

Mentoring and Research Capacity-Building Experiences: Acculturating to Research From the Perspective of the Trainee

We participated in the Collaborative HIV Prevention in Minority Communities Program, which was designed to support ethnic minority researchers in improving their HIV-prevention research skills. Here we share our experiences as trainees, as well as the effect this program has had on our research careers.

We liken the process of securing funding for our research to that of acculturation: we had to learn a new culture while retaining our own identity and membership in ethnic minority communities. We also discuss the importance of mentorship from the perspective of the trainee and reflect on our learning and skills acquisition process. (*Am J Public Health*. 2009;99:S16–S19. doi: 10.2105/AJPH.2008.149203)

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WE PARTICIPATED IN THE

first cohort of the Collaborative HIV Prevention in Minority Communities Program at the Center for AIDS Prevention Studies, University of California, San Francisco. This program, funded by the National Institute of Mental Health, was designed to assist investigators already conducting HIV-prevention research within ethnic minority communities to improve their programs of research and to strengthen their research skills. The collaborative is considered a model program.¹ Here, we share our experiences as trainees in the program, as well as the effect the program has had on our research careers. We also offer our perspectives as trainees and discuss some of our successes and challenges.

The first cohort of trainees, recruited in 1997, consisted of four tenured or tenure-track faculty members from research-intensive universities. Our gender, race/ethnicity, sexual orientation, and research interests were diverse. We brought an array of educational experiences, disciplines, publication track records, and novel ideas to the program. Our commonalities were our passion for HIV prevention and our commitment to making a difference within our ethnic minority communities. We each knew our own community from firsthand experience, understood its culture, and possessed an insider's acceptance.

Writing a National Institutes of Health (NIH) R01 grant application,

however, was a foreign experience for all of us. The R01 grant is a key funding mechanism of the NIH. Our predoctoral training experiences, like those of many researchers of color, had neither socialized us concerning the importance of securing funding for our research nor provided us with enough ethnic minority role models. Therefore, venturing into the unfamiliar territory of grant writing was akin to arriving in and adapting to a new culture. This is a useful analogy for understanding the important steps and practices involved in mentoring researchers of color. Acculturation is a multidimensional, complex process, with many potential outcomes.² Several dimensions of the culture of origin are retained while those of the new culture are acquired.

Many aspects of grant writing and research capacity building are similar to the process of acculturating. A new culture—of federally sponsored research—and a new language—of grant applications—need to be mastered to write successful applications. Familiar language patterns have to be modified, and new methods must be learned. Many skills must be acquired, and in this process, an identity as a researcher is constructed.

Most of us had been trained to use quantitative methods in our research. In the mentoring program, we were encouraged to use qualitative methods that would reflect the voices and experiences of our participants. This training enriched our perspectives and

helped us remain in touch with communities of color. We also learned to integrate these new methods into grant writing.

Although we were already researchers, we had not received federal funding. For us, the identity formation of a senior researcher was aided by mentorship that empowered us to listen to our own ideas and to see ourselves as capable of writing a successful grant application. As is often the case with the reception that immigrants face, a welcoming new culture can enhance individuals' ability to integrate and identify with that culture. In the mentoring program, we were received with enthusiasm; the welcoming atmosphere supported our integration with other researchers and our development as productive scientists.

THE CONTEXT OF THE MENTORING PROGRAM

Cultural integration was achieved through our spending three summers at the collaborative's home in San Francisco. We developed a new social and scientific network, which also increased our social capital. We gained access to multiple researchers and obtained some visibility within a new scientific network. This approach is consistent with Bozeman and Feeney's definition of mentoring as "a process for the informal transmission of knowledge, social capital, and psychosocial support perceived by the recipient as relevant to work,

career, or professional development."^{3(p731)}

The mentoring program provided opportunities for both trainees and mentors: multiple collaborative relationships developed, including manuscript coauthorship and collaboration on grant applications.

We learned from others in our cohort and from different cohorts. Some researchers have suggested that research should be perceived as both an intellectual and a social pursuit,⁴ and this held true for our socialization in the program. Our bonding, and the sense that developed among us of being part of a community, are congruent with the cultural styles of people of color, who often have a communal and collective orientation in their lives.

