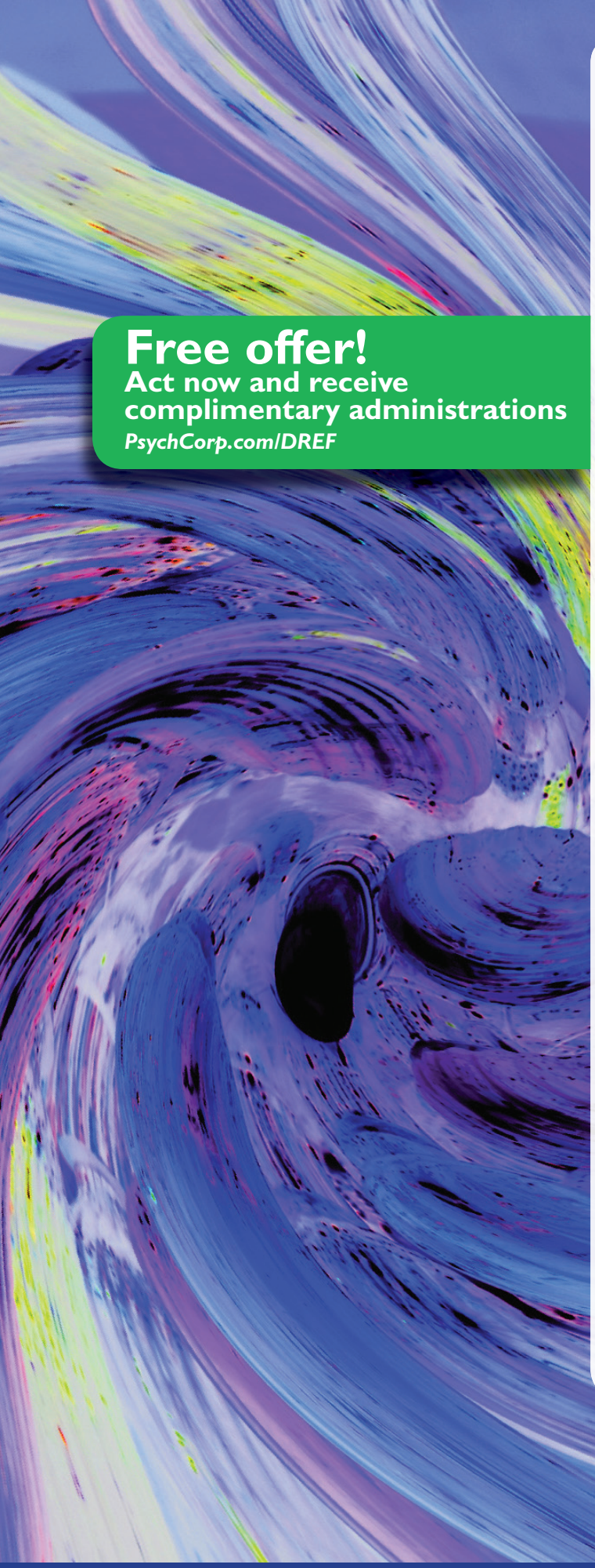

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Editor's Corner

Michelle L. Mattingly, Ph.D., ABPP/CN
NAN Bulletin Editor

Eric Rinehardt, Ph.D., ABPP/CN
NAN Bulletin Associate Editor

With this edition, we are excited to introduce a new format for the Bulletin. As an official publication of NAN, we want to provide our membership with the tradition of excellence that they have come to expect but now we are expanding to include five sections. The next few issues of the Bulletin will include familiar content as well as a new organizational structure. We will highlight some of these sections in the current issue. The new format will include:

- **Patient Corner** is dedicated to patient education and information. This will provide patients and their caregivers with informative and balanced coverage of the latest advances in neuropsychology and neurological conditions This will include a page or two that practitioners can print out and have available in their waiting rooms for patients to read and use as a reference tool/guide.
- **Student Corner** is dedicated to addressing issues critical to students or early career neuropsychologists.
- **Journal Section** (starting next edition) will allow an author to take a particularly complex and/or technical article they have written, and simplify the content into a more easily accessible and digestible read.
- **Professional Issues** will include topics relevant to clinical practice.
- **Spotlight Corner** (starting next edition) will consist of an interview with a public figure or leader in our field who has made a contribution to or supports neuropsychology.

We would like to take this opportunity to give a very special thanks to previous editors, Drs. Deborah Koltai-Attix and Tyler Story, for maintaining as well as advancing the excellence of the Bulletin. We would also like to thank Mr. Scott Barnett and Drs. Geoffrey Kanter, Paul Kaufmann, Manfred Greiffenstein, Mike Williams, Diana Goldstein, Lisa Sworowski, Bernice Marcopulos, Beth Caillouet, and Chriscelyn Tussey, who have agreed to contribute on very short notice to this edition. We are so appreciative of your willingness, timeliness, and excellent work product. Thank you!

We look forward to delivering this new look and believe that it will provide you with information essential to your clinical practice.

Michelle L. Mattingly, Ph.D., ABPP/CN
NAN Bulletin Editor

Eric Rinehardt, Ph.D., ABPP/CN
NAN Bulletin Associate Editor

In This Issue

For this Bulletin we have chosen a forensic theme, but will not necessarily remain theme-specific for future editions. As the field of neuropsychology continues to develop and establish itself into mainstream medicine, so will its utility in a wide variety of forensic settings. Many neuropsychologists, for example, conduct independent forensic neuropsychological examinations in civil cases to render opinions regarding 1) the presence or absence of cognitive impairment, 2) suspected etiology for cognitive impairment, 3) the presence or absence of confounding factors (e.g., medication side effects, psychiatric disorders, poor effort), 4) treatment to improve cognition, and 5) prognosis and ability to return to pre-existing functioning. In criminal litigation, neuropsychologists may be asked to help determine competency to stand trial, responsibility for the crime, or factors which may be taken into consideration for sentencing/mitigation.

Given the adversarial nature of litigation, neuropsychologists and the underlying science our profession is frequently under scrutiny. Advanced training and knowledge are required to succeed in such an environment. The goal of the current NAN Bulletin is to provide readers with a stepping stone for future development and stimulate thought regarding important topics in the field of forensic neuropsychology.

Opinions expressed by the authors and advertisers do not necessarily reflect the position of the National Academy of Neuropsychology.

Patient Corner

When We Need Legal Control Over a Family Member

Scott F. Barnett, J.D., LL.M. (Taxation)
Assistant Professor, University of South Florida College of Medicine Department of Psychiatry and Behavioral Neurosciences
President and Executive Director, Mental Health America of Greater Tampa Bay

Individuals with cognitive impairments and developmental disabilities often need others to care for them and manage their financial affairs. Much of the law's design is to avoid abuse of innocent and vulnerable people. So, gaining control over their affairs is not easy. However, there are procedures for that to happen when clearly needed.

Legal alternatives exist when a person needs to be controlled for their own good or for the safety of society. A person aware enough of their own deficiencies can volunteer to agree to that control. When necessary, a court can grant that control to another qualified person. Each state has its own statutes and legal phrases dealing with these issues. The writer of this article lives in Florida and refers to its statutes and names.

The best path is to find a lawyer in your area who can help. Often a legal aid office has lawyers who can help if you cannot afford your own. The WEB site www.lawyers.com is a good source to find lawyers to hire. The search tools find lawyers in your community that provide services you are looking for. In the cases we are talking about, it is good to start the search for lawyers who provide services for "guardianship and conservatorship", "elder care", and "special needs people". Lawyers with the specialty knowledge can help you in court and with voluntary actions.

COURT ORDERED CONTROLS

Baker Act. In Florida, the "Baker Act" and "Marchman Act" provide procedures to help protect people from harm to themselves or others because of mental illness or substance abuse. You must make a petition to a magistrate. This can result in a protective "detention". Within 2 days a qualified professional must examine the affected individual. The report to the magistrate helps decide if more protective detention is needed or other acts performed. Often law enforcement personnel can help start these proceedings because they are often called for emergencies. NOTE: Specific searches in Google or Bing can bring up directions about the steps needed to carry out one of these acts. Finding the similar statute in your state is the start. For example look up "involuntary commitment due to mental illness" with the name of your state at the end of the search phrase.

Guardianship. A family member or qualifying close associate can petition a court to adjudicate a person as a "legal incompetent" and to appoint a guardian. There are professional guardians that can be appointed to perform the needed services if no family member is willing or suited for the role. Typically, you need to hire a lawyer to help you with this. Also, the Judge appoints a separate lawyer to protect the due process rights of the individual you want to have declared a legal incompetent and become a ward of a guardian. Legal incompetency does not necessarily mean physical incompetency. It means the subject individual does not have the capacity to affect legal matters. (For example, a minor is legally incompetent until reaching the age of majority. That status can be changed with a court ordered emancipation.) The courts have wide discretion about what legal authority is taken from the individual in such cases. Judge's orders can be very specific. Also, they can be "plenary" (everything is included). Distinctions exist between a Guardian of the Person and a Guardian of the Property of the ward. The Guardian of the Person manages medical care and personal living circumstances. The Guardian of the Property takes legal title to the ward's property to manage it for the ward under supervision of the Court. Different individuals can be appointed to the different positions or the same person can be appointed to both.

