

Becoming an Academic Researcher in Psychiatry: A View From the Trenches

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Successful academic research careers must withstand the pressures of inevitable challenges. Some challenges are inherent to the nature of the work; for example, the identification of “researchable” problems requires innovative thinking; the completion of projects requires tenacity and detail-orientation; and the development of a productive research program requires management skills and consistent funding [1, 2]. However, factors beyond these also impact the potential for success in academia. These include maintaining motivation through challenging times and failures, acquiring excellent mentors, and achieving work-life balance.

The four authors participated in the Career Development Institute (CDI) for Psychiatry in 2012–2014. (See Kupfer et al. [3, 4] for more information on the CDI). Briefly, this 2-year longitudinal program aims to enhance the careers of junior researchers in academic psychiatry (typically junior faculty members, or those making the transition from training to faculty status) through training related to both the direct and indirect aspects of an academic career. Initially, participants attend a 4-day seminar series with one-on-one and group mentoring sessions, followed by 2 years of distance mentoring

and online “webinars,” which cover various topics of relevance to junior investigators [3, 4].

Our experience in the CDI led us to reflect upon the major challenges to successful careers in psychiatric research, thus inspiring this perspective piece on issues currently facing junior investigators. We have personally found that the most substantial challenges in developing an academic research career arise from indirect aspects of this career choice: maintaining motivation, acquiring mentors, and managing work-life balance. We aim to provide other junior investigators with the knowledge that these types of challenges are expected. We also hope that more opportunities (such as the CDI) that involve open discussion of these challenges within academic psychiatry may lead to changes related to these obstacles.

Motivation for Academic Research Career: “Reaching the Finish Line”

Motivation for an academic career derives from the same biological processes that mediate reward, learning, and reinforcement. We consider the rewards and punishments of academic medical research compared to teaching, clinical, or administrative careers. In general, substantial primary rewards come from directly helping an individual; researchers trade this for the delayed gratification of potentially helping many people in the future. The brain is not wired for this: a primary reward is a social smile—not a publication. It takes a long time to identify tractable problems and implement solutions, with inherent uncertainty of the outcome. Because of this, several of our colleagues have moved into management in private facilities because of the rewards associated with directly changing the delivery of patient care.

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A research career also involves extensive criticism and rejection; negative feedback is experienced as a punishment [5]. Neuroscience supports this observation: in one experiment, physicians best able to learn from simulated patient medical errors exhibited elevated dorsolateral prefrontal responses, whereas physicians with the least ability to learn had more activation in reward processing regions in response to successes [6]. Physicians and researchers are humans, and humans struggle in the face of repeated failures and prefer to focus on success. For the average, healthy person, it is a challenge to maintain motivation in the early phases of an academic career because of the inevitable rejections. We have also found that complaining about these challenges openly can be misinterpreted to imply that our research is not up to current standards in our field. Overall, we feel that maintaining the motivation to conduct research comes largely from a desire to finish tasks, an excitement for new ideas, and developing a vision of progress. Furthermore, we have found that, with perseverance and adequate support, successes accumulate, and the failures are easier to tolerate.

Mentorship: “You Don’t Know What You Don’t Know”

Finding excellent academic mentorship is crucial for career development and sustained motivation. Mentorship is challenging to obtain and maintain, requiring commitments from both mentor and mentee—a difficult landscape to navigate as a junior investigator with limited experience of how to be a “mentee.” This relationship is challenging and dynamic: at times, we have all felt neglected as mentees, but we recognize this very experience may be a necessary step towards independence as a researcher. Furthermore, we often conduct work in close collaboration with our mentors as we engage in team-based science, but this close support may interfere with our ability to succeed independently, as mentors and mentees compete for the same resources. Thus, ideal mentorship that promotes scientific progress requires the identification of someone interested and supportive of your work, but not so invested that it is really a small next step in their work rather than a potential independent program of research for the mentee.

All members of the academic psychiatric community are under pressure to maintain funding, write scientific reports, and manage personnel. Mentorship may be viewed as a higher-risk activity because there is no guarantee of productivity and often only indirect benefits to the mentor. Another challenge is the *quality* of mentorship. Just as good mentorship is important, bad mentorship has consequences, as poor mentoring can lead to negative perceptions of a chosen field [7]. Selecting the wrong mentor will end a career, but knowing what is right in a mentoring relationship is a challenge.