In our first year at the collaborative, each participant had to conceptualize and carry out a pilot study to serve as preliminary data for the R01 application that was expected as an outcome of participation in the program. The training program provided us with instrumental support, such as seed money to carry out pilot research, computer equipment, office space, and summer salary. We benefited from interactions with at least two mentors with different but complementary strengths. In the second year, we wrote the R01 application and participated in peer review sessions, in which we received extensive feedback from mentors. A second and a third cohort of trainees joined the program, and we had the opportunity to develop additional close relationships.

Epstein suggests that training of ethnic minorities requires models and catalysts, people who can spark interest and serve as agents of change.⁵ The program provided

us with excellent models and catalysts: Barbara Marin, Susan Folkman, Rafael Diaz, Jeanne Tschann, Olga Grinstead, and others who came later to work with the new cohorts of visiting professors. These individuals were not only successful researchers but also encouraging teachers who helped us meet the challenges we faced.

Our mentors encouraged us to work on themes close to our hearts and to the needs of our communities. This made the task of developing a preliminary study relevant and exciting. For instance, M. C. Z. knew she was interested in studying disclosure of HIV status among Latino gay and bisexual men, but she was not sure whether she should examine the sexual risk and public health consequences or the mental health implications of disclosure or nondisclosure to others. During a meeting in which these doubts were expressed, Barbara Marin suggested a trip to the ocean to think about this dilemma. Slightly puzzled with this suggestion, M. C. Z. went to the ocean and found herself struck by a response to her dilemma: both sexual risk and mental health were important and interrelated. She was able to find support for this connection in previous research findings. This experience highlighted the importance of listening to our hearts to make important decisions, such as the direction of our program of research.

Typically, ethnic minorities are not present in high enough numbers in the sciences and academia to serve as role models and catalysts for minority scientists. An important part of the process was for us to envision ourselves as people who could obtain NIH funding and to recognize that participation in a mentoring program would help us accomplish

this task. The collaborative served a cultural brokering role that helped us to master the culture of federally funded research at the NIH. To succeed, we had to learn to decode what the application process entailed, what the current funding priorities were, and the extent to which there was support for certain topics within the political climate of the time.

SKILL DEVELOPMENT PROCESS

Several aspects of the mentoring program facilitated our learning. Mentors provided us with samples of their own successful and unsuccessful applications, which afforded us a new perspective and demonstrated that even well-established researchers had to be persistent in the face of disappointing results to obtain funding. Access to the critiques of these applications clarified what to expect from the review process. Sample applications are not usually readily available to the public, yet it is nearly impossible to write a fundable application without following specific implicit and explicit rules.

Several other elements of the experience at the collaborative helped us develop the research skills necessary to lead an application to fruition; one-on-one mentorship from top-notch researchers, group meetings with peers and mentors, prompt feedback on our drafts, and peer reviews of our drafts were all extremely valuable. Our relationships with and support of each other were also critical, and a good mentorship program should consider how trainees and mentors will mesh and work together.⁶ We each had an insider's perspective on what it was like to be a minority and to conduct HIV-prevention

research in underrepresented and underresourced communities. We supported each other personally as well as professionally. The mentorship program at the collaborative, therefore, provided a social network that we retained when we went back to our home institutions. Successful programs such as those at the collaborative promote dialogue and reflection that help mentees find their own voice⁷ and develop scientific skills,⁸ and they are supportive of gender, racial/ethnic, and sexual orientation diversity.⁹

The collaborative research program helped develop our grant-writing self-efficacy through practice in writing our own applications. We received feedback in incremental steps (i.e., specific aims, preliminary studies, background, etc.). In addition to the modeling from mentors and staff and the exposure to their previous unsuccessful applications, we also benefited from immersion in a comfortable, intellectually vibrant setting that allowed us time to devote to our grant application. Moreover, the environment promoted positive personal and professional relationships, which was crucial to creating social support.

