



Education and Training / Formation et perfectionnement professionnel

Barriers to Resident Research in Radiology: A Canadian Perspective

Kate Hames, PhD, MD^{a,*}, Michael Patlas, MD, FRCPC, FSAR^b,
Richard Duszak, MD, FACR^c

^aDepartment of Radiology, McMaster University, Hamilton, Ontario, Canada

^bDepartment of Radiology, McMaster University, Hamilton General Hospital, Hamilton, Ontario, Canada

^cDepartment of Radiology and Imaging Sciences, Emory University Hospital, Atlanta, Georgia

Abstract

Purpose: The study sought to identify and characterise barriers to research for Canadian diagnostic radiology residents and suggest potential solutions to enhance future research success.

Methods: Institutional research board approval was obtained. Electronic surveys were solicited from all postgraduate year 2-5 diagnostic radiology residents at all 16 programs across Canada. The survey focused on key factors inhibiting research during training.

Results: Of all 400 Canadian diagnostic radiology residents, 88 (22%) responded. Of respondents, 86% reported research experience before residency, with 19% holding a nonphysician graduate degree. All indicated that research was a requirement for completion of their residency. The most important reported factors limiting resident research were time constraints (67%), personal disinterest (32%), and inadequate mentorship (32%). Although 44% reported dedicated residency program research training, 40% reported no such opportunities. Among the various time constraints, respondents cited studying demands (61%), on-call demands (52%), and daily clinical duties (38%) as strong or significant barriers to research. Most (63%) indicated their program provided at least some protected research time, but 21% were not aware of such protected time availability. When available, protected research time was modest, and ranged from 0.5 days/month to 3 months, with the majority of respondents citing 1 month of protected research time.

Conclusions: Diagnostic radiology residents in Canada report numerous barriers to research. Programs seeking to enhance radiology research should focus on providing appropriate training, protected time, and mentorship.

Résumé

Objet : L'étude vise à cerner et à caractériser les obstacles à la recherche pour les résidents en radiologie diagnostique au Canada, ainsi qu'à suggérer des solutions pour accroître le succès de la recherche.

Méthodes : L'étude a été approuvée par le comité de recherche de l'établissement. Des questionnaires électroniques ont été transmis à tous les résidents de deuxième à cinquième année des 16 programmes de radiologie offerts au Canada. L'enquête mettait l'accent sur les principaux facteurs nuisant aux activités de recherche durant la formation.

Résultats : Des 400 résidents en radiologie au Canada, 88 (22 %) ont répondu au questionnaire. De ces participants, 86 % ont déclaré avoir pris part à des projets de recherche avant leur résidence, et 19 % étaient titulaires d'un diplôme d'études supérieures dans un autre domaine que la médecine. Tous ont indiqué que la recherche figurait parmi les exigences à satisfaire pour terminer leur résidence. Les plus importants facteurs limitant les activités de recherche durant la résidence étaient les suivants : manque de temps (67 %), manque d'intérêt personnel (32 %) et mentorat inadéquat (32 %). Bien que 44 % des participants aient déclaré que les programmes de résidence comprenaient une formation spécialisée en recherche, 40 % ont affirmé le contraire. Comme raisons principales de leur manque de temps pour les activités de recherche, les participants ont invoqué les études (61 %), le travail sur appel (52 %) et les tâches cliniques quotidiennes (38 %). La plupart (63 %) des résidents ont indiqué que leur programme prévoyait un certain temps pour la recherche; toutefois, 21 % n'étaient pas au courant que du temps de recherche leur était accordé. Le temps alloué à la recherche était minimal, allant de 0,5 jour par mois à trois mois; la majorité des répondants ont toutefois déclaré que leur programme leur permettait de consacrer un mois à la recherche.

* Address for correspondence: Kate Hames, PhD, MD, McMaster University, 1280 Main Street West, Hamilton, Ontario L8S 4L8, Canada.

E-mail address: kathleen.hames@medportal.ca (K. Hames).

Conclusions : Les résidents en radiologie diagnostique au Canada signalent de nombreux obstacles aux activités de recherche. Les programmes qui souhaitent améliorer la recherche en radiologie doivent offrir aux résidents une formation appropriée, du temps et du mentorat.
© 2018 Canadian Association of Radiologists. All rights reserved.