Petitioning a Court to declare a family member incompetent is emotionally challenging to the family and petitioners. That is especially true if the individual in question challenges the need for it. However, if a true incapacity exists it is the more honorable and most effective way to provide the care and attention needed. Where the potential ward has enough presence of mind to know their need for help easier can take to give others the necessary legal authority.

VOLUNTARY SUBMISSION TO CONTROLS

Durable Powers of Attorney and Health Care Surrogates. The simplest way to authorize another to care for us comes from this. Grant the other person the necessary powers by a proper document. Durable Powers of Attorney name a third-party as our "agent". Their authority to act is generally only when we are aware and can provide direction. A "durable" power of attorney allows that authority to continue if we cannot direct them in each individual act because of a physical incapacity. However, this is not the same as becoming a guardian. The powers of a holder of a durable power are limited. A Health Care Surrogate gives the

medical establishment a third-party to make medical decisions if we cannot make them ourselves. Here too, naming the surrogate does not surrender authority for our own care. Nonetheless, these are important documents everyone should have. They may be enough to avoid the need of the expense and heartache that often come with starting and working with guardianships. Granting a Durable Power of Attorney or designating a Health Care Surrogate is accomplished by proper signing of specifically drafted documents. Many government organizations devoted to the disabled have forms you can use. Qualified lawyers can help you with this as well. CAVEAT: In Florida recent changes in law make a Durable Power of Attorney a much more important document than it was. So, working with a qualified lawyer is recommended.

Voluntary Guardianships. An individual can agree to name a guardian for their own behalf. Including the Court in future proceedings may be important to third parties. They can act without fear of a later challenge of the authority given in a Durable Power or Health Care Surrogate designation. Also, the powers taken from the ward and or given to the named guardian can be designed to meet specific needs or wishes of the ward. Even with voluntary action by the ward, a petition to the Court is necessary to establish voluntary guardianships.

Specific Guardianships. Occasions exist that do not need a full guardianship. The law offers the Courts alternatives to deal with specific situations. They often appoint a Guardian Ad Litem to protect the rights of an individual in a single legal case. For example, an individual may not be missing, but still have rights to be protected. Also, a child involved in a dependency hearing has rights a Guardian Ad Litem can protect. Appointments of a Guardian Ad Litem do not answer the long-term needs of an individual with cognitive impairments or developmental disabilities. However, they may serve as an important alternative in specific situations.

In Florida, a special statute exists allowing appointment of a Guardian Advocate for a person with developmental disabilities. This is important for parents with a child needing medical care that reaches the age of 18. Without such an appointment medical personnel are restricted in taking the parent's directions. HIPAA limits the parent's general rights to get medical information. The distinction between this type of Guardian Advocate and others is this. The statute does not require an adjudication of incompetency as a precondition to appointment of the Guardian Advocate. [NOTE: The phrase "guardian advocate" appears in a variety of laws each with their own impact.]

GENERAL COMMENTS AND RECOMMENDATIONS

Good estate planning for anyone considers the potential needs for guardians and holders of other powers. When unable to speak for ourselves, it becomes critical to have legally authorized spokespeople. This can affect dealing with third parties: banks, doctors, government agencies. Setting up an involuntary guardianship remains a backstop if nothing else is done. However, in those times enough stress and confusion already exists. In all cases, it is best to find a proper lawyer familiar with the laws about this. Estate planning lawyers typically have the necessary knowledge. In cases where government benefits are important a "Special Needs" or "Elder Care" lawyer may be better. Where there is no source for recommendations otherwise, sometimes the Clerks of the Court handling these matters (i.e., Probate or Mental Health Divisions) might give direction. Telephone listings in the yellow pages also provide useful information. Further, certain web sites, such as www.lawyers.com, mentioned earlier, can help you find the proper lawyer for different matters. The best referrals come from others who have dealt with the same matters. Like hiring a lawyer for any matter, their knowledge and experience is important. However, you also want a comfort level they can be easy to work with and attentive to your case.

Scott F. Barnett, J.D., LL.M. (Taxation), CDFA is a member of the Florida Bar since 1972. He is an assistant professor in the USF Department of Psychiatry and Behavioral Neurosciences where he assist in the training of Forensic Fellows and increasing awareness of the area Bar of forensic resources in the department. Mr. Barnett also lectures at the USF Center for Entreprenuership on corporate governance and closely held business planning. His primary avocation is in estate and closely held business planning with solutions offered in life insurance and annuities.

Student Corner

The Business of Neuropsychology related to your First Job: Critical Issues and Questions

Geoffrey Kanter, Ph.D., ABN, ABPdN
President, Comprehensive MedPsych Systems

I would like to address some issues which have direct concern for new professionals coming out of graduate programs and/or postdoctoral programs. Unfortunately it is rare that there is any formal discussion in post-doctoral or internship programs related to critical issues and questions which really require understanding when you are confronted by all the varied choices to be faced the minute you consider what you will do when you complete your clinical training. These include choices such as whether to go into private practice, become an independent contractor, become a salaried employee, work full-time, work part time, are flexible hours possible, what about salary negotiations, how much money can I make, research versus clinical work, government versus private versus hospital versus university clinic/program versus for profit versus non-profit etc. etc. etc.

The route of becoming a private practitioner brings with it a sense of independence and responsibility for oneself but with all the typical associated anxiety about generating referrals, marketing, paying bills, and paying rent (business and home). Of course, the first major concern is where are your referrals going to be coming from, how will you market yourself, how will people find out about you, and what is a local competition. Perhaps you have some flexibility in terms of deciding where you would like to work but if you do not, this has a great impact on your capability to start a private practice. I remember clearly after two years of initial employment, deciding to go out on my own on a part-time weekend basis. I recall renting an office space, furnishing it, and then sitting by the phone for hours waiting for those calls which had been promised by many local neurologists, psychologists, physicians and others. It was very disheartening.

But far beyond that, in this day and age, you had better know what CPT codes combined with which ICD-9 (or ICD-10) (or should that be DSM-IV?) codes you will be allowed to bill and for which insurance companies. Which insurance companies will you bill under medical diagnoses and which will have to be billed under mental health diagnoses? How long will it take you to get on insurance panels (3-5 months sometimes) and which insurance panels do you need authorization for and which do you not? Do you actually make more money staying out of network and for which insurance companies is this true or not true. Furthermore, the answers to these questions will change from state to state and district to district within each state, and even from plan to plan within an insurance company. From a business perspective, what ratio of office rent to revenue should I make as my goal (and why has no one ever asked or answered this question before), how does self-employment tax figure into my overhead. Should I do my own billing or hire a billing service (at what percentage, and can I negotiate the billing companies' rates?). In order to be successful, what percentage of revenue should be my goal in terms of variable overhead such as paper supplies, copier/fax equipment (Is an internet system better?), testing supplies, secretarial support, billing support, the effect of vacations (i.e. unpaid if you are in private practice), health insurance (individual versus group), etc. How do I address fixed versus variable costs. Should I pay taxes via TurboTax or use a real accountant? Should I use a cash-based versus accrual method for accounting? Many such questions need to be understood and answered before jumping into the private practice arena. Most folks coming off their post-doc will not understand most of these terms which will affect your ability to be successful.

From the perspective of findings and negotiating for an employee position, there are likewise a set of very important questions and issues that must be answered or at least understood. Always the first issue is salary. Understanding the various different types of salary structures can be of critical importance: straight salary, contract work, hourly work, RVU productivity payments, percent of revenue are some that you should be aware of. There are others.

Understanding what salary you can request, negotiate, demand, or simply give in to depends on many factors. I am always chagrined to see the national average surveys which are completely irrelevant to where our group is located, the types of patients we see, the insurance plans we take, our specific overhead, etc. It is always disheartening to interview a potentially viable candidate on the phone and be told: "I think I should be paid this median salary because that is the national average" without any concept of the local environment, competition, overhead, state differences, insurance reimbursements, etc. All of these issues must be taken into account. To simply look at a national average and expect to be paid that amount will ultimately lead to a perception on any potential employer's part that you have not done your homework

and may not be worth the effort to attempt to negotiate an acceptable salary specific for the circumstances of that practice. Private practices versus university settings, versus VA settings all have different reimbursement/payor mixes which leads to different salary structures and flexibility. Not understanding this and demanding the median salary (or more) has occasionally led to very short interviews ending in the comment, "Fine, if you think you are really worth that much and can find it, then go get it, but not here."

From my perspective from the hiring side of the equation, salary negotiations have many complex issues and variables raging underneath that you may not know about and which cannot be broken down into a simple formula or range of formulas. It depends on how much revenue the person can bring in, the payor mix (Medicare, Magellan, UBH, self pay, taxes [VA], grant money), is revenue based on low per unit reimbursement and high volume, or self pay or high unit reimbursement and lower volume, do you have the expertise to treat children, is there is a psychometrician involved, how badly does the practice or group or agency need or want someone with your skills (AND personality), what is your training and experience, board certification, salaries of other folks in the practice, how well the group is doing financially, how long has it been in business, what is the overhead cost (this can vary tremendously and you may not know this or be able to find out), how much the group can afford, the location of the group (which state, which part of the state), competition from other individuals or groups, is this a program development position or are you coming in to an already established strong referral base, how much supervision will you need, how fast will you get up to speed, etc. etc. These and many other factors are what I look at in trying to strike a balance between how much to pay, how much is someone worth, and how much the practice can afford. And it can change month to month; last November Florida psychologists were hit by a 40% decrease in rates from BCBS, in January we got a 6% decrease from Medicare and then in April another 5%. Next January there will be another 3% Medicare cut. You have to know that this would affect any practice's salary/pay structure.

