

The Case for Research Training

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Research training has been a core issue for the American Psychological Society since our founding nearly 15 years ago. It's something we raise with Congress and federal agencies when we address issues of research funding and scientific priorities. Too often, however, we find that training is not foremost in the minds of the people who set those funding levels and establish those priorities. You don't hear much if anything about training when agency heads testify on their annual budgets, and you don't usually hear about it when members of Congress deliberate over research budgets, scientific goals in health or education, or any other topics involving federal support for research.

But every four years, the National Academy of Sciences, or more accurately, NAS's operating arm, the National Research Council, conducts a Congressionally-mandated study of training needs in the area of health research, focused primarily on NIH. That process is once again underway. The "Committee for Monitoring the Changing Needs for Biomedical and Behavioral Research Personnel" recently began its quadrennial review of research training at NIH, and invited APS to make recommendations on the needs of behavioral science research training.

In testifying before the committee, which includes several behavioral science researchers, APS Executive Director Alan Kraut said that behavioral science research training should be more of a priority at NIH because of the central role of behavior in health. He called for a new approach in determining the nation's training needs in health priorities, urging the committee to shift from its traditional "employment" model that looks at the job market for researchers, to a model that reflects the nation's health needs. He also asked the committee to examine issues relating to NIH's implementation of the training recommendations, noting that NIH has not been completely responsive to the committee's findings in the past. (The full testimony can be viewed on our website at www.psychologicalscience.org/advocacy).

Consider the amount spent at NIH on behavioral research in FY 2001: \$359 million at NIMH; \$343 million at NIDA; \$238 million at NCI; \$222 million at NICHD (in all, twenty-two agencies funded some form of behavioral research). It's a \$2.1 billion enterprise. This represents a dramatic increase from 15 years ago, but this expansion hasn't extended to training in behavioral science. However, Kraut expressed optimism that the committee can have an impact on behavioral science research training, because of new leadership at NIH – "There is a new Director of NIH [Elias Zerhouni] who has spoken openly about the importance of behavior" – and because of a greater presence for behavioral science on the NRC committee. The committee includes psychologists William Greenough, University of Illinois, Urbana-Champaign; James Jackson, University of Michigan-Ann Arbor; Georgine Pion, Vanderbilt University; and Richard Shiffrin, Indiana University.

Kraut also said that the well-documented link between behavior and health should be the basis for determining our training priorities. In the past, the NRC committee has relied on an economic model when making its recommendations, focusing on the job market rather than on scientific opportunity or

health needs. “I have to say that I do not understand this approach,” remarked Kraut. “Health research is based in large part on its importance to public health. The National Cancer Institute is a \$4 billion-plus agency not because there are thousands of cancer researchers to fill jobs. NCI funds \$4 billion in research because cancer is properly recognized as an enormous public health problem. The same should go for all the disorders that have behavior at their core. These conditions can’t be addressed fully without behavioral research, in all its basic, applied, and clinical forms.”

“When I speak about behavioral research related to health,” Kraut said, “I don’t just mean applied or clinical research ... Before you address how to change attitudes and behaviors around AIDS, you need to know how attitudes develop and change in the first place. Or, before you can change decisions about any risky behavior, you need to know how judgments and decisions are made on a range of topics. Similarly, before you address memory decline in the elderly, you need to know the basics of learning and memory and how that changes with age. And before you address the complexity of the interactions among genetics, the brain, and, say, schizophrenia, you need to know the basics of cognition, emotion, culture, behavioral aspects of neuroscience, and behavioral genetics.”

A GOLDEN TICKET

At the heart of research training at NIH is the National Research Service Awards, or NRSA. “NRSA may be small in number but they are powerful influences on setting priorities in training,” remarked Kraut “They set trends that are followed by the entire health research training enterprise. A NRSA award is a golden ticket.” In 1994, a previous incarnation of the committee used the “national health needs” model in looking at training levels, and recommended that NIH increase its NRSA in behavioral science and some other areas, while holding level the number of biomedical NRSA. NIH did not adopt those recommendations, but it did adopt a recommended increase in the stipends for NRSA.