CHALLENGES AND OPPORTUNITIES

Not everything that occurs during training in educational settings is perceived by participants as supportive or conducive to a successful and comfortable experience. Mentees in the program had varying experiences, and sometimes being cast in the role of a trainee evoked memories of previous experiences of discrimination. After having been respected colleagues in our own institutions, we found that assuming the mentee role was

sometimes a challenging switch. Although most mentors were highly supportive, feedback was occasionally perceived to be discouraging. However, the same type of feedback often comes from a study section, and therefore, such experiences could serve to inoculate mentees against discouragement when their work is severely criticized. Fortunately, core mentors of the collaborative were supportive and validating of our efforts, even when they were providing constructive criticism.

The geographic location in San Francisco presented both a challenge and an opportunity. The high cost of living was burdensome, particularly because we still had financial obligations in our hometowns. On the other hand, spending the summers in San Francisco enabled us to create a space away from university duties, which facilitated immersion in writing and learning. Moreover, it was enriching to experience a research-intensive institution, a different city, and a different set of colleagues. It was evident that the program had made preparations for our arrival: office space, equipment, library resources, and friendly staff made us feel important and that there was an investment in our mentoring.

Acceptance at the program often increased our standing at our home institutions. The training program encouraged our institutions to provide additional support to ensure our success in the program. This support included release time and sabbatical leave to write the application or supplementing seed money. However, not all mentees were in optimal environments in their own institutions, and some had to contend with heavy loads of teaching, advising, and service duties when they returned. It is important to

note that the training was less effective when research support was not in place at the home institution. Therefore, engaging department chairs and deans from home institutions in this endeavor could help maximize efficacy of mentoring programs in general.

A potential barrier to the development of the mentee could arise from a mismatch between a mentor and a trainee. This mismatch could be attributable to differing professional interests, perspectives, personalities, and previous experiences. It is important to empower both mentors and trainees to speak up and dissolve relationships that are not working, without blame being placed on either party.⁶

CONTRIBUTION TO OUR RESEARCH CAREERS

Program participation greatly enhanced our research careers, especially regarding external funding. The time frame of three summers to produce a fundable RO1 was realistic. It disabused us of the notion that it is possible to sit down and write a first RO1 in two months. Perhaps very experienced researchers can accomplish that feat, but they are not starting from scratch. They have previously developed multiple templates for budget, measures, and other components of an application. New investigators, on the other hand, need to develop each component of an application without the benefit of experience. Mentors can play an important role in helping to accelerate learning, but it is still a long process, similar to adapting to a very different culture.

In our particular case, one author (M. C. Z.) obtained National Institute of Mental Health and National Institute of Child Health

and Human Development funding to conduct research on men who have sex with men, and the other (F. Z. B.) obtained several grants from the Substance Abuse and Mental Health Services Administration and other federal agencies to implement and evaluate HIV and drug use prevention programs for African Americans. Although she did not secure NIH funding, this author found that the training process was nonetheless very beneficial in many ways, including the identification of more appropriate funding sources for her particular line of research. We both learned to become better mentors; we have had dozens of students who have moved on to academic jobs and have obtained their own funding.

Despite multiple successes, we both have had our share of rejected manuscripts and unscored applications. Because a proposal is unlikely to be approved for funding the first time, it is important to learn to accept rejection and failure and not to take it personally. It is also essential to learn from the feedback of reviewers and to improve the application accordingly. Moreover, if at some point it becomes clear that reviewers do not like an application, despite attempts to revise and improve the proposal, it may be time to abandon that specific topic or shift the focus completely.

A portion of our success comes from persistence, patience, willingness to learn, and hard work. These traits are beneficial in most academic and research settings. The collaborative provided a mechanism that increased the chance that our hard work would eventually pay off. We were somewhat primed to benefit from the program; perhaps it would not have worked as well for those who were already struggling with research careers. A

different type of program may be needed in such situations. For example, a more modest research agenda might be to submit a paper for publication or to develop a research protocol for a study.

Although many of the challenges to becoming a successful researcher are not exclusively experienced by racial/ethnic minority researchers, often our training, background, and history of discrimination and personal hurt make the road to success steeper. If we are to confront the rising epidemic of HIV/AIDS in communities of color and if we are to address health disparities, it is imperative that representatives of ethnic minority communities be among the researchers tackling these problems. Therefore, supporting mentoring programs for racial/ethnic minority researchers should continue to be an NIH priority.

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