The best idea is to talk to local folks who are or have been working in the same situation for ideas. You certainly will get some ideas from neuropsychologists from around the country, but whether they will be relevant, or even harmful to you depends on the local situation. I have had several people over the years tell me "But I can get $X more from this facility in Tampa", or "This person offered me $150,000 with benefits right off my post-doc for doing 75% of the work you say I should do." What is realistic in one place for one type of group whose business is treating folks who have a payor source from Z may be very unrealistic for a different set of circumstances. The damage comes when someone has not done their (local) homework and becomes demanding about a particular rate structure or salary amount because someone 3000 miles away does it that way or because they read it in a survey someplace.

There are so many issues to be aware of that in deciding what to do when you grow up and leave your training facility that it is overwhelming and daunting. You can't possibly know all the answers to these questions, but you should start to keep a list of questions to begin to understand and perhaps ask. I wish that these questions and issues would be formally addressed at the graduate and/postdoctoral level.

I wish you all the best.

Geoffrey Kanter, Ph.D., ABN, ABPdN is board certified in neuropsychology and pediatric neuropsychology and owns and operates Comprehensive MedPsych Systems, the largest private for profit behavioral medicine group in Florida. CMPS employs over 40 staff (neuropsychologists, psychologists, psychiatrists, and Master's level counselors). His perspective on this subject comes from initially working in a private TBI residential treatment facility, becoming a staff neuropsychologist on a hospital rehabilitation unit, managing this small psychology department, becoming director of the larger psychology department in a free-standing rehabilitation hospital, starting a solo practice, then directing and developing a behavioral medicine program within a large medical center, and eventually developing a private group (CMPS) over the course of the last decade. He has hired over 100 staff members over his career in these varied settings. He is a former Insurance Consultant for the Florida Psychological Association. And aside from running CMPS, he performs civil forensic neuropsychological evaluations, runs a mental health consulting business, runs a Transcranial Magnetic Stimulation (TMS) leasing business, and a solar energy business. He sleeps only on weekends and a few holidays.

Neurobehavioral Sequelae of Early Iron Deficiency in Rats A Dissertation in Neuroscience

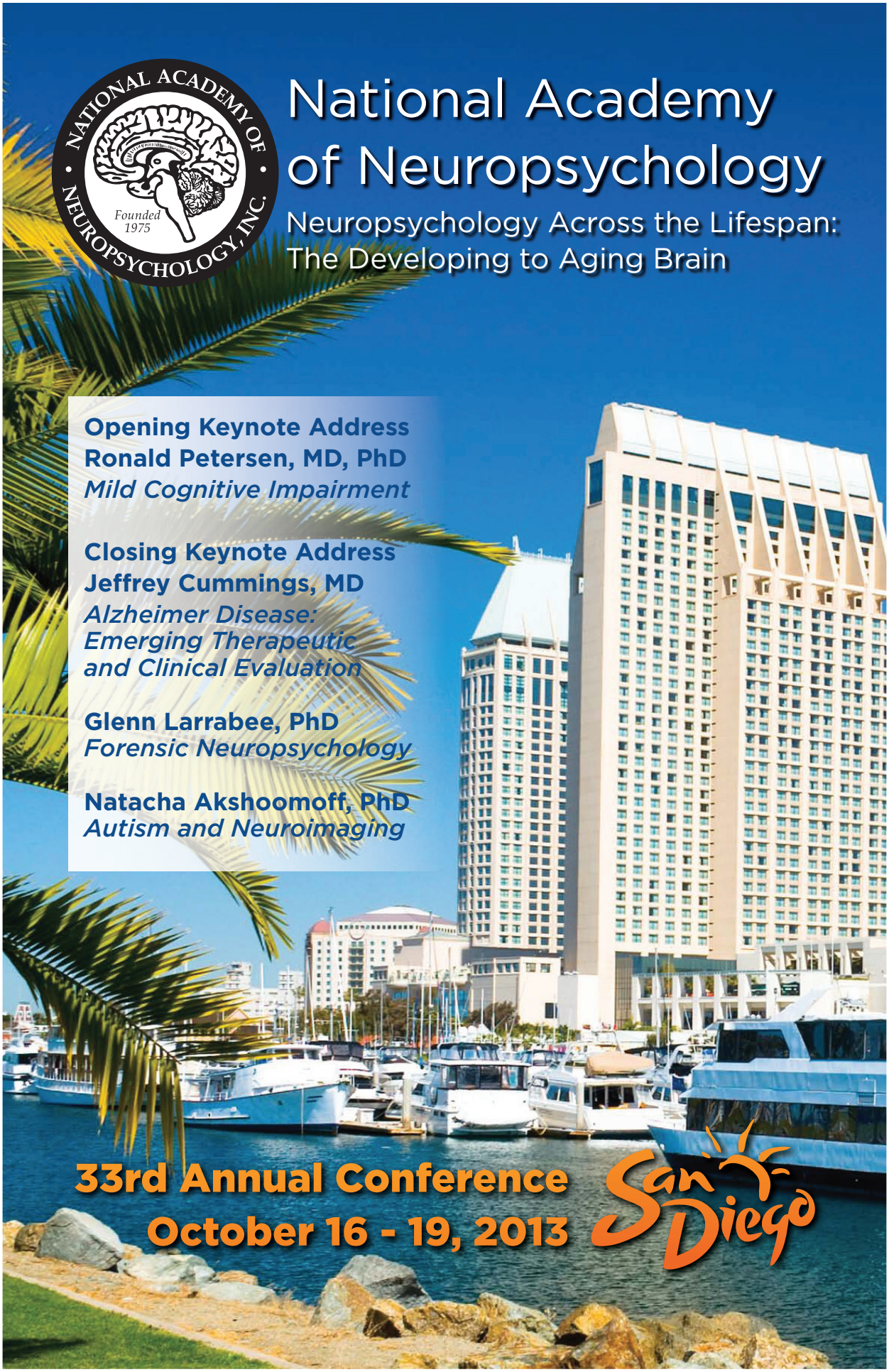
Wael M. Y. Mohamed, M.D., Ph.D.
Neuroscience Unit, Menoufiya Medical School, Egypt

There is no doubt that iron is vital for proper neuronal functioning and development. Nonetheless, the effects of iron deficiency on neurological systems have not yet been thoroughly studied. A number of investigators have shown that in humans, the most salient deleterious effect of iron deficiency (ID) early in life is persistent cognitive impairment. Others have shown that early ID may cause impairment of dopamine (DA) metabolism including DA clearance, transporter density, and dopamine receptor (D1 and D2) densities. The present studies were conducted to investigate the relationship between iron deficiency early in life and cognitive functions especially attention and to elucidate the possible underlying mechanisms using an animal model. Through the use of the attention set shift paradigm we have demonstrated several novel findings regarding iron deficiency and attention in rats as well as extended our knowledge regarding the possible underlying neurobiological mechanisms and possible therapeutic strategies. ***The first aim*** was designed to probe the interaction between early iron deficiency, during the critical window of dopamine system differentiation (PND4-PND21) and the attentional performance and stimulus control in rats. Using Attention Set Shift Testing we found that rats that were iron deficient at postnatal day-4 (PND4) to weaning (PND21) had major attention problems including sustained, selective and divided attention at the age of 45 days. These findings support our hypothesis that in rats, early ID impairs their performance on an attention-related task, an effect that also persists into adolescence and beyond in humans. These results may lead to the development of successful treatment strategies for persistent cognitive dysfunction in children and youths who suffered from ID early in infancy. ***The second aim*** focused on the possibility of reversing the above effects induced by early iron deficiency using methylphenidate. We observed that methylphenidate treatment at 50 days old improved the performance of ID animals, especially on the easier tasks and at lower doses compared to control animals. This has potential ramifications in finding a successful treatment of persistent cognitive dysfunction characteristic of children and youths who suffered from ID early in infancy.

The third aim was designed to examine the effects of early ID on the catecholaminergic system. Therefore, we examined dopamine and norepinephrine transporter densities within certain brain areas related to attention using radioactive ligand binding technique. Our results revealed a significant age effect on DAT levels in the nucleus accumbens (NA), olfactory tubercle (OT), and substantia nigra (SN) but not in the striatum. Specifically, 21-day-old rats had greater DAT levels compared to 45-day-old rats in the NA, OT, and SN as well as in the OT compared to 75-day-old rats. Additionally, there is a significant age difference on NET levels in the dentate gyrus but not in the frontal cortex or the locus coeruleus. Specifically, NET levels were increased among 45-day-old rats compared to 75-day-old rats. However, there is no main effect for diet and no diet-age interactions on DAT and NET levels.

Overall, this work led to several novel contributions regarding the impact of iron deficiency on cognitive function. These findings are very important as they elucidate the impact of iron deficiency on catecholaminergic systems in the brain.

