

APA



Division 12

Clinical Science

Society for the Science of Clinical Psychology
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the American Psychological Association



Developing clinical psychology as an experimental-behavioral science

Newsletter

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Articles published in *Clinical Science* represent the views of the authors and not necessarily those of the Society for a Science of Clinical Psychology, the Society of Clinical Psychology, or the American Psychological Association. Submissions representing differing views, comments, and letters to the editor are welcome.

Presidential Column

To APA or Not to APA. Is That the Question?

Mitch Prinstein, Ph.D., University of North Carolina at Chapel Hill

SSCP is a community of professionals who are remarkably committed to a shared vision of clinical science. Few associations have such a focused mission, or such a passionate dialogue about the field we all wish for. But for many reasons, our discussions within SSCP routinely circle back to a fundamental question regarding our affiliation with APA. How does our placement within the structure of the APA governance system offer benefits or hindrances in achieving our mission? Does our affiliation with APA imply an acceptance of its mission, practices, or decisions? Can we leverage our position within APA to affect the greater good? Would our departure have an effect on the field's reliance on APA to fulfill our basic needs? These are just some of the questions that we have entertained, debated, and perhaps even obsessed over within SSCP. For many years!

But here's one more question – perhaps the one that underlies all others. What is SSCP without APA? I am not sure I have the answer to that question yet, but it is one that seems especially important to address.

On a personal note, I can share that I have been involved in APA governance in many ways for almost 20 years now, and I share the frustrations and concerns that so often have been expressed on our list. In fact, it was about 5-6 years ago that I was asked to be a part of APA's Good Governance Group (GGP) – a committee that was surprisingly productive, using evidence-based strategies to understand how to maximize efficiency, membership engagement, and realignment of values within APA. We collected data, we met in DC routinely, and we collaborated with stakeholders in and out of APA. On some days, we reimagined how we might start from scratch if we were to build a new association from the ground up. On other days, we studied management principles, organizational theories, legal issues pertaining nonprofit groups, etc. Members of our group even visited other professional associations similar in size, function, and heterogeneity to APA. The national associations of dietitians, actuaries, and even other social sciences

all were discussed, offering quite useful comparisons with APA. It was extremely educational and very productive. We offered many solutions! Yet ironically, our solutions required endorsement by the very governance units that GGP was designed to reconceptualize, and sadly, this meant that many potential reforms were left unaddressed. APA's efforts to fix itself did not make it through APA governance. For me, it has been extremely challenging to retain hope in APA while watching it trip over itself, yet again.

Still, our shared frustration with APA, our disappointment, and our growing hopelessness, as is so often expressed on our list cannot lead us to impulsive action. As gratifying as it might seem sometimes to offer a finger to APA (and I don't mean to tell them they are #1!), it is important that we, SSCP, remember that we serve a greater mission. It is our hope to promote clinical science. To change the face of education and training in clinical psychology. To help practitioners provide the best supported approaches. And ultimately to improve people's chances at reducing psychological distress. How can SSCP most effectively fulfill this mission?

The SSCP Board has been actively debating these very issues for the past two years, and although it predates my own involvement with the board, I understand that similar discussions have ensued for far longer than that. Almost two years ago, we offered a strategic plan to clarify our mission, a series of actionable steps to fulfill this mission, and an analysis of how our affiliation with APA may help or hurt us in doing so. At that time, the membership voted strongly in favor of a three year trial period. It was an experiment. For three years, we would try to work within the APA governance system to advance our mission, and use our experience as data to test the hypothesis so often raised on our list: SSCP could effectively affect change from within APA.

Then, a bit over a year later, the Hoffman report was released. As our board has discussed, we now face an unanticipated question. Do the realiza-

tions reported by Hoffman compel us to abandon our experiment before it has been completed? Has the information contained within the report changed our desire to test our hypothesis – are we no longer interested in working within APA, even if we could? Do APA's current issues – both internally and publically – confer potential harm to us, simply by association?

Certainly, our anger has grown. Our disappointment, shame, and hopelessness all have understandably increased. And we even may be increasingly tempted to wave that finger! But the intensity of these emotional responses may be waning as suggested in our flash polls (note: a 2/3 membership vote is required in our bylaws), and within numerous back-channel emails from members encouraging a tempered approach. Our ideas for a solution-oriented approach still have not been fully discussed.

This brings us back to the underlying question at hand. What is SSCP without APA? SSCP's disaffiliation with APA would functionally disband SSCP, rendering our group non-existent. We can organize a new listserv on any number of email platforms. We can even develop a low-tech website and newsletter to create a sense of community among us. But as a group recognized as a professional association that can promote perspectives, collect dues to support its initiatives, affect change in the field, and have credibility in the media, SSCP likely needs to be an incorporated entity registered as a non-profit group with the IRS. (Note: this is costly, and our flash polls do not suggest we would be able to generate necessary funds easily).

On a more conceptual level, what is our vision for SSCP without APA? What will be the agenda of such a group, and how will SSCP 2.0 fulfill its goals? In some ways, this is quite easy to envision. We are fortunate to have developed partnerships with several other groups over the past two years that each share our passion, commitment, and desire for change. We also are extraordinarily grateful for the abundant resources and support offered by APS. However, we must remember that at present, APS has no governance structure to support SSCP as an official branch, division, or subgroup, nor does APS' mission include any agenda that would directly bear upon clinical practice issues (e.g., CE provider approval, regulation of internships, state psychological association lob-

bying, practice guideline development, etc.). In the absence of any formal affiliation with a larger professional society, or any organized structure within which we can operate, we may simply be a bunch of like-minded colleagues who shout at the wind. These too are issues that the SSCP Board is carefully considering, and we are very excited by APS' ever-growing commitment to clinical science activities and the new opportunities for partnerships that presents.

At our October 2015 Meeting, the SSCP Board again discussed our affiliation with APA. We reviewed the sentiments expressed on our list, the Google document for anonymous posts, as well as the data from our flash polls. We also reviewed the notes and conclusions that led to our ongoing experiment, proposed by the SSCP Affiliation Task Force in early 2014. Over the course of our discussion, it became clear that until we can answer this fundamental question regarding SSCP as a separate organization, it is important for us to proceed cautiously, not reactively. Our actions should follow from a clear plan, and not from our impulses, no matter how tempting they may be. The SSCP Board is focused on envisioning how our group may best accomplish its mission. At this point, the majority of the board feels we need more data. We may need to see the data from our 3-year experiment, once it concludes. We certainly need data regarding practical options for how SSCP would function as an organization separate from APA. These are the questions that SSCP needs to answer now.

Diversity Corner

Building a Diverse Clinical Science: Strategies for Recruiting Underrepresented Students

Joye C. Anestis, Ph.D., Susan Y. Lin, Ph.D., & Chardeé A. Galán, B.A.

Racially and/or ethnically diverse students are underrepresented at all levels of psychology education (American Psychological Association, 2002; Matton, Kohout, Wicherski, Leary, & Vinokurov, 2006). While representation of racially/ethnically diverse students in doctoral programs is increasing, the proportions do not match the U.S. Census data. For example, in 2013, 6.4% of all U.S. doctorate degrees, and 9% of psychology doctorate degrees, were awarded to individuals who identify as Black or African-American (American Psychological Association Center for Workforce Studies, 2010; National Science Foundation, 2015). While this represents a 70% increase over the past 20 years, 13.2% of the U.S. population identifies as Black or African-American (U.S. Census Bureau, 2015). Although APA does not systematically track enrollment of other diverse student populations (e.g., sexual orientation, gender identity, disability status, religion, veteran status, and so on), it seems plausible that other groups are also underrepresented (of course, this remains an empirical question).

The goal of this Diversity Corner is to give SSCP members some strategies to improve recruitment of diverse students (broadly defined) into their graduate training programs. We assume that ultimately we all want to recruit the best future clinical scientists we can, but strategies for graduate recruitment and retention must recognize the academic value of scholars' contributions to diversity and seek to limit the barriers that have previously prevented the full participation of underrepresented students within our field. Although we sought to provide suggestions that were as empirically-driven as possible, we have also incorporated personal stories and anecdotes. Additionally, it is not possible to examine specific strategies for all groups in one brief newsletter article. We encourage SSCP members to access the articles cited below and look for more specific recommendations as needed. For example, Thomason [1999] focuses on recruitment and retention of Native American students. We also recommend reading the "Special section on ethnic minority recruitment,

and training" in the April 2010 issue of the APA Office of Ethnic Minority Affairs' Communique.