The committee’s 1994 recommendations to NIH called for an increase in NRSA from 1,069 to 1,450 to be in place by 1996. However, NIH elected not to implement this recommendation. The rationale for this has never been clear, but Kraut attributes it less to the fact that NIH does not have structure or process in place to implement such recommendations. “You recommended a 151- award increase in postdocs; a 228 increase in predocs... Yet, in its response, NIH selectively implemented recommendations – ignoring the behavioral recommendations, but implementing the other recommendations – by what I would characterize as ‘convenience’,” he remarked. “The bottom line was that anything that could be done easily through [some central NIH structure] was begun. Anything that required more a complicated strategy...was ignored.”

One of the challenges facing behavioral research is the lack of understanding surrounding it on behalf of those who determine the research training agenda. “On the one hand, there are institutes who care a great deal about behavioral science and who could be guided on behavioral training based on your recommendations. But those institutes have not been particularly connected to this study – either its development or its implementation. On the other hand, there are NIH offices who don’t particularly involve themselves in institute-specific behavioral science. There is not much they can or want to do with your behavioral recommendations. Yet, they are the ones most connected to this study.

In stressing the importance of behavioral research and training in basic behavioral science, Kraut noted that it was NAS that first documented that 7 of the 10 leading causes of premature death in this country are due in large part to behavior and account for over 50 percent of mortality. ” If we offer our best

young scientific minds the opportunity to train in behavioral science, with all the sub- and cross- and inter-disciplinary perspectives that implies, we will be addressing many of the daunting health concerns facing our nation.”

So how can this committee succeed where their predecessors have not? The study is still in its early stages, Kraut noted. “I encourage you to continue your fact-finding and connect with the institutes most interested in your task. Go to the program people most involved with the substance of behavioral science. That’s where you are going to learn about cutting-edge research and where the next generation of cutting edge researchers ought to focus.”

BASIC NEEDS

Finally, there is the issue of the National Institute of General Medical Sciences, informally known as the “basic science” institute. NIGMS leadership has claimed that 40 percent of all NIH pre-doctoral candidates on training grants at NIH are supported by NIGMS. Yet NIGMS supports no research in basic behavioral science and no training in basic behavioral science, despite a statutory requirement to do so. NIGMS’ charter specifies that the institute’s mission is “the conduct and support of research, training, and, as appropriate, health information dissemination, and other programs with respect to general or basic medical sciences and related natural or behavioral sciences which have significance for two or more other national research institutes or are outside the general area of responsibility of any other national research institute.”¹ Yet of the \$2 billion plus of money spent on behavioral research and training at NIH, none is spent by NIGMS.

Kraut made this a strong part of his testimony. “NIGMS once did have a tradition of supporting behavioral training. Now, they claim that behavioral research falls outside their mission, and ignore all those who recommend it. Former NIGMS director Ruth Kirschstein spoke before you at your last meeting. She specifically said that there weren’t enough knowledgeable staff at NIGMS to oversee behavioral training. I don’t know about you, but that rang hollow to me. Don’t you think a nearly \$2 billion agency can get that knowledge?” he asked.

Kraut concluded on this point by emphasizing that it’s not only APS that is concerned with this situation. ” The issue of NIGMS and its snubbing of behavioral training has been a repeated subject in both chambers of Congress over the past five years. When the Senate Appropriations Committee gave NIH its budget for 1999, they encouraged NIGMS ‘to support behavioral research training as part of its mandate to support basic research training in all areas of health and related research,’” he pointed out. “In 2000, the House Appropriations Committee specifically linked NIGMS and behavioral research training, encouraging the institute to support behavior, and to consult with the science community and other institutes to identify priority areas. The Senate repeated these suggestions in their Appropriations reports for 2001 and 2002. In the 2003 report, the Senate went one step further, encouraging ‘the NIGMS to develop collaborations with other Institutes, such as the NCI and NIMH, and the Office of Behavioral and Social Sciences Research to fund basic research to integrate physiological knowledge of pre-disease pathways with behavioral studies.’”

“With its sizeable budget and resources, NIGMS should be on the cutting edge of basic behavioral research and training,” Kraut said to the committee. “I hope that your final recommendations include asking NIH to oversee the implementation of a research training program in behavior at NIGMS.”