Wael M. Y. Mohamed, M.D., Ph.D. is a Neuroscientist, Pharmacologist and a Psychiatrist. He graduated from Menoufiya Medical School in Egypt with an MD. He holds a PhD degree from Penn State University, USA. He is interested in translational kind of research, emphasizing on basic neuroscience (developing animal models for ADHD) and clinical neuroscience (treating kids affected by ADHD as well as psychological consultation for patients with various psychological disorders). He has a tenure track as an assistant professor in Menoufiya Medical School.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Professional Issues

Forensic Neuropsychology: Training, Scope of Practice, and Quality Control

Paul M. Kaufmann, J.D., Ph.D., ABPP
Diplomate in Clinical Neuropsychology, Practicing Attorney-at-Law

Manfred F. Greiffenstein, Ph.D., ABPP
Diplomate in Clinical Neuropsychology, Diplomate in Forensic Psychology

Courts increasingly use neuropsychology experts to assist in resolving legal questions about brain-behavior relations and mental state. The growth of forensic consulting in neuropsychology is well documented (Sweet, et. al., 2002; Heilbronner, 2004; Kaufmann, 2009), including pediatric populations (Sherman & Brooks, 2012). Braun et al. (2011) noted a 6% average rate of annual growth in Lexis cases referencing neuropsychology from 2005 to 2009, and an unprecedented 20% increase in 2010. No other area of neuropsychology practice has documented such consistent expansion. Lawyers increasingly seek consultation from neuropsychologist experts because clinical neuropsychologists apply a scientific approach (Larrabee, 2012) that meets judicial standards for expert testimony (Kaufmann, 2012). See Figure 1 for updated comparisons of related disciplines through 2011.

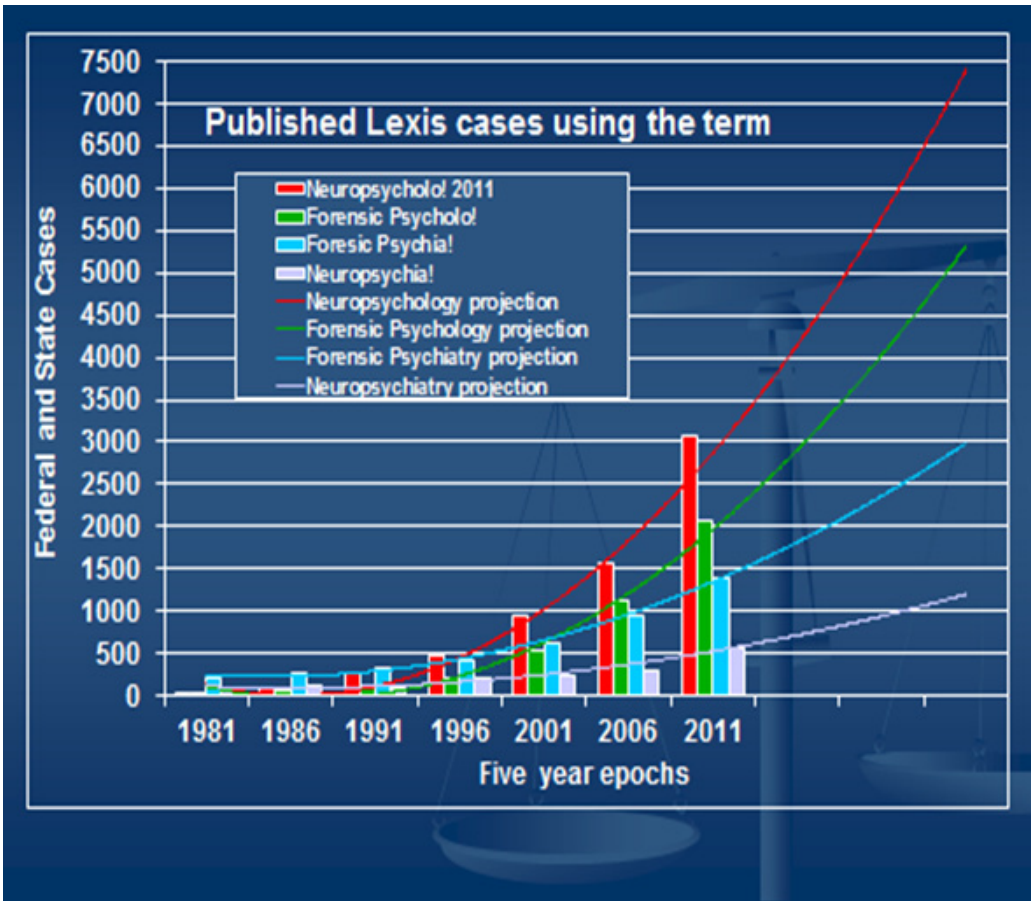

Figure 1. Number of United States federal and state cases using the root terms Neuropsycholo!, Forensic Psycholo!, Forensic Psychia!, and Neuropsychi! in five year epochs for the past thirty years used as a basis for polynomial regression projections for the next fifteen years. These frequency counts represent the "tip of the iceberg" because the Lexis database only includes appellate cases and narrowly selected trials introducing novel legal concepts.

With this rapidly increasing use of neuropsychology in our courts, practitioners of law and psychology confront challenging new questions. This article briefly addresses training model revision, scope of practice, propriety of forensic consulting, and quality control of expert opinions.

Neuropsychology Training Model Revision

Historically, the adversarial nature of forensic consulting generated reactions from neuropsychologists ranging from distasteful afterthoughts to overt hostility. To this day, formal neuropsychology training models essentially ignore this rapidly growing practice area. Postdoctoral fellows might gain some forensic experience if an affiliated supervisor happened to accept forensic referrals – as a growing number of them do. Some neuropsychologists first encounter forensic work upon receipt of a subpoena for records, most likely generated from clinical work involving accident survivors with traumatic brain injury (Carone & Bush, 2013). Many neuropsychologists are not adequately prepared to deal with lawyers or to engage in forensic practice. National neuropsychology organizations responded to this growing need by developing more forensic continuing education workshops and publishers delivered new textbooks. Recently, Greiffenstein and Kaufmann (2012) provided some helpful suggestions about how to enhance productive attorney-neuropsychologist relations in order to develop a forensic practice.

Neuropsychology training models lag behind the growing forensic demand. The Houston Conference on Specialty Education and Training in Clinical Neuropsychology (Hannay, etal., 1998) remains the most widely recognized training model, but it makes no mention of attorney referrals or forensic consulting. Forensic practice is omitted from the four potential subspecialties (child, pediatric, geriatric, and rehabilitation) listed in the Policy Statement. The largest and oldest neuropsychology board certification examination contains essentially no forensic content and mentors actively discourage candidates from submitting forensic work samples. A different neuropsychology board certification process conducts a paper review (no examination), for added qualifications in forensic neuropsychology, in which the applicant is invited to describe relevant experience (in less than 300 words) and provide endorsing signatures of presumably competent practitioners. Neuropsychology training places very little emphasis on understanding relevant jurisdictional law and the appropriate use of legal authority in forensic consulting, even though forensic practice is the fastest growing source of new practice revenue for neuropsychologists. Perhaps it is time to revisit the didactic balance in neuropsychology training models.

Scope of Practice

The growing demand for neuropsychologist experts has been noticed by forensic psychology, raising understandable questions about comparative scope of practice. The American Psychological Association (APA) recognized the specialties of clinical neuropsychology in 1996 and forensic psychology in 2001, with the following definitions.

"Clinical Neuropsychology is a specialty that applies principles of assessment and intervention based upon the scientific study of human behavior as it relates to normal and abnormal functioning of the central nervous system. The specialty is dedicated to enhancing the understanding of brain-behavior relationships and the application of such knowledge to human problems."

"Forensic Psychology is defined as the professional practice by psychologists within the areas of clinical psychology, counseling psychology, school psychology, or another specialty recognized by the American Psychological Association, when they are engaged as experts and represent themselves as such, in an activity primarily intended to provide professional psychological expertise to the judicial system."

These definitions suggest that *any* other APA specialists *are* forensic psychologists when they are "engaged as experts and represent themselves as such, in an activity *primarily intended* to provide professional psychological expertise to the judicial system." However, forensic psychologists appropriately note that reports from non-legal contexts are not automatically transmuted into "forensic" reports just because they are subpoenaed for use in a legal venue. Forensic consulting requires, at minimum, the factor of intentionality: Psychology consulting is specifically requested to answer legal, not clinical questions (Heilbrun, Grisso, and Goldstein, 2009). The aforementioned APA specialists will likely encounter difficulty (and possible embarrassment) when expanding into forensic practice, absent knowledge of relevant jurisdictional law and the hierarchy of legal authority. Courts may still tolerate legal ignorance from neuropsychologist experts, because experts are liberally defined by federal and local statute as persons with "scientific, technical or other specialized knowledge" (FED. R. EVID. 702) that may help the jury understand the facts in dispute. Even without forensic training, clinical neuropsychologists bring "the scientific study of human behavior as it relates to normal and abnormal functioning of the central nervous system" and "the application of such knowledge to human problems."

Brodsky and Robey (1973) first coined the term "courtroom familiarity" as a minimal competence required for forensic consulting. Greiffenstein and Kaufmann (2012) provided five basic principles of effective neuropsychologist-attorney interactions:

- Understand legal bases
- Practice competent neuropsychology
- Support board certification
- Adhere to ethical principles
- Be courtroom familiar

In our experience, neuropsychologists are typically the least prepared in understanding the legal bases for their work and courtroom familiarity. Efforts to address neuropsychologist "blind spots" in otherwise well-received continuing education workshops have been met with the occasional criticism of spending too much time on "preliminary concepts" and not enough time on neuropsychological material. The law, not to mention legal analysis, is so foreign to most neuropsychologists that they sometimes bristle when hearing that forensic consulting requires greater courtroom familiarity and legal fluency. Similarly, most lawyers do not understand science or statistical analysis. Although preparation for forensic consulting does not necessarily require a deep or broad understanding of legal principles, the APA ethics code advises "when assuming forensic roles, psychologists are or become reasonably familiar with the judicial or administrative rules governing their roles" (Standard 2.01f). Moreover, all states require psychologists to pass a test on laws regulating the profession before obtaining a license.