We want to emphasize that, before substantial progress can be truly made toward a more diverse clinical science, empirical data is needed to identify the true cause of underrepresentation: Are underrepresented students not applying to clinical psychology programs? Are they applying but not getting invited for interviews? Are they being invited and attending the interview, but then not being extended offers? Or are they invited but unable to attend (due to financial burden, work obligations, family obligations, etc.)? The best solutions for increasing minority representation should be driven by accurate information regarding where in the pipeline we are losing potential applicants. In the absence of that data, we are making the best recommendations we can based on the existing literature and anecdotal experience. In future Diversity Corner columns, we will continue to explore this topic, as we learn from faculty members and clinical psychology programs with proven track records of mentoring diverse students.

One of the most important steps in recruiting diverse students is ensuring the program materials explicitly document the program's commitment to training individuals of diverse backgrounds and to supporting research topics in areas of diversity. There are many ways to do this, but could include explicit descriptions of an antidiscrimination policy, the presence of minority-based financial aid, a statement of commitment to diversity training, a statement specific to recruiting for diversity, inclusion of a diversity minor as part of graduate training, the presence of a graduate-level diversity courses or other training, and multicultural faculty research (Bidell, Ragen, Broach, & Carrillo, 2007). Several studies have demonstrated a positive relationship between the inclusion of multicultural content in paper application materials and the enrollment of ethnic minority and LGB students (e.g., Bernal, Barron, & Leary, 1983; Bidell, Turner, & Casas, 2002; Yoshida, Cancelli, Sowinski, & Bernhardt, 1989). Of course, many programs have done away with printed program materials, relying solely on internet-

based recruitment efforts and applicant information, yet it seems that our online descriptions of a commitment to diversity have not caught up with the need. Bidell and colleagues (2007) analyzed the websites of a randomly selected sample of professional psychology doctoral programs, and found that fewer psychology doctoral programs had specific diversity-focused content (again, ethnicity and LGB orientation) on their web materials, relative to their 2002 study examining paper materials. For example, less than 15% of the programs identified in Bidell et al. (2007) included an anti-discrimination policy statement on their websites. The authors concluded that training programs are not prioritizing their online materials as essential recruitment tools. Nonetheless, psychology programs which are successful in recruiting diverse students emphasize their websites as vital recruiting tools (Rogers & Molina, 2006).

Anecdotally, many potential applicants peruse program materials specifically looking for content such as a mission statement, coursework that highlights a focus on diversity training, or photos of diverse faculty and students. In the competitive world of graduate student recruitment, potential applicants for whom diversity is a key part of their identity may not even apply to programs who do not attend to diversity, even if other aspects of the programs are stellar. In an effort to encourage recruitment efforts that are more diversity-sensitive, Bidell et al. (2002) proposes a Diversity Index which can be calculated to evaluate how well your program's print/online materials attend to diversity in recruitment. We also would suggest looking at some stellar examples of clinical psychology program websites, such as the program at UNC-Chapel Hill which includes three separate subheadings under "Diversity": a detailed statement about their commitment to diversity and inclusion, an explicit description about diversity recruitment, and a through description of their diversity training committee, including multiple training experiences in diversity that are part of their curriculum.

Programs dedicated to training and mentoring undergraduate psychology students from underrepresented groups are an effective method of increasing accessibility of our graduate programs. For example, Hall and Allard (2009) describe a 6-week summer research training program for well-qualified ethnic minority undergraduate students. Students were randomly

assigned to a multicultural training track which emphasized the cultural context of psychology within all components of the curriculum (which included a clinical research methods course, research presentations by faculty, individual faculty mentoring, instruction on applying to graduate school, dinner in the home of the lead researcher, and two field trips), a monocultural training track featuring the same curriculum but without the emphasis on cultural context, and a control group who did not receive either version of the extra training. They note that students participating in either program applied to graduate psychology programs at a significantly higher rate than the control group. Other ideas include shorter training opportunities and workshops targeted to diverse undergraduate students looking to apply to graduate school, which can occur at the program- (e.g., the "Diversifying Clinical Psychology Weekend" hosted by the UNC-Chapel Hill's clinical psychology program), department- (e.g., the "Diversity Weekend" sponsored by the University of Minnesota Department of Psychology), or university-level (e.g., Vanderbilt University's "PhD Pre-VU Recruitment Event"). Anecdotally, it seems that a key component to the success of these experience is ensuring that they are "all expenses paid."

Another key predictor of successful minority student recruitment is targeted financial aid (Bernal et al., 1983; Rogers & Molina, 2006). If such opportunities are available at your university, they should be plainly stated on your recruitment materials. In the absence of such funding, Bidell et al. (2007) suggests partnering with organizations that offer grant and scholarships to diverse graduate students (such as APA Divisions 44 and 45 and the APA Minority Fellowship Program).

Other components of successful recruitment of diverse students include involving current diverse faculty and students in recruitment efforts, faculty making personal contacts with potential diverse applicants prior to the application deadline, having a university and department support for their recruitment and retention efforts, and developing a relationship with a historical institution of color (Rogers & Molina, 2006). For example, the Clinical Psychology program at UNC-Chapel Hill includes a Minority Brunch during their interview weekend where minority applicants can meet current minority students. Other programs have a presentation from their Diversity Committee

at the beginning of their interview days. Such events emphasize the department's commitment to ensuring that students of underrepresented groups feel welcomed and supported.

If we want all students to feel welcomed in the ivory tower, we have to be vocal and transparent about our attention to diversity, and we have to help eliminate barriers to graduate school. We hope we have outlined some helpful steps in achieving this goal. Creating a more inclusive clinical psychology can only serve to enhance the breadth and quality of the scientists we produce.

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Financial Report

Stewart Shankman, Ph.D.
University of Illinois-Chicago

FINANCIAL HIGHLIGHTS

- Expenses: -\$500 to Fordham for NIMH coding project
- Income pending: +\$1800 from Paypal (membership dues)

Join us for...

SSCP Virtual Clinical Lunch Talks

View the talks online & then join the discussion on the SSCP Listserv.

For November, Dr. Matt Nock presents “Recent advances in understanding and predicting suicidal behavior” https://youtu.be/5igGn_aHC7o

Links to past talks available at <http://www.sscpweb.org/ClinicalLunch>:

Dr. Bethany Teachman - “Coming to a computer near you: Changing threat interpretations to reduce anxiety”

Dr. Steve Hollon - “Is cognitive therapy enduring or are anti-depressants iatrogenic?”

Awards & Recognition

SSCP Student Outstanding Researcher Award Winners

The award committee has completed its review of applications, and was very impressed by the large number of phenomenal, truly exceptional candidates and their exceptionally advanced research contributions to clinical psychology. We are very pleased to announce the three winners of the SSCP Student Outstanding Researcher Award! Interviews with each of our three award winners will appear in the winter newsletter.

Jonathan Stange

Advisor: Lauren B. Alloy, Ph.D.

University: Temple University

Expected graduation: 2016

Current Internship: University of Illinois at Chicago

Colleen Stiles-Shields

Advisor: David C. Mohr, Ph.D.

University: Northwestern University

Expected graduation: 2017

Hannah Williamson

Advisor: Thomas Bradbury, Ph.D.

University: University of California, Los Angeles

Expected graduation: 2017

2015 SSCP Student Poster Award Winners

Congratulations to the Student Poster Award Winners, who presented their posters at the Association for Psychological Science meeting in May.

Award Winners (\$200 prize)

Joanna Berg

“The “Big Three” Personality Disorders: Rethinking the DSM’s Cluster System”

Diana Steakley-Freeman

“Assessing Clinical Complexity: Evidence for Network-Based Prediction of Suicidal Ideation”

Brandon Goldstein

“Stability of EEG Frontal Asymmetry and Associations with Maternal Depression in Young Children”

Distinguished Contributions (\$100 prize)

Carolyn Davies

Katherine Leppert

Jessica Swinea

Joya Hampton

Sharon Lo

Katrina Goines

Updates from the 2014 Varda Shoham Clinical Scientist Training Grant Recipients

Improving the Dissemination of Evidence Based Assessment Strategies for Common Mental Health Diagnoses

Eric A. Youngstrom, Ph.D., & Mian-Li Ong, M.A.
University of North Carolina at Chapel Hill

There has been a push for evidence-based assessment, corresponding to a similar movement towards evidence-based treatment in mental health. Evidence-Based Medicine (EBM) has also made major advances in evaluating diagnostic tests, applying them to individual cases, and teaching critical thinking to clinicians and consumers. The historical strengths of psychological assessment can combine with the interpretive framework from EBM to better support clinical utility. These methods can be taught quickly to graduate students or clinicians, and they produce large improvements in accuracy while adding little or no time or expense to the average assessment. For evidence based assessment techniques to realize their potential, they must be disseminated in a format that makes them: (i) easy to access; (ii) efficient to use; (iii) easy to update; and (iv) not get lost. Putting material online improves accessibility and creates synergies via links to other resources, such as online calculators and decision-support tools as well as databases and primary sources. Online content can be organized around the arc of the clinical assessment process, rather than the traditional research report format.