Universally, we felt that one benefit of the CDI program was detailed exposure to examples of successful and unsuccessful mentorship relationships, coupled with outside guidance to navigate our own relationships. We also learned that a mix of mentors at various career stages could be beneficial. Senior mentors—successful in a different funding era—may underestimate the challenges faced by junior investigators, but can also give the benefit of wisdom earned through long careers. In contrast, mid-career researchers may be more cognizant of current challenges, but may be struggling to survive. Peer mentorship provides an inexpensive approach to team building, with successes previously observed in psychiatry [8, 9] and other specialties [10]. Although we all agree that peer mentorship is particularly important in maintaining motivation and feeling successful in an academic career, our own opportunities for peer mentorship were rare prior to the CDI program. Since attending the CDI, we have felt more confident in our own science, have a better understanding of the role of a scientific mentor, and have developed an appreciation of the importance of having multiple mentors (i.e., established investigators, mid-career researchers and peer mentors) all related to different aspects of maintaining an academic career.

Balancing Work and Life in Academia: “Having it All”

Work-life balance, though a challenge in all careers, is particularly challenging in academia, where there exists a widely held belief that extremely long hours are necessary for success. American academics work over 50 h per week, on average [11], and some successful academics appear to work a lot more. We have found work-life balance concerns to be particularly challenging for junior investigators. Typically, the age-group of this career phase coincides with starting a family, having caregiving responsibilities for other family members, or even developing a chronic medical illness. Young children deserve, demand, and require time, but high visibility and early-career impressions with one’s colleagues may be critical for development of collaborative relationships and high productivity. On a personal note, one of us switched scientific fields in part because of a low-productivity period related to young children, highlighting the “perfect storm” of competing needs.

There are some potential solutions to enhance work-life balance and allow survival during the critical early phase of the academic career. One option is “stopping the tenure clock” for both family and non-family reasons, an option available at some universities. In one study, stopping the tenure clock for family reasons resulted in a 4 % wage penalty 2 years later. However, the salary gap between groups narrowed over time and became insignificant after several years [12]. Interestingly, long-term productivity does not seem to be

impacted by stopping the tenure clock [13]. There is some evidence that pursuit of an academic career may be particularly challenging for women who become parents [14]. Given that the American Psychiatric Association's Resident Census shows that more women than men now pursue residency in psychiatry, it behooves the field to support female researchers. However, we also note that modern childrearing typically involves parents of both sexes, and we hope that all caregivers receive equal support.

One possible approach is to provide research support during years of caregiving or illness (e.g., Harvard's Claflin Award [15]) and another is to give adequate time recognition for caregiving or illness so that the window for early career award eligibility expands. Our field should be uniquely aware of the long-term mental health benefits for children raised by parents able to invest the necessary energy, love, and time required for their development, alongside the importance of caring for others and ourselves during medical or financial difficulties. While clinical and administrative positions may accommodate reduced hours for several years, working reduced hours as a researcher is likely to be penalized because a research career is largely judged on visibility: the numbers of publications and presentations at meetings. For now, junior investigators should be empowered to negotiate for the flexibility that allows them to maintain their careers during challenging periods.

Changing our Perspective: "From Survive to Thrive"

Though we recognize that the current financial issues may prove persistent, our field is poised to make significant advances in the understanding of psychiatric illness and treatments—advances that will be led by today's junior investigators. We recognize that the CDI may have chosen us because of some perceived ability to succeed, and our continued participation in the CDI through this paper may further reflect this fact. Those caveats aside, we are painfully aware of our talented colleagues who decided that academic research was not feasible for them due to the factors outlined above. However, we have found that success is possible, with perseverance and support. We all come from different backgrounds, institutions, and countries, and we share the goal of becoming successful researchers in psychiatry. We have known the disappointment of our grants and papers being rejected and the struggles of developing our careers and families in a time of scarcity. Nonetheless, we are persisting with our academic careers. Despite the competitive environment, we worked together in writing this paper to describe this critical time and our experiences therein. We hope this piece prompts academic leaders to consider ways for their institutions to support junior

investigators to continue the best traditions of research in the field despite the current challenges.

Implications for Academic Leaders

- It is becoming increasingly difficult to start a career in research-based academic psychiatry.
 - The Career Development Institute (CDI) is a NIMH-funded approach designed to provide early career investigator with the key skills needed to thrive in today's difficult funding environment.
 - Three key issues facing early career investigators include difficulties with motivation, mentorship, and work/life balance.
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