Effective forensic consulting requires knowing the most applicable evidentiary law, landmark legal cases relevant to psychology, and the basic civil rights of plaintiffs and defendants. Even the most elementary forensic psychology texts provide a sufficient understanding of the law and courtroom procedures to engage in forensic consulting (Greiffenstein, 2008; Melton, Petrila, Poythress, Slobogin, & Otto, 2007; Andrew, Benjamin, & Kazniak, 1991; Glass, 1991). However, understanding legal bases overlaps with appreciating legal culture. In this regard, courtroom familiarity and legal fluency remain a distinct advantage for forensic psychologists. Forensic psychologists have training and experience that is not as readily available for many neuropsychologists who are called upon to serve as experts. Similarly, nothing in forensic psychology training provides expertise in brain-behavior relations. Neuropsychological consultation is especially valuable in court when the mental state of a party with known or suspected neurologic impairment is in question.

Neuropsychology Questions the Propriety of Forensic Consulting

Neuropsychology training guidelines are silent about forensic consulting and neuropsychologists present ambivalence and some professional angst about the growing "dirty work" referred by attorneys, as noted in several comments below.

"It wasn't that long ago that many of us jumped into neuropsych because it paid so much more than general psych, the higher pay created a buzz and lots of people jumped into the market. Now, forensics is paying better than regular NP and people are jumping into that market. I think forensics will see its days come and go."

Although difficult to interpret, a generous reading of this comment is that it may reflect some serial imposter anxiety of an early career professional struggling with career choice and an uncertain future. Clearly, the Houston Conference guidelines do not outline a casual "jump" into neuropsychology. A similar jump into forensic consulting is also ill-advised.

Upon presenting some implications of growth trends in forensic consulting on practice revenue at a neuropsychology leadership strategic planning event, a colleague commented that "some fear that we are becoming too forensic." Another added, "students do not enter the profession to do forensic work." More recently, a colleague asked about revenue trends. When provided with data underlying figure 1, this unyielding skeptic replied "these facts – neither separately, nor together – necessarily lead to a conclusion that legal consulting is the fastest growing new source of revenue for practicing neuropsychologists." Naysayers abound when innovation encroaches, yet those who deny these trends cannot identify any other neuropsychology practice area that approaches the growth in forensic consulting. These collegial reservations seemingly ignore how much courts value the assistance provided by neuropsychologist experts – a service that is based in Constitutional requirements. This work will not go away, unless alternative methods emerge that are superior to neuropsychology. At the same time, it has been difficult for some to accept that the relative value of traditional clinical services is in decline.

Propriety of forensic consulting gets addressed in unexpected ways. All too common, psychologists turn to the APA ethics code to answer questions addressed by jurisdictional law, even when the ethics code clearly directs psychologists back to law. We routinely redirect colleagues back to relevant jurisdiction law. While space does not allow for a full presentation of specific legal issues in question, a senior colleague warned "I would remind you that we are unqualified to make assured scrutiny of jurisdictional law." We agree, though the training deficit should not be ignored. When noting our licensing requirements and ethical duties to be reasonably familiar with the law, our colleague added "reading law as you say has only to do with low-grade licensing exams in any jurisdiction."

Other colleagues have responded more favorably, thanking us for efforts to bring forensic consulting out of the shadows and to make it more understandable and accessible. One colleague made the astute observation that clinicians need to develop a better appreciation that their neurologic patients encounter legal problems in which a neuropsychologist expert opinion may be outcome determinative.

Board certified neuropsychologists are becoming the preferred brain-mental state-behavior experts in our justice system, not just our medical clinics. This new balance is a good thing, but it may call on the profession to revisit its training guidelines and retool for a different market.

Quality Control of Expert Opinions

While growing demand evokes some professional disdain among otherwise competent colleagues, unfortunately, it also attracts entrepreneurial opportunists who provide a poor quality product that harms neuropsychology. Some "experts" will do or say almost anything to tap into this growth opportunity, as noted in the following sworn testimony.

Q: Is this School of Neuropsychology recognized by the American Board of Neuropsychology?
A: I don't know.
Q: Does the school have credentials?
A: Yes.
Q: Who credentials the school?
A: The diplomate is American Board of School Neuropsychology, ABSNP. It's also recognized by the American Board of Pediatric Psychology. It's an educational specialty area of neuropsychology. So it's not medical, it's educational.

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Q: Well, you're not a neuropsychologist, are you?
A: I'm a licensed educational neuropsychologist.
Q: What is the license number?
A: My license number is --
Q: Well, whatever it is, I mean --
A: ---- is my LEP. So I am a licensed educational psychologist.
Q: You said "neuropsychologist" that's why I am asking you.
A: That's right. And I have a diplomate in neuropsychology. I don't have that number, my diplomate.
Q: But a moment ago, you said you were a licensed educational neuropsychologist.
A: Exactly.
Q: Aren't you combining two different things to get that title?
A: It's a specialty area. It's a specialty area in school psychologist, and it's a specialty area in neuropsychology.

Many competent and well trained neuropsychologists who engage in forensic consulting have run into similar nonsense. It is far too common. The profession must address these issues, but such matters must be managed cautiously because they are fraught with liability.

However, more challenging quality control issues arise in areas where reasonable neuropsychologists may disagree, e.g. appropriate application of symptom validity or performance validity measures in neuropsychological evaluations. Greiffenstein (2012) recently noted if "you are not convinced that some persons can and do mimic deficits to fulfill personal needs after MTBI, you should not be practicing clinical neuropsychology." These issues are also being confronted in sworn testimony.

Q: Have you seen indicia of malingering from the testing that you did?
A: Not really. I think she under-performed if you simply take the brain, but there's really no consistent or extensive evidence that there was an attempt to perform poorly on purpose.
Q: Your report says "She puts forth good effort." What was that based on?
A: Observation, seeing a very large number of patients and getting a sense for when…
Q: Is 36 an indication of good effort? [Referring to a TOMM raw score]
A: No. It's typically indicative of compromised effort.
Q: You indicate the Plaintiff was able to repeat three digits backwards. Does this represent good effort?
A: It's hard to say. I have seen many people get three backward who overall are exerting reasonable effort.
Q: Do you agree that Plaintiff failed at least eight measures of symptom validity?
A: No. As far as I can tell, she didn't fail any.

Despite organized efforts to promote more consistent practice with consensus conference statements (Heilbronner, et al., 2009), variability among experts remains. Many of these questions of credibility are left for a jury to consider if the matter makes it to trial. As judges like to say, "That's why cross examination was invented."

Conclusion

Growth in forensic consulting for neuropsychologists is outpacing every related brain-behavior expertise and the growth is accelerating. This growth suggests, perhaps demands, re-consideration of training models to include appropriate education relevant to forensic consultation. Is neuropsychology listening? Neuropsychologists who practice competently, avail themselves to forensic consulting, and follow suggestions provided in workshops and textbooks, will find that forensic consulting is a rewarding way to diversify practice and develop new revenue. In offering quality – relevant and reliable – services to the legal profession, neuropsychology supports the truth-seeking function of the judiciary, promotes justice, protects the profession, and serves public policy.

Paul M. Kaufmann, J.D., Ph.D., ABPP-CN is a licensed clinical psychologist, attorney, and board-certified clinical neuropsychologist, who operates a multi-state private practice in forensic consultation emphasizing pediatric neuropsychology. He completed his Doctoral Degree at the University of Houston in 1988 with Dr. Jack Fletcher as his chair and completed a two year Post-Doctoral Fellowship at the Child Study Center - Yale University School of Medicine. He is engaged in the full time practice of law, representing the Nebraska Department of Health Human Services in administrative hearings, trials, and appeals, and serving as a Special Assistant Attorney General of Nebraska. Dr. Kaufmann has published numerous book chapters, peer-reviewed scientific research articles, and legal commentaries, most recently addressing the use of neuropsychological evidence in court and the scope of neuropsychologist expertise. Currently, Dr. Kaufmann is a Member-At-Large of the American Academy of Clinical Neuropsychology Board of Directors. Currently, Dr. Kaufmann serves as an attorney for the University of Oregon Office of General Counsel.

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NAN would like to congratulate the 2012 award recipients for their contributions to the field over the past year and throughout their careers.

Distinguished Lifetime Contribution to Neuropsychology
Kathleen Y. Haaland, Ph.D.

Distinguished Service Award
Jeffrey T. Barth, Ph.D.

Early Career Award
Angela L. Jefferson, Ph.D.

Outstanding Dissertation Award
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Lara E. Jehi, M.D.
Colleen Kenney, B.A.
Richard Naugle, Ph.D.
Imad M. Najm, M.D.