The primary goal of the project was to create easy access to updated assessment material for clinics in the Research Triangle area by uploading an online HTML format (Wikipedia) of assessment portfolios created by doctoral students as part of their capstone exercise in assessment class. The portfolio organizes all of the information that a clinician would need to aid in diagnosis, treatment planning, and outcome evaluation for that condition: Benchmark base rates, risk factors, screening tools, recommended confirmatory interviews or tests, and process and outcome measures with clinically significant change definitions. With the funding from the training grant, we have 13 online portfolios prepared, following the topics and recommendations of the Evidence Based Assessment special issues and updating the reviews with more recent information about diagnostic validity, treatment selection and moderators, and outcome measurement. These portfolios have received over 2,000 page views since its creation in September 2014. Doctoral students (also student therapists) and interns now have easy access to portfolios, and are able to update information in real-time as they discover new information on the Web.

A secondary goal of the project was to disseminate research evidence to a larger audience in a freely accessible form. To this extent, the knowledge gained from the training grant has facilitated the preparation of an APA Interdivisional Grant (CODAPAR) to link the work of multiple divisions together (Division 53; Society of Clinical Child and Adolescent Psychology, Division 12; Society of Clinical Psychology, EffectiveChildTherapy.org) and to link relevant resources (available questionnaires, evidence-based assessment) on Wikipedia. Our group is also closely working with UNC Libraries to run edit-a-thons to improve the quality of disseminating research evidence on Wikipedia, and we are in talks with Association of Psychological Science and Wikimedia Education Foundation to synergize the work we are doing with other online initiatives. The next project will integrate multiple existing divisional and association initiatives, and connect them to the largest free global encyclopedia. The SSCP training grant accomplished the goal of transforming the assessment portfolios into an online format, as well as launching more innovation in connecting online resources with Wikipedia to make them more visible.

Improving Practice with Clinical Data

Anna van Meter, Ph.D., Yeshiva University

In 2013, the clinical program at Ferkauf Graduate School launched a new initiative to formally integrate training in research and practice. Our goal is to move beyond static training in the content of empirically-supported treatments and toward training students to use evidence-based processes. We believe this will better equip students to actively engage in evidence-based practice now and when they become independent clinicians. In addition to introducing new course work to teach students the process of evidence-based psychology, we also developed a new electronic medical record system for our training clinic that will facilitate data collection on individual patient outcomes and allow data to be used in aggregate form for research projects.

Over the past year, we have worked hard to develop a flexible, web-based system that will meet our clinical, training, and research needs. This process has included several steps; after conducting a needs assessment for our electronic medical record, the faculty, in conjunction with the directors of both the CBT and psychodynamic tracks, chose measures that could be given to clients as part of a general assessment battery – both at intake and to measure outcomes over time. The selection of measures required a great deal of thought – our goal was to find well-validated measures that would reliably measure baseline symptoms and outcomes without overburdening clients or being prohibitively expensive for the clinic. Once we had selected our measures, we worked closely with the vendor hired to build the online system in order to design its functionality and interface. Because we wanted the system to perform a variety of functions, there were several technological hurdles to overcome. However, with the help of funds from SSCP, we recently introduced the CARE (clinical assessment, research, & evaluation) system at our clinic.

Our training clinic is one of the largest in the country, and we are excited to have this opportunity to augment both the care and training we provide. The CARE system will serve as both an electronic medical record and as a tool to collect and aggregate assessment data at intake, during treatment, and at termination for all clients. The CARE system will support a diverse range of uses, from follow-up on patients, to therapist feedback, and addressing research questions, including program evaluation. It will also be an important teaching tool, providing opportunities to demonstrate to students the role that data can play in improving clinical outcomes and determining factors that moderate the success of evidence-based treatments.

Importantly, the system was also designed to allow us to update it as needed. Our hope is that both students and faculty will propose new research questions that can be addressed through clinic data, and that, as we learn more about the outcomes of our patients and the effectiveness of our student therapists, we will also update our clinical training to maximize the benefit to students and clients.

Enhancing the Integration of Science and Practice in a Rural Community Clinic through a Routine Outcome Monitoring (ROM) System

Lee Cooper, Ph.D. & Haley Gordon, M.S.
Virginia Tech

The Virginia Tech Psychological Services Center (VT-PSC) is the graduate training clinic for the Department of Psychology's APA and PCSAS accredited clinical science PhD program. In 2012, clinical graduate students and faculty began a systematic initiative to enhance the integration of science and practice through the development and implementation of a standardized assessment and treatment evaluation protocol. The protocol included empirically-supported, developmentally-based, intake, midpoint, and discharge measures, including initial screening assessments, semi-structured interviews, and disorder specific questionnaires. Both student clinicians and faculty supervisors reported improved standardization of procedures, diagnostic accuracy, and

case conceptualization in the assessment phase. However, rates of implementation throughout the intervention phase were low. Clinicians and clients reported the following barriers to consistent implementation: extensive paper-and-pencil measures, considerable time scoring/graphing, and lengthy outcome assessments over the course of treatment that interrupted the flow of the intervention protocol and therapist-client working alliance.

Thus, improvements were needed to bolster therapist and supervisor “buy in” and client adherence. We hypothesized that transitioning our system to a web-based application (reducing time for both the client and clinician) and adding regular brief (rather than lengthy periodic) outcome monitoring would help improve outcome monitoring at our clinic. The Varda Shoham Clinical Science Training Initiative Grant funding provided the seed money to purchase an online-web-based routine outcome monitoring (ROM) system called Owl Outcomes (<http://owloutcomes.com>), developed at the University of Washington, which includes an extensive library of evidence-based assessment measures used at intake, discharge, and throughout treatment. With this program, we created a new computerized ROM protocol called S.C.O.R.E. (Standardized Clinical Outcome Research & Evaluation) to further advance science-practice integration and clinical science training at VT-PSC.

With SCORE, we improved upon our original program by transferring assessments to an electronic platform, and adding mandatory weekly ROM measures. The new SCORE Program, through the OWL Outcomes system, improved the implementation of our treatment evaluation program by: 1) providing weekly outcome data that allowed clinicians to continuously assess and supplement treatment progress; 2) increasing client accessibility through a web-based program that could be completed at home at their convenience or through a tablet at the PSC; 3) reducing client burden through inclusion of very brief outcome measures; 4) reducing clinician scoring burden and improve accessibility to weekly feedback; 5) allowing clinicians to more easily gain outcome information from multiple respondents including teachers and caregivers; and 6) incorporating therapeutic alliance measures. Essentially, this new system gives graduate clinicians the ability to more effectively incorporate scientific methodology into their practice by assessing outcome progress and determining how this should impact treatment.

We began the SCORE project during the 2014-2015 academic year and 72 clients have since participated, completing weekly ROM measures. All faculty supervisors have requested and received training in the SCORE protocol, and all current clinicians have implemented weekly ROM assessment measures with their clients, demonstrating improved buy-in. Additionally, we have received IRB approval for a database of our ROM measures results to be used in future research projects and collaborations.

Translating Science to Practice Project

To facilitate a more science-informed practice of clinical psychology, SSCP recently launched the Translating Science to Practice Project, which includes interviews with researchers about the clinical applications of their work, access to journal articles, and online discussion forums.

The first interview in the series (*Maximizing Exposure Therapy for Anxiety Disorders*) is available at <http://www.sscpweb.org/SciPrac> and features Michelle Craske, PhD discussing her work on an inhibitory learning model of fear extinction and the application of this research to treating anxious clients.

