Building research productivity in an academic setting

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This article describes the methods that one academic nursing unit used to move from receiving no National Institutes of Health funding to a top-20 ranking. A 1995 school task force recommended changes to move toward greater research productivity, including increased external funding. The school created a research infrastructure to support both the scientific development of research studies and the production of high-quality external grant applications. Barriers to research productivity were successfully managed. The research culture dramatically changed to emphasize innovation, autonomy, peer support and review, long-term investment in research productivity, penetration of research throughout school activities, and public display of research accomplishments. Academic nursing units can develop research cultures to support meaningful research that secures major external funding.

Nurses who work in academic settings with a research mission know they are expected to generate new knowledge through empirical inquiry. Institutions including the National Institutes of Health (NIH) are sources of significant research funding. Although such funds are available and doctoral-prepared nurses are working in many academic settings, the vast majority of externally spon-sored research projects are conducted in just a small number of such settings. This article describes the success of one school of nursing in moving from having no NIH funding to being ranked in the top 20 schools for NIH funding for consecutive years.

Background

Nurse scientists generate the knowledge for research-based practice. Major external funding is essential to conduct many important studies. Nurse researchers consider NIH a desirable agency because it funds large, diverse projects and because investigators of NIH-funded studies earn recognition and prestige for their scientifically meritorious projects that have passed critical peer review. The lion's share of NIH's funding for nursing research goes to but a few nursing schools.[1] The NIH has instituted measures to address this disparity (eg, R15 grants for which only schools with low levels of funding are eligible to apply), but these have met with little success.

The University of Missouri Sinclair School of Nursing's (MUSSON) early efforts to promote research began in the 1970s, followed by the formation of a research office in 1980. Although faculty secured a few grants, they primarily completed unfunded studies and published their findings in premier journals. By the early 1990s, faculty had stopped submitting grant applications to NIH. Several faculty were nearing retirement, making it unlikely that they would invest in building research programs. The faculty devoted considerable effort to revising curriculum, developing new master's programs and performing service activities. In 1995, the school's Dean, Toni Sullivan, who served from 1989–1999, began working with faculty members to explore ways of moving toward external research awards. MUSSON set its sights on securing NIH research funding.

Process

In 1995, a task force examined the school's research productivity and suggested future efforts. Task force members consulted with colleagues at institutions with significant NIH funding. Consultations with experts

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provided information about successful strategies that other institutions used. Members interviewed all of MUSSON's tenured, tenure-track and clinical faculty to discover their opinions about what facilitated or impeded research and to seek suggestions for a research infrastructure that would encourage successful research. Although clinical-track faculty generally do not expect to complete research, their inclusion in planning ensured diverse input and broad support for the planned changes. After several months of work, the task force recommended ways to redesign the research infrastructure, modify expectations regarding external funding and dramatically change the research culture.

Published papers have discussed the functions of research offices in schools of nursing and offered suggestions for developing successful grant applications. Specific techniques and tools for developing grant proposals are available.[2] Recent papers have described the continuum of services that research support offices may provide to facilitate research and grant development.[2–9] Multiple papers outline the staffing and job responsibilities of research office personnel.[2–4] These published papers focus on the services that such offices provide. However, fewer authors have discussed strategies to develop a stimulating intellectual environment that supports research productivity.[6] Likewise, tactics to overcome barriers to performing research are less frequently reported. This article describes strategies that the MUSSON used to move from receiving no NIH research funding to a top-20 ranking for NIH funding. We emphasize the development of a stimulating research culture and strategies used to overcome barriers to research productivity.

Creating a Research Infrastructure to Facilitate an Intellectually Stimulating Environment

The school of nursing's research infrastructure now includes research interests groups, consultation on research program development, statistical consultation, professional editing, research assistants, expertise on university and agency procedures, and assistance with the preparation of budgets and grant materials.[10] The services provided by the MUSSON infrastructure are similar to those described in published papers.[2–5] This discussion will focus on the contribution of these elements to an invigorating research climate.

Research Interest Groups. The task force strongly recommended that faculty decide on key topics to pursue through research interest groups (RIGs).[10] However, initial efforts to determine interest-group topics failed because a few individuals dominated these faculty-wide discussions. The faculty dominating the meetings were not the most active researchers, nor had they voiced commitment to increased research productivity. After several difficult meetings, the Dean ended the impasse by calling for RIG

concept papers. Only 2 groups submitted papers to the Dean, who in 1995 formed RIGs for gerontology and women's health and funded research assistants for both. A faculty member in each RIG volunteered to coordinate the groups, which specified meeting times when no other MUSSON committees were allowed to meet, in order to encourage faculty participation. RIGs initially convened monthly, though schedules have varied over the years. Several faculty members belong to more than one RIG and, after the initial year, graduate students also joined groups. RIGs have been central in facilitating research creativity and promoting an intellectually stimulating environment.[6]

The original Gerontology RIG included 8 faculty with advanced research skills and numerous publications in premier research journals. Members decided to move existing faculty research trajectories forward while enhancing the environment for gerontology research. This RIG has been successful far beyond our original vision. Signs of success include the faculty's many major external grants in this area, strong interdisciplinary linkages, additional tenure-track positions awarded to nursing and other disciplines in recognition of gerontology strengths, and a Center of Aging developed and housed in nursing. The MUSSON campus leadership in gerontology has had powerful effects on the school's research climate. Faculty members experience considerable pride in campus recognition that nurses lead MU gerontology efforts. Excitement about gerontology research is palpable.

Other RIGs (health behavior change, oncology) have formed as research areas developed. The active RIGs are an important component of the research culture because they provide a cadre of colleagues interested in individual faculty members' research interests. Often, co-investigators emerge from the RIG or are identified by the RIG. RIG members are aware of other members' interests and direct relevant information to them. RIG members provide peer review of manuscripts and grant proposals, thus providing a forum for intellectually stimulating discussion.

Associate Dean for Research. The Associate Dean for Research focuses on enhancing and promoting the research milieu, developing systems to support research productivity, and assisting new researchers in developing strong research programs. Her instrumental tasks are similar to that described in the literature.[2,3] Considerable effort focuses on creating an intellectually challenging and rewarding environment. She interviews potential faculty to assess their research abilities, interests, and potential funding for their areas of science. These interviews also provide an opportunity to assess whether the candidate will find colleagues with both shared and divergent interests to stimulate the new faculty member's creativity. She meets with new faculty monthly to help them develop a research trajectory