Mitigation: The Role of Neuropsychology in Sentencing Considerations

Diana S. Goldstein, Ph.D., ABPP
Owner and Director, Isaac Ray Forensic Group and Michigan Avenue Neuropsychologists

Lisa A. Sworowski, Ph.D., ABPP
Founder, Carolina Neurobehavioral Service

Introduction

The prevalence of serious mental disorders among convicted criminals entering jails and prisons in the U.S. has been estimated to be 17%,[1,2] significantly higher than the estimate of 5% in the general population. Presumably, a large number of criminal defendants with serious mental disorders, including neurocognitive disorders, will have been diverted prior to conviction and sentencing—through civil commitment (e.g., to a mental hospital or, if so adjudicated, to a special treatment facility for sexually dangerous persons), commitment for restoration to competence if found incompetent to proceed to trial, or hospitalization subsequent to an acquittal by reason of insanity—making the total number of criminal defendants with serious mental illness or cognitive impairment who enter and are processed through the criminal justice system far greater.

Despite having a verifiable mental disorder, a substantial percentage of defendants will fail to successfully achieve a partial defense (as in diminished capacity/responsibility or mens rea) or complete defense (not guilty by reason of insanity) during the guilt phase of adjudication. However, even when a mental disorder cannot be proved to be related to the elements of an offense,[3] it can have a substantial impact during the sentencing phase. It serves as one of many factors that may be considered in mitigation and weighed in favor of a less severe sentence, including a life versus death sentence in capital cases.

Mitigation Defined

Also referred to as "mitigating factors" or "mitigating evidence," mitigation is evidence about a defendant's personal background, or the circumstances surrounding his involvement in the instant offense, that defense can present in order to make the case for a lesser sentence. In the United States, most mitigating factors are determined and presented by clinical evaluations, making the role of clinical psychology (including neuropsychology) and psychiatry central.

Each State has its own set of mitigating (and aggravating) factors, and instructions to jurors about how to weigh such evidence similarly differs. The commonalities are nonetheless considerable. Generally, mitigating factors address the defendant's personal background, including a history of mental illness or intellectual disability, physical or sexual abuse, other trauma, youth, an absence of a criminal history involving violence or felonies, having a minor role in the offense, acting under duress or provocation, or having character traits or attitudes reducing likelihood of recurrent criminal conduct.

Although a comprehensive discussion of aggravating factors is beyond the scope of this article, they are discussed at various points for context. Aggravating factors are any relevant facts or circumstances, supported by evidence presented at trial, that increase the severity or culpability of a criminal act. If jurors agree aggravating factors outweigh mitigating factors, such evidence may be used in favor of imposing a more severe sentence, including a death sentence in capital cases.

Aggravating factors generally include murders committed during the commission of another offense, for financial gain, of law enforcement officers or public officials, multiple murders, murders of vulnerable individuals, and having a history of multiple convictions for violent or other felony crimes. Demonstrating a lack of remorse, amount of harm to the victim, committing an offense in front of a child, and likelihood of recidivism are other commonly considered aggravating factors.

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[1] Steadman H.J., Osher, F., Robbins P.C., Case B., Samuels S. (2009). Prevalence of Serious Mental Illness among Jail Inmates. *Psychiatric Services*, 60: 761–765.

[2] World Health Org., Information Sheet: Mental Health and Prisons 1, http://www.euro.who.int/Document/MNH/WHO_ICRC_InfoSht_MNH_Prisons.pdf (2006).

[3] Criminal liability is established in common law-based jurisdictions such as the United States when both the mental element of a crime (i.e., *mens rea*, acting with a guilty mind, or with intent) and the external/objective element of a crime (i.e., *actus reus*, a [voluntary] guilty act) are proven to exist beyond a reasonable doubt by the prosecution during the guilt phase.

While some States statutorily bar the application, mental illness can also be used as an aggravating factor. In *People v. Smith*, 107 P.3 229 (Cal. 2005), despite its statutory prohibition, the California Supreme Court affirmed the lower Court's decision to allow the prosecution's use of evidence of the defendant's mental illness as aggravation, as long as the mental condition related to the circumstances of the offense and was deemed more probative than prejudicial.

Mitigation in Capital Cases

The death penalty is intended only for "the worst of the worst" offenses. Following a conviction, in order for jurors[4] to determine whether a particular defendant merits a death sentence, they must weigh evidence supporting that the murderer is indeed one of the worst of the worst (aggravating factors) against evidence that may reduce his culpability or provide other reasons for sparing him a death sentence (mitigating factors).

Landmark United States Supreme Court Cases

The modern death penalty process has been shaped by a series of U.S. Supreme Court decisions. The first significant general challenge to capital punishment that reached the Supreme Court was the case of *Furman v. Georgia*, 408 U.S. 238 (1972). The Court overturned the death sentences of Furman and two other defendants. Although the Court did not hold that capital punishment is *per se* unconstitutional, it expressed concern that the statutes were being implemented arbitrarily and capriciously, and that capital punishment was cruel and unusual.

The Court revisited the issue in *Gregg v. Georgia*, 428 U.S. 153 (1976), ruling that Georgia's modified death penalty laws passed Eighth Amendment[5] scrutiny. The statutes provided a bifurcated trial in which guilt and sentencing decisions were separately determined, and mitigating and aggravating evidence was considered during the sentencing phase. Juries were instructed that a death sentence could be imposed only if it found one or more factors that enhanced the gravity of the offense compared to other potential capital offenses ("aggravating circumstances") and considered mitigating factors that might offset evidence of aggravation. The statutes of most death penalty States today emulate the Georgia procedure: "The jury is not required to find any mitigating circumstance in order to make a recommendation of mercy… but it must find a statutory aggravating circumstance before recommending a sentence of death."

The Supreme Court's decision in *Lockett v. Ohio*, 438 U.S. 586 (1978) broadened the range of mitigating evidence for

consideration by jurors. Lockett was convicted of aggravated murder, for which the death penalty was mandatory in Ohio unless any of three mitigating factors were proved: 1) the victim had induced or facilitated the offense; 2) the offense was committed under duress or coercion, or strong provocation; or 3) the offense was primarily a product of psychosis or mental deficiency. The jury was not allowed to consider Lockett's relatively minor involvement in the crime, or a psychologist's favorable prognosis for rehabilitation.

The Court ruled that "the limited range of mitigating circumstances that may be considered" according to Ohio statute violated the Eighth and Fourteenth Amendments[6] by not permitting the individualized consideration of mitigating evidence. They argued that juries ought to be allowed to consider "any aspect of a defendant's character or record and any of the circumstances of the offense that the defendant proffers as a basis for a sentence less than death."

Finally, in *Walton v. Arizona*, 497 U.S. 639 (1990), the Supreme Court upheld Arizona's sentencing procedures, ruling that sentencing by a judge rather than a jury did not violate the Sixth Amendment, and that Walton's Eighth and Fourteenth Amendment rights were not violated by placing on him the burden of proving by a preponderance of the evidence the existence of mitigating evidence.

Mitigating Factors in Federal Capital Cases

Whereas the Supreme Court has ruled that mitigating circumstances need only be proven by a preponderance of the evidence, the prosecution must establish the crime's aggravating circumstances beyond a reasonable doubt. Since *Lockett*, a jury may also consider any mitigating evidence it finds relevant.

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[4] Sentencing determinations in capital cases may be made by jury or judge (see landmark Supreme Court cases, below).

[5] The Eighth Amendment was adopted in 1791. It is nearly identical to a provision in the 1689 English Bill of Rights, in which Parliament declared, "as their ancestors in like cases have usually done…that excessive bail ought not to be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted."

[6] The Fourteenth Amendment was ratified in 1868. Among many of its provisions, it affords the right against cruel and unusual punishments.

Jurors are instructed to weigh the mitigating evidence presented by the defense against the aggravating evidence presented by the prosecution. Having more or less of one type of evidence is irrelevant; jurors decide for themselves how much weight to give any one factor. A federal death penalty requires a unanimous vote among jurors. Jurors need not agree that mitigating factors exist; a single juror may appropriately consider *any* mitigating circumstance irrespective of other jurors' opinions. Properly understood, mitigation is not intended to excuse a crime, but rather to offer reasons to spare a defendant from a sentence of death.

18 USC § 3592. In determining whether a sentence of death is to be imposed on a defendant, the finder of fact shall consider any mitigating factor, including the following:

1. **Impaired capacity**. The defendant's capacity to appreciate the wrongfulness of the defendant's conduct or to conform conduct to the requirements of law was significantly impaired, regardless of whether the capacity was so impaired as to constitute a defense to the charge.
2. **Duress**. The defendant was under unusual and substantial duress, regardless of whether the duress was of such a degree as to constitute a defense to the charge.
3. **Minor participation**. The defendant is punishable as a principal in the offense, which was committed by another, but the defendant's participation was relatively minor, regardless of whether the participation was so minor as to constitute a defense to the charge.
4. **Equally culpable defendants**. Another defendant or defendants, equally culpable in the crime, will not be punished by death.
5. **No prior criminal record**. The defendant did not have a significant prior history of other criminal conduct.
6. **Disturbance**. The defendant committed the offense under severe mental or emotional disturbance.
7. **Victim's consent**. The victim consented to the criminal conduct that resulted in the victim's death.
8. **Other factors**. Other factors in the defendant's background, record, or character or any other circumstance of the offense that mitigate against imposition of the death sentence.