Clinical Science Early Career Path Series

Vijay Mittal, Ph.D., Northwestern University

As with any career, there are certainly days that running away to a tropical island would seem most appealing. However, for the vast majority of time I am in love with what I do! Quite simply, there is no other job that is intellectually engaging while also defined by so many different unique and rewarding roles. If I am working hard on an ongoing project and start feeling a little bit constrained, I can turn to different data and work on a new paper entirely. If I find that my current research strategies are not effectively answering my questions, I do not feel hopeless. Instead, I can simply start working on preparing a new grant proposal. If operating with tunnel vision is affecting the quality of my work, I can turn to reviewing the research of others. If I have been in the office too long, I can put more focus on my classes. To say the least, engaging with undergraduate and graduate students is enlivening! However, if the students are wearing me out, I can visit with a colleague—certainly these types of interactions provide support, but also inspiration. If I have had enough of the academic setting for the day, I can focus on building my therapeutic skills. What is so amazing about these different roles is the dynamic relationships they share with one another. In every single case, experiences from one role significantly help to inform and improve upon the others. In my experience, weaving all of the roles together until they coalesce into a coherent path contributes to rewarding career. ***The right combination is different for each of us, and this allows for a tailor-made and fully adaptable job-in my opinion, one of the best ones out there!*** I would also be remiss if I did not mention the respective flexibility that is unique to this position—for the most part, professors can arrange their schedules to fit just about any time or location preference (I personally refuse to be in before 10:00am and with a few exceptions, rarely have had to do so). The compensation is not too bad either (money magazine and salary.com routinely rank psychologist as 10th best career and college professor as 2nd). Those pesky software engineers keep beating us, but that is a topic for another day. Finally, this job (particularly the principle investigator role) involves teamwork, and it is enormously satisfying to work with a cadre of talented and motivated students and collaborators, facilitating a way for each to employ their individual skill sets and perspectives, all towards a common goal. I cannot emphasize enough how amazing it feels to have all the

pieces up and running, working in concert with one another, delving into cutting edge and intricate research questions. The purpose of sharing this is not simply to report how amazing my life is (although it is). The main piece of advice I give to students is more of a promise: ***the years of tight finances and difficult work through graduate, internship, and post-doctoral training are certainly worth it. You will not find a more fulfilling and rewarding career!***

I completed my undergraduate education at the University of California Santa Barbara (UCSB), and then spent a year working as a research assistant in a first-episode psychosis clinic at the University of California Los Angeles (UCLA) Aftercare program. It was during this time, in working with patients who were just coming to grips with the fact that they had been diagnosed with a life-altering illness, that I realized I wanted to spend my life helping to alleviate their suffering. I was also so impressed with the intelligent and hardworking researchers in this area. Working at Aftercare left an indelible mark on me; studying a disorder like schizophrenia was similar to exploring a frontier. So many talented people are working in this area but we still don't know the answers to basic questions about the diseases etiology, progression and treatment. I recognized that virtually any work completed in this area often represented the first time it had ever been done, and as a result, this was a field where a researcher could make a big impact and really help people. I decided then and there that this was exactly where I wanted to be!

I attended graduate school at Emory University, working with Elaine Walker on her projects examining youth at risk for psychosis. During this time, I learned psychiatric interviewing, and how to work with understanding adolescents, hormones, and motor behaviors (admittedly, no one can really ever understand adolescents, but we are making some headway on hormones and motor abnormalities). I also discovered the satisfaction inherent in developing a programmatic line of research and learned to appreciate the process of peer review. With Elaine's help, I started working on independent and collaborative papers immediately, and this proved to be an invaluable strategy. I found that while being carefully guided, I started the process before knowing enough about academia to be hesitant or timid. By the time I did know enough to be slightly

intimidated, it was too late-I was already well into it! During this time, I quickly discovered how valuable peer-review is. ***I have always learned far more from submitting articles and receiving reviewer feedback than from classes. I would recommend doing this as much as possible (a good rule of thumb for graduate school is to always be working on one paper while always having another under review-if you endeavor to reach this pattern, you should do just fine).*** Of course it will help your career develop, but furthermore, you will learn and learn and learn. During this time I also found that this type of career could be profoundly rewarding, and if approached correctly, that it lent well to a balanced and happy life. ***Essentially, if you do your best, push yourself, work efficiently (i.e., endeavoring to make assignments or projects build towards learning a new skill or developing a manuscript), be willing to make mistakes (having projects that don't lead to anything can often teach us far more than successful projects, and they also lead us to knew exciting areas), make time for friends and relationships inside and outside of academia, be considerate of others, and remember that you are doing this work for the patients, you will be happy.*** I also learned that the mentor-student relationship goes far beyond graduate school. I am now well into my assistant professorship and still reach out to Elaine for advice regularly. Now that I have my own students leaving the lab, I find myself feeling the pull as well. ***This is a unique and life-long relationship and you should do what you can to nurture it.*** Another important thing I learned at Emory relates to relationships with other professors. ***The faculty in your varied programs all wish for you to succeed and you should aim to collaborate with them when possible, and to continue to foster these collaborations after you leave your early training.***

I then returned to UCLA to complete an internship (Semel Institute, Adolescent Serious Mental Illness Track) honing skills in working with the prodrome and remained there for a two-year post-doctoral fellowship studying early psychosis with Tyrone Cannon. During my time at UCLA, I learned how to apply neuroimaging techniques to my research interests surrounding motor function and psychosis risk, but on a deeper level, I learned from Ty how to operate effectively across different fields (psychiatry, psychology, and neuroscience) and to integrate and reconcile data from a number of domains and perspectives germane to schizophrenia (e.g., genes, imaging, computational modeling, hormones, obstetrics, cognition, development, neurology, animal models). As a quick aside, I also had a pleasant surprise: as you go out into the world and collaborate with scholars in different allied areas, you will be amaz-

ing and pleased with how valuable and appreciated the statistical training provided in Clinical Science programs is. Anyway, my experiences at UCLA led to two insights that profoundly influenced the way I approach this work. First, I began to more fully understand that if I wanted to effectively help these patients, I must never stop learning. ***A clinical Ph.D. is about learning the skills specific to your area, but far more than that, it is about discovering how you yourself learn best, and how to apply this understanding to things that challenge you. You will eventually get to a place where you stop taking tests and classes, but you will always need to keep learning.*** Second, I realized that despite the necessity of continued learning, there were some areas that were important for my work, but that were far too complex for me to have enough time to entirely master, and then maintain. Although this was, and remains to be a difficult lesson, I learned to be comfortable with feeling a little out of my depth at times, and that by focusing on the big picture, and engaging good collaborators, I could still effectively accomplish my goals. ***Trying to master everything yourself is not going to work out well for you! I have found that as clinical scientist, one of our most important roles is to serve as a nexus or intersection point for different domains.*** More than ever, as the questions we tackle now require multidisciplinary collaboration, this is an excellent place to be!

Following my training, I began my first professional position as an Assistant Professor at the University of Colorado Boulder. During this time, I started my own prodromal research program (the Adolescent Development and Preventive Treatment program; ADAPT) and spent 5 years in Boulder. In addition to becoming a better teacher and clinician, I began to learn how to mentor students. I learned to organize a team of student and postdoctoral researchers, and how to wrangle collaborators, submit large and complicated grant proposals, and participate in administrative and service duties (for grants, the department, and professional societies). I also received my first large grants, and truly began to appreciate and enjoy the challenges of being a principal investigator. This may sound like a good bit of work but I assure you, I had a lot of fun too! It is immensely satisfying to run your own lab, to see your own ideas develop and bear fruit. ***Further, despite what you may have heard, I have found that if you plan ahead you will have plenty of time to enjoy and develop hobbies and spend time with friends and family.*** One of the most valuable things I learned at this time was how important it is to have good colleagues. I can only speak from my experience at Boulder but I believe our field is filled with the most remarkable

and multifaceted individuals. Researchers with skills and intelligence that would have allowed for them to make far more money in a much easier fashion in other fields instead chose to dedicate their talents to helping patients and teaching students. This trend lends for a remarkable group of individuals-it is equally humbling and inspiring to be a peer, and it certainly continues to drive to me to work hard to be a better person. ***My advice for students is to start building collegial and collaborative relationships with peers in your graduate programs and postdoctoral positions (do not succumb to petty competitiveness-the purpose of our work is to help people, not to gather prestige).*** The other important thing I realized at this time was how vital professional societies are to our continued development. I have been attending the same conferences during my graduate training, internship, post-doc and now as a professor, and I have discovered that it is important to form academic relationships and friendships with other researchers in my area as well as in the broader field. The people I met in my first years attending as a student have progressed into post-doctoral positions and professorships along with me, and we help and inspire one another a great deal. Further, more senior researchers have watched our development, and have also looked out for our careers. I am still an early career stage researcher, but I already find myself enjoying watching the motivated and bright students progress and I do my best to help them as well. ***Our primary colleagues are in our home departments and Universities, but you should make time to attend conferences regularly to form a broader community.***

I loved the time I spent in Boulder and have nothing but the highest regard for the psychology program there. However, I was interested in moving to a bigger city (to facilitate recruitment efforts for the elusive population that I study), and my wife Audra, an actress, had enjoyed her time in Colorado, but was ready to return to a bigger city as well. I was delighted to join the psychology department at Northwestern University and just started there in the Fall 2015. This next step in my career is very exciting. I imagine the challenges and opportunities of developing a new high-risk program in one of our nations largest cities will test each of my skills as well as serve as an excellent context for continued development. The new colleagues I have met are doing amazing work, and I just can't wait to get started with new collaborative projects! Check in with me in a few years and I will let you know how it goes (from the perspective of a mid-career professor instead). During each of these different training and professional roles I have been extraordinarily privileged to work with thoughtful and dedicated researchers.