Key Words: Resident; Research; Barriers

Given the exponential rise in technological advances in diagnostic imaging over the past 30 years, radiologists have access to vast opportunities to participate in a wide array of impactful research. The investigative potential for radiology is immense, and includes not only the development of new imaging technologies and interventional procedures, but also the use of medical imaging to further bioscientific advancements [1,2]. However, to fully benefit from what Thrall [2] described as the “tsunami” of technology, it will be increasingly important that radiology departments promote a culture of research, particularly at the resident level. This includes emphasizing mentoring and training residents in scientific inquiry and the methodologies of knowledge acquisition. A thorough understanding of the fundamentals of scientific investigation and critical analysis is fundamental to the education of all radiologists. Research training not only promotes future inquiry, but also lays the foundation for lifelong learning and intellectual rigor fundamental to the daily practice of radiology. The future of the discipline will ultimately depend on the critical thinking skills and scientific inquiry of today’s residents, who will ultimately become tomorrow’s leaders.

Although research is fundamental to the ongoing evolution and success of all medical specialties, radiologists face unique barriers to research that threaten to impede the growth of the discipline and displace radiologists as leaders in their field. A recent consensus report published by Canadian, UK, and U.S. radiologists noted that radiology has fallen behind other specialties when it comes to research participation and publication [3]. Lack of departmental support, the view of radiology as a mere service provider, disrespect of radiology by other investigators and clinicians, and an increasing work load with decreasing time away from clinical duties are all key factors limiting successful research in radiology [3,4]. However, to combat these barriers, it is increasingly important to foster a strong research environment at the resident level with emphasis on innovation, critical analysis, and interdisciplinary collaboration.

As in the United States [5] diagnostic radiology residents in Canada are required to participate in research to demonstrate competency in the role of “Scholar,” as outlined by the Royal College of Physicians and Surgeons of Canada [6–8]. To satisfy this requirement, residents are expected to contribute to the development, application, and dissemination of new knowledge [6–8]. However, it is uniquely difficult to conduct high-quality research during residency training. Obstacles include lack of time, inadequate mentorship, personal disinterest, lack of program support, and little to no training in research design and statistical

analysis. Faculty in radiology departments also face similar barriers to assist with resident research, including limited time to serve as research mentors, lack of departmental support and recognition, limited funding, and lack of a cohesive research curriculum [4,9].

Prior authors have examined challenges related to resident research in the United States [10–14], but such challenges in other countries have received little attention. The aim of this study is to identify and characterise barriers Canadian diagnostic radiology residents face in their attempts to conduct research during residency training. A more thorough understanding of common challenges could lead to the implementation of practical solutions at the individual trainee, residency program, and national levels.

Methods

Institutional Research Ethics Board approval was obtained. An online survey was sent to the program directors of all 16 radiology programs in Canada along with an email asking the directors to provide more information about their programs and forward the survey to their residents. A total of 13 program directors responded. Nuclear medicine residency programs were not included in this survey. The program directors were asked to report the total number of residents in their programs, number of postgraduate year (PGY) 2-5 residents, and gender composition of those residents. The program directors were also asked to distribute the online survey, along with an email explaining the study, to all PGY2-5 residents in their program (PGY1 residents were excluded, as radiology training does not typically begin until the second year of postgraduate study). The survey was available from March 1 to July 31, 2017. Participants were informed that the survey was entirely voluntary and completely anonymous, and that information would be used only for research purposes. The investigators were blinded about all identifying details of individual resident responses (eg, home university, PGY status).

The online survey consisted of 14 questions related to resident demographics, previous research experience, and publication of resident research projects, as well as a variety of questions regarding perceived barriers to conducting research and ones pertaining to competing time commitments. The survey questions were derived from both an informal survey of residents in our home program as well as from literature pertaining to conducting research during residency training [10,15,16]. The survey was designed and administered using a SurveyMonkey platform. Descriptive statistics were reported.

Download English Version:

<https://daneshyari.com/en/article/8821152>

Download Persian Version:

<https://daneshyari.com/article/8821152>

[Daneshyari.com](https://daneshyari.com)