Psychologist as Mitigation Specialist

As mitigation hearings have become a critical part of capital cases, defense attorneys have turned to mitigation specialists to investigate defendants' backgrounds. Mitigation specialists are typically clinical psychologists or social workers. They meet with numerous collateral informants in order to gather information about a defendant's developmental, educational, familial, medical, psychiatric, substance use, and employment background, and any other element of the defendant's life that may assist defense counsel in presenting a compelling case for a sentence less than death. Mitigation specialists are so central to a defendant's case that the American Bar Association has included them in their 2003 Guidelines on defenses in capital cases (Guideline 4.1 A(1), p. 952)[7]:

> A(1). "The defense team should consist of no fewer than two attorneys…an investigator, and a mitigation specialist."

The ABA comments:

> "A mitigation specialist is also an indispensable member of the defense team throughout all capital proceedings. Mitigation specialists possess clinical and information-gathering skills and training that most lawyers simply do not have…They have the clinical skills to recognize such things as congenital, mental or neurological conditions, to understand how these conditions may have affected the defendant's development and behavior, and to identify the most appropriate experts to examine the defendant or testify on his behalf." (p. 959)

In its 2008 Supplementary Guidelines,[8] the potential role of a neuropsychologist is particularly clear:

> "At least one member of the team must have specialized training in identifying, documenting and interpreting symptoms of mental and behavioral impairment, including cognitive deficits, mental illness, developmental disability, neurological deficits; long-term consequences of deprivation, neglect and maltreatment during developmental years… effects of substance abuse and…consequences of exposure to trauma." (Guideline 5.1 E, p. 682)

Mental health clinicians retained to testify in mitigation hearings are not required to present historical or character evidence about a defendant that may be considered aggravating, a [non-neutral] role that differs vastly from that of the mental health expert retained to offer opinions during the guilt phase. It is not necessary for a mitigation specialist to have examined the defendant in order to testify in a mitigation hearing, and the specialist may provide "pure" expert testimony if deemed relevant. These same caveats apply to clinicians testifying in aggravation hearings.

A review of the list of mitigating factors (in particular "impaired capacity" and "disturbance") and the ABA's call for expertise in identifying, documenting and interpreting signs and symptoms of neurologic and neurocognitive disorders make clinical neuropsychologists ideal for the role of mitigation specialist. Our training in quantifying executive dysfunction and intellectual disability in particular uniquely qualifies us to explain to fact-finders the manner in which certain developmental or acquired neurocognitive disorders may impact planning, decision making, judgment and insight ("appreciation"), problem-solving and reasoning skills, self-monitoring, capacity to benefit from

[7] Guidelines for the Appointment and Performance of Defense Counsel in Death Penalty Cases. American Bar Association; 2003.

[8] Supplementary Guidelines for the Mitigation Function of Defense Teams in Death Penalty Cases. American Bar Association; 2008.

corrective feedback, and behavioral inhibition/impulse control (note the "volitional prong" of impaired capacity), which in turn may impact aspects of criminal conduct with potential to be mitigating in a particular case. Impairments in socioemotional reciprocity (as in Asperger's and other autism spectrum disorders) may similarly be relevant.

Under the general rubric of "risk assessment," clinical psychologists and neuropsychologists may be asked to testify at aggravation hearings about the treatability versus recalcitrance of various disorders as it relates to the likelihood of recidivism or of committing violence in prison, among other things. In addition to psychopathy, schizophrenia, pedophilia and sexual sadism—disorders frequently raising controversy over treatability and a common focus of risk assessments, the static nature of certain neurocognitive disorders may also be used as aggravating evidence. Examples include intellectual disability, chronic traumatic or anoxic brain injury, and autism spectrum disorders, in particular if defense claims the associated cognitive, behavioral or psychiatric impairments influenced the instant offense; the prosecution could argue that these very same static impairments increase risk for reoffense and represent aggravating factors.

Conclusion

Clinical psychologists, in particular neuropsychologists, are uniquely qualified to work with attorneys in the sentencing phase of noncapital and capital cases.

Diana S. Goldstein, Ph.D., ABPP is a board certified neuropsychologist in Chicago. She is the owner and director of neuropsychology of the Isaac Ray Forensic Group and Michigan Avenue Neuropsychologists, private practices offering mental health and neurocognitive evaluation and treatment services to the courts and families. She maintains an adjunct faculty position at the University of Chicago and directs a forensic training program for advanced doctoral level neuropsychology students. Areas of research and practice include malingering, psychopathy, traumatic brain injury, dementia and anxiety disorders.

Formerly the Associate Director of Neuropsychology at the Isaac Ray Forensic Group and Michigan Avenue Neuropsychologists in Chicago, **Lisa A. Sworowski, Ph.D., ABPP** relocated to Charlotte, North Carolina and founded the Carolina Neurobehavioral Service, a private practice specializing in clinical and forensic neuropsychological evaluations. She obtained her doctorate in clinical psychology at the University of Kansas and completed a two-year postdoctoral fellowship at the University of Chicago. Dr. Sworwoski held an academic appointment in the Department of Psychiatry at the University of Chicago and has published on topics such as multiple sclerosis, stroke, substance use and malingering. She has provided expert testimony in federal and state courts, in both criminal and civil matters.

The Role of Neuropsychology in Competency to Stand Trial Evaluations

Bernice A. Marcopulos, Ph.D., ABPP
Department of Graduate Psychology, James Madison University

Beth A. Caillouet, Ph.D.
Western State Hospital/University of Virginia Medical Center

Chriscelyn Tussey, Psy.D.
New York University School of Medicine/Bellevue Hospital Center

Introduction

The practice of forensic neuropsychology has been growing as the assessment of cognitive functioning can be critical for a wide range of psycholegal questions (Kaufmann, 2008). Neuropsychologists are most often asked to weigh in on civil matters involving personal injury, but can offer useful information on criminal matters as well (see Denney & Sullivan, 2008). For instance, a neuropsychological evaluation can be very important ancillary information as part of a competency to proceed evaluation (Marcopulos, Morgan, & Denney, 2008). Psychologists may be asked to opine on a number of legal competencies in criminal matters, such as competency to stand trial, competency to confess, competency to be executed, competency to waive counsel, among others. This article will focus on the issues involved in competence to stand trial (CST), the most common legal competence (Melton, Petrila, Poythress, & Slobogin, 2007).

Background

A defendant has a right to a competency evaluation before proceeding to trial, a right that was established by the landmark Supreme Court decision in *Dusky v. United States* (1960). Briefly, Milton Dusky was charged with kidnapping and assisting in the rape of an underage female. Although Dusky's attorney expressed concerns about his trial competency due to acute psychotic symptoms (he was diagnosed with schizophrenia), he was found competent to stand trial and received a 45-year sentence. The case was appealed to the United States Supreme Court. They ruled that in order to be competent to stand trial, a defendant must have a "sufficient present ability to consult with his lawyer with a reasonable degree of rational understanding" and a "rational as well as factual understanding of the proceedings against him" (*Dusky v. United States*).

Although there may be differences in the exact wording, a variant of the Dusky standard is employed in every state. It is necessary to note that while assessing CST, contrary to common beliefs, education level, intelligence, or an unwillingness to cooperate with one's attorney do not alone preclude trial competence. The forensic evaluator must determine whether the defendant has a *present* ability to factually and rationally understand legal proceedings and to consult with one's attorney; however, the final decision regarding whether a person is competent to stand trial is a controversial topic (see Zapf & Roesch, 2009 for a discussion of the "ultimate issue" controversy). The presence of mental illness or cognitive deficits does not automatically equate with incompetence to stand trial, and most defendants, even those with impairments, are competent (Pirelli, Gottdiener, & Zapf, 2011).

A forensic evaluator determines by way of an interview, whether the defendant has sufficient knowledge of courtroom personnel and procedures, whether they can state and understand the charges against them and potential outcomes if convicted, and whether they are able to work effectively with their attorney. A defendant may be judged to be incompetent to stand trial if current psychiatric or cognitive symptoms cause them to be confused about their charges and legal proceedings, or unable to work with their attorney due to paranoid delusions or difficulties communicating. After finding a defendant incompetent, the judge usually orders treatment and restoration, which could occur in jail, in the community or in a psychiatric facility. Restoration efforts typically entail education about the court and legal process along with treatment of the psychiatric disorder causing the symptoms which interfere with trial competence (e.g., schizophrenia). If the defendant cannot learn basic legal information or work with their attorney due to severe and permanent cognitive deficits, or their psychiatric symptoms are not amenable to treatment, they may be deemed unrestorable.

The Role of Neuropsychology in CST Evaluation

As noted earlier, the legal opinion regarding whether a defendant is competent to proceed is based on specific legal standards (Grisso, 2003). Psychological testing is not required to determine trial competence, but in some circumstances testing, especially neuropsychological testing, may provide useful information. Cognitive deficits related to psychiatric illness, developmental, or neurological disorders can certainly impact a defendants "factual and rational understanding" and impair their ability to work with their attorney. In a study of federal criminal defendants, 38%

of individuals with "organic" disorders were found incompetent to stand trial versus only 18% of the total sample (Cochrane, Grisso, & Frederick, 2001). Presumably, cognitive deficits related to the "organic" disorders impacted the defendants' ability to understand the legal proceedings or to consult with their attorney. Intelligence, attention, memory, and social intelligence have been associated with incompetence (Nestor, Daggett, Haycock, & Price, 1999). A recent meta-analysis indicated that individuals who were incompetent to stand trial had Wechsler test (e.g., WAIS-R, WASI, WAIS-III) full scale IQ scores that were 6 points lower than those who were competent, with small to medium effect sizes (Pirelli, et al., 2011).