While I always have had the next step in mind, I also have made certain to appreciate where I currently was as well. During each of these experiences, there were so many things for me to learn, and I simply wouldn't have gotten the most from each environment if I had been solely focused on moving along to another step in the progression. At the risk of sounding trite, it really is all about the journey. ***My final piece of advice to students is that they should always have a plan for the future and work towards it, but that they should also stay in the moment and make sure to enjoy each training experience for what it is and what it has to offer.***

About the Author: Vijay Mittal, Ph.D. is an assistant professor at Northwestern University. He focuses on the psychosis prodrome and adolescent development, and his research program works to elucidate etiological conceptions and design novel targeted treatments.

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Clinical Science Early Career Path Series

Brant Hasler, Ph.D., University of Pittsburgh

A career in science was never in question for me. As the child of two Ph.D's in physiology, I was fortunate enough to be exposed at an early age to both frequent scientific discussion and hands-on experience (e.g., dissecting sheep hearts at the kitchen table), an exposure that stimulated my natural curiosity to “understand stuff”. However, passion for a particular scientific discipline—in my case, clinical psychology with a focus on the role of sleep and circadian rhythms in affect and motivation—was not ignited until much later. I believe such passion to be an absolute requirement for a satisfying career in science. As I look back on my path to my current position as an Assistant Professor in Psychiatry in the University of Pittsburgh School of Medicine, I credit discovering this passion, establishing a focus, and connecting with mentors and peers as the keys to my success. Having said that, I want to emphasize that the path isn't always simple or linear, that occasional missteps are to be expected, and that good fortune can sometimes make all the difference.

As noted, it took me considerable time to discover my particular scientific passion. Many of my peers decided on clinical psychology early in their undergraduate education, but it was eight years after receiving my undergraduate degree before I entered a clinical psychology program. During my first few years at Wesleyan University, like many undergrads, I found myself prioritizing the recreational perks of college over academics and my grades were accordingly unremarkable. Sporadic signs of my future career did appear—intrigued by emerging brain science during a Behavioral Neuroscience course during sophomore year, I chose the brand-new Neuroscience and Behavior major and approached the professor of that course, Dr. Harry Sinnamon, about volunteering in his lab. In an important life lesson for me, Harry turned me down at first, until I demonstrated more focus and a better work ethic in a subsequent neuroscience course, which finally earned me a paid summer research stint in his lab studying the neural basis of locomotion in rats. Some of the skills I learned—stere-

otactic work and brain sectioning, along with electrical stimulation and unit recording—proved invaluable in landing my first position post-undergrad. Perhaps more importantly, Harry himself re-invigorated my dormant interest in science. His intellectual acumen, his personal charisma, and the fact that he built most of his equipment himself, (as well as, I admit, his great music library in the lab) all gave me a compelling role model of the kind of scientist I'd want to be.

Despite my improving grades and renewed interest in neuroscience, I graduated Wesleyan in 1994 with an average GPA and no clear plan for a next step. Some early promising interviews for research assistant positions were unsuccessful. Instead, after sleeping on a friend's couch in Boston for 6 months, I landed a temp position at the biotech company Alkermes, Inc. Thanks to the skills I'd learned in Harry Sinnamon's lab, the temp position became a permanent one in Alkermes' neuropharmacology department, where I assisted in autoradiographic uptake studies of a compound to be used in the treatment of brain gliomas. Despite the industry setting, the department was not so unlike academia, with much attention paid to the intellectual nurturing of promising junior staff and the generous inclusion of co-authorships on papers. My supervisors were really mentors, not just bosses. Although I didn't yet feel like I'd found my niche, I did enjoy the work and the working environment. (I was also motivated by having my first job with a competitive salary and stock options, which allowed me to escape from that couch.) Furthermore, Alkermes set the stage for the next step in my career path in two other ways. First, my supervisors consistently and sincerely encouraged me to apply to graduate school. Second, Alkermes covered the tuition for coursework at the Harvard Extension School, including a remarkably influential course, the Biopsychology of Waking, Sleeping, and Dreaming.

Accordingly, in 1998, after four years at Alkermes, I found myself across the country and enrolled in the Neuroscience Graduate Program at Oregon

Health and Science University in Portland, Oregon. I still wasn't sure a neuroscience PhD was the right direction (I'd also applied to vet schools and had even almost applied to culinary school), but I was excited about moving to Portland and I'd liked the people I'd met at OHSU. The first year went well—my grades were decent and I passed the qualifying exams—but most importantly, it provided me my first, fateful, opportunity to conduct human research, in a study investigating circadian mechanisms in winter depression under Dr. Alfred Lewy. This experience proved to be a major turning point, partly because it led to my decision to leave the neuroscience program. Although the curriculum laid a solid foundation for me in understanding the physiology underlying psychological processes, I soon realized that my greatest rewards during the program sprang from assisting in the winter depression study and interacting with the patients. These encounters with people burdened by depressed mood were terrifically rewarding—noticeably more so for me than the benchwork—which perhaps should not have been a surprise given that my interpersonal relationships have long been my most valued investment. However, when I relayed this discovery to the neuroscience program director, he regretfully reminded me that a neuroscience Ph.D. was not the optimal degree for a career in clinical research.

This realization led to my departure from the program to work directly with Dr. Lewy for the next three years until 2002, when I joined the clinical psychology PhD program at University of Arizona, with Dr. Richard (Dick) Bootzin as my advisor. For the first time in my academic life, I was truly excited about coursework. I also embraced the clinical training, while at the same time developing expertise in sleep and circadian research that has proved critical to my research program. Indeed, I had found my passion. I also cannot overestimate the value of the mentorship I received at Arizona. Dick was an amazing mentor—never overbearing, never constraining, and yet with a remarkably broad range of expertise and a peerless open door policy. Thus, I wasn't limited to topics related to insomnia (Dick's focus), and had the opportunity to design and conduct experimental (Master's) and prospective (Dissertation) studies investigating the interrelationships between circadian rhythms, sleep, and mood. Dick was also entirely supportive of his trainees connecting with other faculty, and thus I initiated

collaborations with other faculty researchers in order to gather cross-method evidence of circadian-motivation interactions in other samples. Notably, I also broadened my training by spending three years working with Drs. Varda Shoham and Michael Rohrbaugh on a multi-site study of family-focused interventions for adolescent substance abuse. Besides setting the stage for my eventual transition to research focused on adolescent substance abuse, Varda and Michael became secondary advisors, and together with Dick hugely influenced my belief in the clinical science perspective. I should note that Dick and Varda continued to provide mentorship, friendship, and support of my career for years after graduate school...and thus I felt their loss terribly keenly when both passed away in 2014.

After Arizona, I sought a clinical internship and postdoctoral fellowship that would provide outstanding training in a clinical science environment. Western Psychiatric Institute and Clinic (WPIC) was the clear frontrunner, particularly given its unique concentration of researchers with expertise in sleep, circadian rhythms, and affective neuroscience. Fortune and patience again played an important role, however; I was initially wait-listed and would only be granted an interview if an initial invitee turned down his/her interview. I know without a doubt that had I not gone to WPIC, my current position and research would be very different. Luckily, I did get the opportunity to interview, and the close call probably pushed me to step up my game. I am deeply grateful that I did eventually match with WPIC's internship, as it led in turn to a T32 postdoctoral fellowship and eventually my faculty appointment in 2012. I was fortunate to benefit from WPIC's remarkable infrastructure for assisting trainees into developing successful applications for NIH career development awards (in my case, a NIDA-funded K01 focused on circadian misalignment, reward, and adolescent substance abuse). Although I had initially planned to apply to NIMH, I selected NIDA based on the advice senior faculty colleague who explained that NIDA was increasingly interested in sleep and circadian factors in addiction (while NIMH had cooled on sleep/circadian research). Given my growing interest in circadian effects on the reward system, as well as my grad school venture into adolescent substance abuse research, it was a small, yet important shift in my research direction. That is, although I maintained

a continuing focus on my central area of interest and conceptual model (circadian-reward pathways), it was also useful to allow for some flexibility in the outcome measures and psychopathological “context” (substance use disorders vs affective disorders).

At this point in my career, I know that developing focus, maintaining a sense of curiosity and passion about my work, and being flexible in my approach have been critical to my success. I also could not be where I am without having had the opportunity to connect with generous faculty mentors and like-minded peers. Encouraged by my experience with collegial faculty at Arizona, I have knocked on many doors at WPIC and nearly invariably been welcomed into new collaborations and/or training opportunities. I have been able to assemble a team of formal (Drs. Daniel Buysse, Duncan Clark, and Erika Forbes) and informal mentors (too many to name) who each provide something unique to my continued professional growth, as well as a network of peers with complementary interests. Of course, these relationships are all two-way streets, and I work hard to be generous with my time and energy, whether assisting in others’ research studies, co-authoring papers, or carefully reviewing others’ grant applications. The effort is worth it. These relationships, coupled with a continued focus on my central research questions, have been crucial in my subsequent grant-funding successes, including, most notably, a NIAAA-funded R21 on which I serve as PI, but also various other NIH- and internally-funded grants. Not every institution is as collaborative and collegial as WPIC, but I would hope that putting one’s energies into the “team science” approach should lead to success in any academic environment. And, of course, a little luck always helps.

Finally, I have never forgotten that the interaction with patients was what sparked my initial interest in clinical psychology, and thus I was sure to obtain licensure during my postdoc years. Although my primary role is a researcher, I dedicate a morning per week to seeing patients with sleep complaints, as well as a few hours of additional time for clinical supervision of graduate and postdoctoral trainees interested in behavioral sleep medicine. As they say, the clinical work certainly informs my research questions, and the rewards of training new sleep clinicians and successfully treating patients’ sleep problems are very rich. Indeed, while it may be wise to limit clinical activities

so that they do not overwhelm research responsibilities, and it is certainly important to make sure they are cohesive with one’s research focus, for me these ongoing clinical experiences continue to stoke my passion for my work, which from childhood to today has been the keystone of my career.

About the Author: Dr. Brant P. Hasler is currently an Assistant Professor of Psychiatry at the University of Pittsburgh School of Medicine and Western Psychiatric Institute and Clinic. His research focuses on the role of sleep and circadian rhythms in regulating affect and motivation, particularly as relevant to affective disorders and substance abuse. In addition to his research program, Dr. Hasler is actively engaged in research mentorship and clinical supervision, as well as direct clinical practice, and is the Co-Director of the accredited Behavioral Sleep Medicine training fellowship at the University of Pittsburgh.

Student Perspective Series

A Career in Psychological Science: Insights from Nobel Laureates

Jon Stange, M.A., Temple University

I recently was fortunate to have the opportunity to attend the 65th Lindau Nobel Laureate Meeting in Germany, a meeting at which Nobel laureates met with doctoral students in fields relevant to medicine/physiology, chemistry, and physics to discuss the future of science and to share their perspectives on careers in research. Although much of the meeting involved discussions of the laureates' work in the aforementioned sciences, several themes emerged that I believe are also relevant to our field of psychological science.

Do what's important. Think about the big picture. Study what you believe will be important in changing the field, that could lead to a paradigm shift or a major breakthrough in what currently is known. Although it may be tempting to pad your CV by cranking out more "easy" papers, choose a good idea that has the potential for long-term payoff even if it means writing fewer papers now. Of course, students feel a pressure to publish numerous papers due to the difficulty of obtaining faculty jobs. Nevertheless, hiring committees can tell when you believe an idea is important and have thought through the long-term goals of the questions driving your work.

Pursue your passion. Research is tough! Your research is something you should be passionate about. If you have the passion and the interest in your topic, this will keep you going even when times are tough, when experiments don't turn out in the way you hoped or that grant doesn't come through. If you lose interest in a topic, re-spark your interest by looking at the problem from a different perspective, or choose something else! If you feel inadequately knowledgeable in that area, read more! As laureate and former United States Secretary of Energy Steven Chu said, even laureates are always learning new things, trying new areas of research, and pursuing new questions of interest. As long as you have curiosity and passion about your topic, you never know what you might stumble upon.

It's okay to fail. Pursuing a topic in an innovative way involves taking some risks, and you could be

unsuccessful. Although disappointing, this is okay. As someone who encountered several failures before making a discovery that led to winning a Nobel Prize, Eric Betzig pointed out that often what seems like a failure at the time is ultimately unexpectedly useful in some way. As a cognitive therapist, I would add that you may be able to reframe outcomes that seem like failures as learning experiences that hopefully will help you look at questions differently in the future.

Learn to talk about your work with enthusiasm.

Imagine you were taking an elevator ride with your program officer and you had 30 seconds to convince her about the importance of your work. What would you say? As scientists, we often become so engrossed in the details of our work that we lose sight of the big picture and have difficulty concisely summarizing the take-away messages of our work to someone unfamiliar with our area of research. Practice your elevator pitch so that you are ready when the time comes. In addition, develop a somewhat longer version of this pitch that is engaging, like a 15-minute TED talk, so that you can share your fascination with your work to audiences who are interested in hearing more.

Stay humble. As astrophysicist laureate Saul Perlmutter shared with us, along with hard work and dedication to a topic, the Nobel Prize is not an award given to the best scientist. Many other factors come into play, not least of which is luck: there is no telling in advance whether an interesting experiment will turn out to result in a discovery. I would extend this further to say that we should remain humble when we get that grant or publish that paper, and remember the multitude of factors out of our control when we don't.

Interdisciplinary work. Across scientific fields, the most important work is becoming increasingly interdisciplinary. However, several laureates do not recommend that scientists aim to pursue interdisciplinary work. Rather, they suggest that we pursue questions of interest to us and see where that takes us. Often this leads to discovering a need to study new things

or to bring in collaborators in other disciplines. If you do find yourself collaborating, it is worthwhile to set expectations up front as far as what each colleague will contribute to the project, and what the ultimate outcome(s) will be, including authorship on paper(s).

Consider alternative careers in research. In many areas of science there is an overpopulation problem – that is, more PhDs are produced than academic jobs are available. In clinical psychology we often feel pressure to choose between careers in academia or clinical work. But perhaps there are other options available, including industry, consulting, science education, and science journalism. As several laureates noted, there is a need in the workforce for individuals who are trained to think scientifically. Often students do not hear about such opportunities because our mentors are academics who are not familiar with these routes. Perhaps we should seek to find out more about these opportunities and share them with our colleagues.

Learn how to share science with the media. As scientists, we typically are not trained on how to manage the presentation of our work in the media. This can be a difficult task because the media often oversimplifies and polarizes research findings, pitting one view against the opposite, without considering shades of gray and making qualifying statements that are necessary when presenting scientific results. In part, this stems from the media having a different goal: whereas scientists present their work as an incremental step, the media may have the goal of entertainment, leading them to overstate the evidence and stir up controversy. Scientists need practice in succinctly summarizing the messages of our work to meet the goals of the media without compromising the science by oversimplifying it. At times, we also may have an obligation to talk to the media to facilitate the dissemination of our work or to straighten the record if inaccurate information is being proliferated (think: vaccines cause autism). As I discussed with Dr. Perlmutter, this is particularly important given people's reliance on heuristics that are influenced by the limited information they receive from the media.

Limitations. In the spirit of science, it is worth noting some limitations of the advice provided here. In addition to sharing many characteristics such as perseverance and enthusiasm for their work, laureates are individuals who took risks that ultimately were suc-

cessful. We did not hear from those scientists who took early risks that didn't pay off (e.g., those who invested everything in pursuit of topics that were unsuccessful, costing them their opportunity at tenure). Many of these laureates also may have been provided opportunities not available to other scientists that facilitated their pursuit of risky or unusual topics. Thus, it seems an optimal balance is needed between investments in high- and low-risk pursuits while not placing all of your eggs in one basket.

Across these numerous topics, one message seems clear: humility, gratitude, and bold pursuit of your passion are likely to lead to a successful and rewarding career in science.

About the Author: Jon Stange is a sixth-year PhD student in clinical psychology at Temple University. He currently is completing his clinical internship at the University of Illinois at Chicago. Jon's research focuses on psychological flexibility and interactions between cognitive and affective systems in the development and course of mood disorders.

Student Perspective Series

In It for the Long Run: Keeping Your Way During Graduate School

Jessica Hamilton, M.A., Temple University

Imagine this: You're at a family party and that well-meaning relative innocently asks, "So when are you going to graduate?" You smile back at him/her with an inner grimace, and respond, "In a few years..." There always seems to be a few more years, no matter how many you already have behind you. Some of you may feel compelled to explain that you have done something productive in this time or that graduate school is simply the start of your career – not to be defined by a graduation date. Regardless, one thing is certain: a doctorate program in clinical psychology is not for the faint of heart. It's a long, winding, and unpredictable road. So how do we maintain our own mental health while researching and treating the psychological states of those around us? Although there are no quick fixes or hard and fast rules, it can be difficult to maintain focus and stay driven and productive throughout the journey. As a current fifth year, I'm starting to see the light at the end of the tunnel, so here are some helpful tips from the trenches:

Baby steps. Throughout graduate school, you may find yourself looking up to those people ahead of you – those older graduate students who seem to have it all figured out, clinicians who make it all look easy, and faculty members who seem to know everything. You may feel pressure to figure out exactly what you want to do with your life or to publish the most impactful and groundbreaking study. But, it's important to remember that every step (no matter how small) is still important. Your manuscript may not cure depression, but it may provide an incremental step in better understanding the etiology or treatment for the disorder. In fact, it may even help said clinicians or faculty members with their own clinical practice or research.