If a defendant has been found incompetent to stand trial based on cognitive rather than psychiatric factors, a neuropsychological evaluation can identifying these underlying issues impacting a defendant's competence help predict the likelihood of restorability. Intellectual disability, impairments in attention, memory and language that can impact restoration efforts should be documented (Marcopulos, et al., 2008). Information about a defendant's functioning in these areas can be particularly important given that the majority of defendants who are deemed incompetent to stand trial have psychotic disorders, in which many of these deficits have been found (Pirelli, et al., 2011; Reichenberg, et al., 2009; & Zanelli, et al., 2010). Neuropsychologists can also provide information regarding the validity of cognitive impairments in judging whether a defendant is feigning (Wynkoop & Denney, 1999).

Malingering is common in forensic populations and should be directly assessed in all forensic evaluations . Rates of malingering range from 8% to as high as 70% (Ardolf, Denney, & Houston, 2007; Cornell & Hawk, 1989; Lewis, Simcox, & Berry, 2002; Mittenberg et al., 2002). Vitacco, Rogers, Gabel & Munizza (2007) found 21% of their sample of 100 males undergoing CST evaluation in a forensic hospital were probable malingerers based on the Structured Inventory of Reported Symptoms (SIRS), a measure of feigned psychopathology. However, it is worth emphasizing that a person may not dissimulate on measures of psychiatric symptom validity, but, in an attempt to feign cognitive symptoms, may perform below expectations on neuropsychological testing or cognitive effort measures. As such, neuropsychologists are uniquely suited to assess malingering of cognitive, in addition to, psychiatric symptoms. For example, it has been estimated that up to 30% of defendants often claim no memory for the events surrounding the instant offense/accusations (e.g., Taylor & Kopelman, 1984; Cima, Nijman, Merckelbach, Kremer & Hollnack, 2004). Although memory for the offense is not necessary for trial competence, assessment of performance validity may be useful to help determine whether actual amnesia is likely. For instance, neuropsychologists with expertise in epilepsy (or traumatic brain injury, dementia, etc.) may be better able to inform the court about whether an individual defendant's particular seizure (head injury, cognitive decline, etc.) history is consistent with a report of amnesia during an event. Neuropsychological assessment can help discern when defendants report cognitive difficulties that are unexpected given their history, or their current functioning. It can be illustrative, for example, when a defendant claims not to understand legal concepts but neuropsychological data reveal intact cognitive performance across all domains, including intellectual ability.

Finally, as already noted, neuropsychological evaluation can be helpful in assessing whether a defendant is unrestorably incompetent (Mossman, 2007). In Jackson v. Indiana (406 U.S. 715; 1972), the United States Supreme Court ruled that states may not indefinitely confine criminal defendants solely on the basis of incompetence to stand trial. It remained unclear whether states could indefinitely maintain criminal charges against incompetent defendants until 2008 when the Indiana Supreme Court (Indiana v. Davis; 898 N.E.2d. 281) unanimously ruled that imposing criminal charges for a permanently incompetent defendant, when pretrial confinement would extend beyond the maximum period of any sentence the trial court could hand down, violated the Due Process Clause of the Fourteenth Amendment. These rulings highlight the importance of effective and efficient determination of unrestorability. The base rate of unrestorable incompetence among persons with schizophrenia is higher than other mental illnesses (Warren, Fitch, Dietz, & Rosenfeld, 1991) and it has been found that the defendants least likely to be restored had lengthy histories of active psychosis and were more likely to possess stable cognitive deficits, such as intellectual disability (Mossman, 2007). Neuropsychologists can help the courts understand the expected sequelae from brain injury and ascertain the presence/absence of cognitive impairment in severe psychiatric disorders (Tussey & Marcopulos, 2012). They can opine whether the defendant has reversible cognitive impairment and can be restored, versus a progressive dementia and is unlikely to be restored (Heck & Herrick, 2007).

Conclusions

The unique knowledge of brain-behavior relationships, along with the frequent ability to quantify deficits via testing, supports the role of a neuropsychologist in these important psycholegal evaluations. However, it is very important that neuropsychologists entering the legal arena familiarize themselves with legal standards, current practice guidelines, and receive specialty training in forensic work (Denney, 2012; Denney & Wynkoop, 2000; Denney & Sullivan, 2008; Committee on the Revision of the Specialty Guidelines for Forensic Psychology, 2011). Although not a direct one-to-one relationship, the principles of forensic mental health assessment can be applied to neuropsychology in a criminal forensic setting (Heilbrun, et al., 2003). Sufficient training and experience in this field is necessary, particularly given that forensic opinions have a significant impact and there are many opportunities for error.

Bernice A. Marcopulos, Ph.D., ABPP directed the Neuropsychology Laboratory at Western State Hospital in Staunton, Virginia for over 20 years where she provided evaluations for civilly committed and forensic patients and developed and implemented cognitive remediation for a hospital-wide psychosocial rehabilitation program. Currently she is Associate Professor of Graduate Psychology at James Madison University and Associate Professor of Psychiatry and Neurobehavioral Sciences at the University of Virginia Health Sciences Center.

Beth Caillouet, Ph.D. directs the Neuropsychology Lab at Western State Hospital in Staunton, Virginia, a training site in the University of Virginia/Western State Hospital postdoctoral residency in Clinical Neuropsychology. She completed her doctoral training at Sam Houston State University and internship and postdoctoral training at the University of Massachusetts. Clinical and research interests include psychological and neuropsychological assessment and treatment of patients with comorbid neurological and psychiatric illness and the utility of neuropsychological assessment in criminal forensic settings.

Chriscelyn Tussey, Psy.D. is the Director of Psychological Assessment at Bellevue Hospital Center. She is a Clinical Assistant Professor in the Department of Psychiatry at New York University School of Medicine. Dr. Tussey maintains a private practice, Metropolitan Forensic & Neuropsychological Consultation, PLLC, in Manhattan. She is also an adjunct professor at John Jay College of Criminal Justice. Her primary research interests are in symptom validity testing and the intersection of law and neuropsychology.

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Increasing the Visibility of Neuropsychology

J. Michael Williams, Ph.D.
Drexel University

As scientists with clinical and/or teaching responsibilities, it is easy to get caught up in busy schedules with little thought to the mechanisms in place to support the field. The National Academy of Neuropsychology (NAN) has had a long history with an advocacy organization in Washington, DC, that is dedicated to advancing neuropsychology and related fields.

The Federation of Associations in Behavioral and Brain Sciences (FABBS) is a coalition of twenty-two scientific societies (www.fabbs.org/membership/), including APA, that share an interest in advancing the sciences of mind, brain, and behavior. NAN has been an active member of this coalition for over two decades. FABBS is among the chorus of voices advocating for neuropsychology, and we have benefited from this association in many ways.

NAN's interests are conveyed to FABBS through a Council of Representatives, comprised of scientists from each society. I have served as NAN's representative to FABBS's Council since 1990. Joe Fishburne, a past-President of NAN, was the FABBS representative prior to me. In addition, there is now a liaison from the FABBS board to NAN, Bruce Overmier, so NAN will have regular input to FABBS leadership.

In a nutshell, FABBS:

- Conducts advocacy on Capitol Hill to make sure that there is funding for the sciences of mind, brain, and behavior at federal science agencies. This involves visits with staff on relevant budget, appropriations, and science committees and collaborations with other science organizations in DC.
- Meets with federal science agency staff at NIH, NSF, DoD, and elsewhere to make sure that there are opportunities for our scientists in the PA's, RFA's, and other initiatives that are developed.
- Identifies, where possible, specific opportunities for involving scientists from our member societies in outreach efforts. This year, FABBS was asked by Senator Inhofe's office for the names of scientists who could address questions about mild TBI, and the NAN leadership submitted a number of names through FABBS.
- Tracks science policy issues (e.g., human research protections), notifies member societies, and responds with input from our sciences.
- Raises awareness about our sciences as STEM (Science, Technology, Engineering, and Mathematics) science, including inclusion of our sciences in science curriculum at all educational levels.
- Highlights compelling research conducted by member society scientists through various media, new and traditional. FABBS's sister organization, the FABBS Foundation, recently hired a science journalist whose primary responsibility is to increase the visibility of the research conducted by scientists in the societies under FABBS's umbrella.

As NAN's representative to FABBS, I have participated in the organization's annual meeting of its Council. Every meeting I have attended has presented advocacy relevant to neuropsychology research. I recall being able to meet with many prominent people in government, such as the director of NIMH, directors of research centers in traumatic brain injury, and others in areas clearly relevant to neuropsychology. At these meetings, I also meet and discuss neuropsychology research with some of the most prominent psychologists in cognitive psychology, neuroscience, and experimental psychology.

NAN's presence within FABBS increases the national visibility of neuropsychology, provides an opportunity to connect with like-minded scientific societies, and provides support for advocacy activities that help advance our field.

For more information, go to: www.fabbs.org/

Sign up for newsletters and advocacy alerts: www.fabbs.org/news/sign-up/

J. Michael Williams, Ph.D. is currently on the faculty of Drexel University. His interests include neuropsychological assessment and malingering detection, clinical applications of fMRI and developing computer-mediated tests and apps for rehabilitation and cognitive assessment.