Aim high. Although baby steps are important, it's good to stay focused on the long-term goals. Work hard towards accomplishing those goals and don't settle for anything less. Your study may not be the coolest thing since sliced bread, but that doesn't mean you shouldn't try and publish it in a high impact journal. I've heard many students argue against submitting a

poster or paper somewhere because their work isn't 'good enough.' But you won't know until you try! The worst that happens is you get rejected and learn what methodological, writing, or statistical improvements you should make the next time. The same applies to clinical work and teaching. You may not be the best clinician or teacher the first time around, but that doesn't mean you shouldn't try to apply yourself and be the best you can.

Celebrate the small victories. We're in it for the long haul... Typically in doctoral programs, everyone has a different pace and a different end goal, which is generally a good thing. But, this also creates difficulties for celebrating personal accomplishments along the way. We may get one or two of these group accomplishments over the years (e.g., comprehensive exam, thesis presentations), but we don't often get the opportunity to celebrate our victories or appreciate what we have accomplished. Whenever possible, I strongly recommend creating excuses to celebrate with your lab or cohort for any accomplishment no matter how trivial. For example, you just finished your first month of classes in graduate school? Go out and grab dinner! You just had an internship meeting with the faculty? Definitely go to the nearest wine bar or gastropub. Completion of your master's thesis or comprehensive exam? Celebrate! Importantly, you shouldn't forget to reward yourself for personal accomplishments either. That article getting published? Grab a friend and try that new restaurant up the block! Whether that celebration means a sushi night to yourself or a group event at a local bar, it doesn't matter. Taking the opportunity to celebrate your accomplishments, particularly with those in the same situation, will help you stay positive and happy throughout graduate school. Plus, who doesn't love an excuse to treat yourself?

Work hard. Play hard. I strongly believe in the importance of a work-life balance, and try to surround myself with those who do too. Your doctoral program may feel all-consuming at some points through the

years, whether it be from a heavy clinical caseload, finals, or applying for a research grant. And during those times, your work should mostly be near the top of your priority list. However, once that deadline has been met, it's time to take a break and do something fun. That could mean a night out watching a Phillies baseball game or finally taking the time to pick up that non-psychology book you have been dying to read. Whatever it is your heart desires, do it! You deserve it.

Find what excites you. Whether it be a new study, statistical technique, or clinical approach, we are in the lucky business of learning. Our ever-evolving field is always being filled with new opportunities for clinical, academic, and personal growth. With all of these opportunities, find what excites you and fully immerse yourself in it. Your work will never feel like 'work' if you are excited and interested in what you are doing.

Take on new challenges in the program and in life. The first few years of graduate school may feel new and exciting as you begin to explore the world of research, clinical work, and teaching. Although you may still have a lot to learn and find your work enjoyable, it may lose some of its novelty too. If you ever find yourself feeling like your daily life is monotonous, that is the time to mix things up and take on new adventures. Enroll or audit an extra course – not because you need it but because it looks interesting! Start a volunteer program in your community to teach psycho-education for at-risk youth. Or become more involved in wonderful organizations and take on a leadership position. Beyond work, expand your social circle by joining that intramural kickball team or signing up for an exercise group or dance class. You could even try something new like painting or a cooking class. Even if you only do it once, you will have learned something new about yourself and had a new experience in the process.

Know when to scale back. We can't give 100% all of the time. I know many people who have tried and not succeeded. Part of graduate school is learning what excites you and trying to spend a lot of your time pursuing that passion. However, there will be times that you need to buckle down and give 100% to classes, clinical work, or research. When those times come, it's okay to scale back on those other things until the surge is over. That said, it's also good to learn when you're able to give your mind a little rest and relaxation

and possibly binge watch the latest Netflix series.

Surround yourself with great people. Perhaps the most important advice for keeping your own sanity during graduate school is surrounding yourself with amazing and supportive people. I've been fortunate in my own life to have a phenomenal family, partner, and friends from all walks of life. I strongly value my cohort and lab and love spending as much time as I can with them, but I also take every opportunity I can to visit my family and hang out with friends from high school and college. This may not always mean face-to-face visits, but the 21st century has served us well with keeping in touch. A FaceTime call or fantasy football google hangouts 'live' draft can serve you well in re-connecting. If you surround yourself with people you love and who love you, you should always be able to find (and keep) your way on the long road of graduate school.

About the Author: Jessica Hamilton is a fifth year clinical psychology doctoral student at Temple University. Her research focuses on the role of stress and biological, emotional, and cognitive vulnerabilities as risk factors for internalizing disorders during adolescence.

Clinician Perspective Series

The Scientist-Practitioner Gap: A Clinical Supervisor Self-Discloses

Nicole Shiloff, Ph.D., Palo Alto University

In thinking about how I, as a clinician, can best weigh in on the topic of the scientist-practitioner gap, I decided that the most appropriate way to do so would be in the form of a series of self-disclosures. Not your run-of-the-mill self-disclosure such as what's next in my Netflix queue but revelations about my emotions. Specifically, the range of emotions that this topic and related issues elicit. However, before I begin to "get emotional" with you, there are three additional things you need to know about me. To begin, I would characterize my orientation as integrative with a leaning towards cognitive-behavioral. Secondly, I firmly believe that we have an ethical obligation to deliver treatments that are evidence-based. And, lastly, the single greatest impact on the evolution of my thinking about the scientist-practitioner gap has been my 10 years working in a training clinic supervising second-year doctoral students, the majority of whom are seeing their very first psychotherapy client under my supervision.

Gratitude

I am grateful to the many students I supervise, whose inexperience and inquisitiveness compel them to ask questions which require me to continuously hone my critical thinking skills, not just with regard to clinical decision-making but more broadly as well. "What should I do with this client?" is the question I hear most often from students, and if it weren't against my moral code to charge them every time I'm asked it, I could probably have retired by now. They don't simply demand answers from me, but they also want me to provide them with a rationale for my answers. My students and their intellectual curiosity have made me not just a better practitioner but a better scientist-practitioner who can engage in the kind of critical thinking that I believe is essential for any good clinician or scientist.

Guilt

I received my graduate and post-graduate clinical training from universities that placed a strong emphasis on producing researchers, and during a time

when randomized controlled trials (RCTs), on which empirically-supported treatments (ESTs) are based, were considered the gold standard. It was a time when the "evidence" in evidence-based practice meant ESTs, and only ESTs. As I reflect back on that time and place, I believe that I, along with many of my colleagues, was probably guilty of unintentionally contributing to the rise of what I would describe as some of the least scientific thinking among "scientists" I've observed. In my opinion, in our well-intentioned effort to emphasize how essential it is that our interventions be informed by research, some of us lost our ability to think critically about the topic. Critical thinking skills were replaced by rigid black-and-white thinking about ESTs. Others among us may not have lost our critical thinking skills per se but communicated a message which, however unintended, many, I fear, heard as: "A treatment is either empirically-supported or it is not. Treatments that are not empirically-supported are not helpful. We should not use interventions that are not empirically-supported."

Worry

I worry that students are particularly vulnerable to the effects of such a message since many students, by no fault of their own, are apt to see things in black-and-white terms. When I begin working with my students, they have one year of classes under their belt, and, by this time, the following four things are usually true: the importance of research informing clinical practice has appropriately been drilled into them; they have been made acutely aware of the scientist-practitioner gap; they are raring to begin their clinical work; and they are filled with anxiety about starting to see clients. I am no expert chef, but, in my opinion, when you mix these four ingredients together, you have the potential recipe for the kind of non-critical thinking that makes good clinical decision making and scientific thinking impossible.

In my experience, an anxious student will find it difficult to resist the seductive appeal of a treatment manual that "matches" his client's diagnosis and pro-

vides him with step-by-step instructions for treatment. If left to his own devices, this student will likely follow each step from the first to the last without needing to exercise any critical thinking skills. Even though he'll have read the introduction in which the authors encourage flexible use of the manual, as a beginning clinician, he's not going to know what flexible use of a treatment manual actually involves. How will he know when it's time to apply flexibility? Is there ever a right time to apply rigidity? A different student, one who leans toward the overly eager, is bound to jump right into treatment without delay. Let's say that, like many treatment manuals, the one this student's using doesn't begin with a section on client motivation. Combine that with the fact that, as a new clinician, she assumes that because her client is presenting for therapy, he is ready to make change, it is no wonder she finds herself confused and frustrated when her client rarely does homework and she is halfway through the manual, with minimal progress having been made.

Of course, this is why students receive supervision. As a supervisor, I consider myself lucky as my position affords me the opportunity to closely supervise the clinical work of a small group of students and I become quite familiar with their clients and their presenting problems. I am able to work closely with the anxious student to make sure he develops an understanding of what flexible use of a treatment manual looks like beyond simply varying the order of its modules or leaving certain ones out. In the case of the overly eager student, I can help her develop the ability to detect more subtle signs of disengagement in her client than lack of compliance with homework or poor attendance. If her client has some ambivalence about making change, I can provide her with what the treatment manual cannot: guidance on how best to explain to her particular client the rationale for putting "active" treatment on hold so that she can shift into motivational interviewing (MI).

Unfortunately, in many settings, clinical supervisors may not have the luxury to provide such intensive supervision to their students and they may be left with no other option than to send them off with a stack of treatment manuals, which their students will likely move through much like one might read through an instruction manual. In some cases, the supervisor is assigned to a substantial number of students; in other cases, the students' caseloads may be considerable. In the worst case, the clinical supervisor has not seen a client since internship but his faculty contract requires he provide a

certain number of clinical supervision hours despite his focus being research. Whatever the reason, I believe the unfortunate result is that the anxious student and the eager student, and however many other students, are denied the opportunity to develop the critical thinking skills that are essential for becoming a good clinician as well as a good researcher.

Indebtedness

I still remember the first time I read Jackie Persons' book, *The Case Formulation Approach to Cognitive-Behavior Therapy* (2008). After finishing it, I can recall feeling an urgent need to send her some sort of very large fruit basket as a "thank you". She was the first person I became aware of who was not just writing about the existence of a scientist-practitioner gap, but who was also attempting to help clinicians navigate its rocky terrain. Specifically, she was offering up a systematic method for clinicians to more easily translate the research findings into clinical practice. In her case formulation approach to CBT, she recommends that the clinician build an idiographic (individualized) case formulation either from the nomothetic (general) formulation underlying a specific EST or from an evidence-based psychological theory. Dr. Persons' writings on case formulation are mandatory reading for my students, and I am indebted to her for highlighting the importance of understanding not just the research literature, but also the client sitting across from us in the therapy room.

I, for one, am not interested in any of my students becoming mere consumers of research, regardless of their ultimate career goals. I am invested in their becoming critical thinkers and, in my opinion, building an individualized case formulation demands nothing if not critical thinking skills. If we are to apply flexibility in our use of a treatment manual, doesn't that basically require us to develop an individualized case formulation? Such a formulation helps us answer the essential questions: Why am I applying flexibility with this client at this point in treatment? How should I go about its application, given my current conceptualization of the factors contributing to and maintaining my client's problems?

More often than not, I do not have my students work through a treatment manual from beginning to end. However, when I feel it is appropriate for a student to use one with, say, her client with depression, it is the individualized case formulation that will help

her understand why I might be recommending that, at this point in time, she skip over the manual's behavioral activation section. Or, in the case of her adolescent client with OCD, it will be evident from the case formulation why I might make the suggestion that his parents play a much more active role in his treatment than the treatment manual advises.

It is quite common that a student, we'll call him Jerome, shows up to supervision talking excitedly about an intervention he just learned about in his psychotherapy class. I will know that I have done my job as a supervisor if, no matter how tempted, Jerome will not try out this intervention with a client before considering whether or not: 1) it targets any of the maintaining factors identified in his formulation and, 2) the targeted mechanism is related to a problem that corresponds with one of the client's current treatment goals.

Let's say, for argument's sake, that both conditions are met and Jerome moves forward with the intervention. Having evolved into a "true" clinical scientist, he will understand the importance of continuously collecting data from his client in order to evaluate his client's progress. If the data indicate his client is not improving then he will know exactly which questions to ask himself: Have I failed to identify an important maintaining factor in my client's presenting problem? Does my intervention target the wrong mechanism? Do I need to revise my formulation?

Hope

During my ten years as a clinical supervisor, I have seen many changes in our field that provide me with much hope for the future. Since the 2006 report of the APA Presidential Task Force on Evidence-Based Practice, in which the APA's policy on the evidence-based practice in psychology (EBPP) is defined, I have observed that with each new cohort, the students' views of the important and varied factors impacting treatment outcomes have become less and less narrow. For those students who plan to become clinicians, the shift in APA policy has served as validation that their contributions to the field (i.e., their clinical judgment and expertise) are no less worthy of merit than those made by their research-bound peers. What also contributes to my feelings of hope is the increased recognition in some of the translational research literature that we are not likely to close the scientist-practitioner gap until the transfer of information between researchers and practitioners becomes more bi-directional. I have also observed the

evolution and increasing numbers of practice research networks (PRN) in our field which, to me, represent a much-needed shift from mere talk about the existence of the scientist-practitioner gap to actions intended to minimize it.

They say that emotions provide us with valuable information and motivate action. It is my hope that in reading this, at worst, you will have acquired some valuable information. At best, the information may motivate you to take action of some sort. The action taken is up to you. If you are a practitioner, perhaps you'll think about ways to collaborate with researchers so that your clinical expertise can have a more direct impact on the future of treatment outcome research. If you are a researcher, perhaps you'll consider designing more studies that enable us to evaluate treatment outcomes at the individual level, not just the group level. If you teach, maybe you'll facilitate a discussion about the epistemological issues underlying differences of opinion about the definition of "evidence" in evidence-based practice. And, finally, if you're a student, perhaps you'll give yourself permission to slow down from time to time so that you can ask yourself: "In this situation, how would a critical thinker think?"

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About the Author: Dr. Nicole Shiloff is Associate Director of the Gronowski Center, the training clinic for doctoral students in clinical psychology at Palo Alto University. She is on the adjunct clinical faculty in the Department of Psychiatry and Behavioral Studies at Stanford University Medical Center and she is a Diplomate in the Academy of Cognitive Therapy. Dr. Shiloff also has a private practice where she specializes in the treatment of anxiety disorders in children, adolescents and adults. The next movie in her Netflix queue is *What About Bob?*

Update from Student Representatives

Rosanna Breaux, M.S., University of Massachusetts Amherst
Andrea Niles, M.A., University of California, Los Angeles

As your student representatives, we would like to take this opportunity to update you on a couple opportunities and resources for our members:

SSCP Internship Hotel Match-Up – We are excited to announce the rollout of this new resource for student members. One of our Campus Representatives, Sarah Victor, proposed this idea and we are thrilled to provide what is sure to be an excellent resource for our student members.

The SSCP Internship Hotel Match-Up will allow interested students to complete a request for each date and location for which they would like to share a hotel. Students can then find other students with requests for the same date and location and contact them in order to make hotel arrangements. Look for an email on the SSCP Student Listserv with more information on this new money-saving resource!

SSCP Student Outstanding Teacher Award – This award is intended to recognize outstanding graduate students who are providing exceptional contributions to the field of clinical psychology through their teaching. Three students will be selected based upon their dedication to, creativity in, and excellence in teaching in the area of clinical science (this can include experience as a teaching assistant).

Applications must be received by December 1, 2015. Complete guidelines and the cover sheet can be found on the student website: <http://sscpstudent.blogspot.com/p/student-awards.html>. Students may be nominated by their advisor or a faculty member for whom they have TAed, or may self-nominate. Please send nomination packages to SSCP Student Representative Rosanna Breaux (rbreaux@psych.umass.edu).

Only graduate students (including students on internship) will be considered for this round of nominations. Graduate students must be student members of SSCP. The annual student membership fee in SSCP is \$15. The membership application form can be downloaded or submitted on-line at: <http://sscpweb.org/Membership>

SSCP Student Poster Award Competition at APS Convention - The 2016 SSCP Student Poster Award Competition will take place at the APS Annual Convention, May 26-29, 2016 – Chicago. If you would like to have your poster considered for the award, select ‘SSCP Poster’ in the first step after you select poster and start new submission.

SSCP hosts an annual student poster session at the APS Annual Convention. Those receiving the top award receive \$200. Winners of the “Distinguished Contributions” Award receive \$100. The SSCP poster submission can deal with any area within scientific clinical psychology. The research and analyses presented in the poster submission must be completed. Please be sure to provide enough relevant detail in the summary so that reviewers can adequately judge the originality of the study, the soundness of the theoretical rationale and design, the quality of the analyses, the appropriateness of the conclusions, and so on. Complete submissions include a brief 50 word abstract and up to a 500 word summary of the work. Please follow the link for a complete call for submissions: <http://www.psychologicalscience.org/index.php/convention/call-for-submissions/rules-guidelines#.Vik8VX6rTIV>

To be eligible to submit an SSCP poster, the first author of the poster must be a student and must be a member of SSCP at the time of submission. Submissions to the SSCP student poster session must be completed by January 31. You will also be asked to provide a copy of your poster by May 13, 2016 so judges will have an opportunity to review your work before the live session.

If you have any questions please contact Thomas Olino of SSCP at thomas.olino@temple.edu. Please put “SSCP Poster” in the Subject line to ensure your question is answered promptly.

Contact Us!

We would love to hear from you regarding any suggestions, comments, questions, or concerns regarding SSCP student membership or resources for students.

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Andrea Niles: aniles@ucla.edu