Academies in Health Professions Education: A Scoping Review

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Abstract

Purpose

Thirty years ago, academies were conceived as a sociocultural approach to revitalize the teaching mission of medical schools and to promote educators' career advancement. The academy movement has grown rapidly and now reaches a broad range of health professions education organizations. The authors conducted a scoping review to map the literature and describe the evidence that guides the formation of new academies and justifies the continuation of existing ones.

Method

The authors searched MEDLINE (via Ovid), Embase (via Elsevier and Ovid), CINAHL (via EBSCOhost), and Web of Science (via Clarivate Analytics) from inception through March 6, 2020, for publications regarding academy-like organizations. They mapped the relevant literature using logic modeling as an organizing framework and included the mission, resources, activities, output, outcomes, and impact of the included academies.

Results

Of the 513 publications identified, 43 met the inclusion criteria, the oldest of which was published in 2000. Most publications were either case reports or perspective/opinion pieces (26, 57.8%), while studies presenting empirical findings were less common (11, 24.4%). Publications showed that academies were diversifying and increasingly were part of a broad range of organizations, including departments, hospitals, health science campuses, and national organizations. The mission, resources, and activities were similar across academies. Evaluation studies were largely limited to process measures, and rigorous studies examining outcomes (i.e., changes in academy participants) and impact on the organization at large were rare.

Conclusions

The increase in the number of academy-related publications parallels the accelerating speed of the academy movement. To sustain this movement, rigorous studies must provide evidence that academies contribute to the revitalization of organizations' teaching mission and bring about an academic culture where educators thrive and where education is a legitimate career path.

Academies of health professions educators are a relatively new but growing phenomenon. The Medical College of Wisconsin pioneered such an academy with the establishment of its Society of Teaching Scholars in 1990 as part of a larger strategy to improve the academic education culture.[1,2] The number of these academies initially increased gradually, reaching 21 in 2005,[3] before quickly growing to 36 within a few years.[4] In 2021, more than 70 organizations are members of the Academies Collaborative (https://www.academiescollaborative.com); most have launched their academies although some are still in the planning phase. Irby and colleagues[5] referred to the increasing momentum of academies as "the academy movement," and Wartman[6] argued, as have others,[2] that academies are a sociocultural approach "to restore interest, credibility, and intellectual standing to the teaching mission."

For the purposes of our review, we defined an academy as a formal member organization of educators who are recognized for their contributions to the institution's educational mission and who serve specific functions to the benefit of other educators. An academy is a functioning organization with designated leadership and dedicated resources, "not simply a group of recognized faculty."[3] Our definition, which builds on the definitions offered by others,[3–5] is based, in part, on our familiarity with current Academies Collaborative members. It departs from traditional definitions in 2 ways: (1) academy members are not limited to "distinguished" educators; and (2) an academy can be situated in a variety of organizations besides medical schools, including professional organizations, departments, and hospitals.

The academy movement arose during a time in which the predominant culture in academic medical centers valued "traditional" research, as it was seen as a potential source of funding that could supplement clinical revenue and was regarded as providing opportunities to discover new knowledge. In contrast, teaching was generally seen as a distraction, a cost expenditure, and a burdensome obligation to merely "transmit" knowledge to students.[2,7] As the disenfranchisement of teachers in higher education started to be recognized as a threat to the education mission of medical schools, the scholarship of teaching was introduced as a legitimate form of scholarship.[8] Pleas were made to create a national center for health professions education (HPE) research

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to establish educational research "as part of the academic mainstream."[6,9] This backdrop fueled a groundswell of support for cultural change and structural reform to "reinvigorat[e] the educational mission of academic medicine,"[5] to advocate for faculty devoted to teaching, to stimulate educational innovation, to support educational scholarship, and to strengthen teachers' professional identity.[10]

Spearheaded by the Association of American Medical Colleges' Group on Educational Affairs, the field gradually took action in the early 2000s and embraced several avenues to restore the stature of educators in realizing the educational mission of medical schools. These included faculty development programs and fellowships in medical education,[11] awards for clinician-educators,[12] documentation guidelines and quality criteria for educational scholarship,[1,13] inclusion of teaching portfolios in faculty dossiers,[2] peer-reviewed publication outlets for teaching products,[14–16] and the establishment of a clinician-educator promotion track.[2] The academy movement found its footing in the Academies Collaborative founded in 2002 by 2 trailblazing institutions: the University of California, San Francisco, and Harvard University.[17]

As interest in academies grows so does scholarship on academies. Some publications provide helpful descriptions of individual academies (e.g., Cooke et al[18]) and others examine the academy movement from a national perspective (e.g., Searle et al[4]). To our knowledge, however, no comprehensive review of the academy-related literature exists. Thirty-two years after the inception of the first academy, it is time to take stock and examine what the current literature can offer to guide the development of new academies and to justify the continuation of existing ones.

To this end, we conducted a scoping review to "map the literature … and to identify key concepts; gaps in the research; and types and sources of evidence to inform practice, policymaking, and research."[19] Specifically, the purpose of this scoping review is to describe the extent and nature of publications regarding academies and to identify gaps in published research.

Method

We conducted our scoping review in concordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews (PRISMA-ScR)[20] and followed the framework introduced by Arksey and O'Malley[21] and enhanced by Levac and colleagues.[22]

Identification of relevant publications

Academy-like organizations are described in the HPE literature with various monikers (besides "academy") such as: "society," "institute," and "program" (see e.g., Irby et al[5]). Conversely, entities are commonly called "academy" or "society" but serve different purposes than the academies that were the focus of our review. Using our modified definition (see above) as a starting point, we iteratively developed inclusion and exclusion criteria. Specifically, we included publications and abstracts that described, examined, referred to, or commented on an entity that:

1. Is situated within an HPE organization, such as a medical school, residency program, clinical department, hospital, health sciences university, specialty society, or national HPE organization
2. Promotes the educational mission of the parent organization and career paths of its faculty/members by recognizing excellence in teaching, curriculum innovation, and educational scholarship
3. Has dedicated resources for activities
4. Undertakes activities to support its mission
5. Is a membership organization with criteria for membership
6. May or may not have an application/selection process
7. Expects or requires its members to participate in and/or contribute to its activities for a period of time

Our definition excludes faculty development courses, fellowships, and certificate programs. Even though they are academy-like organizations, they lack the longitudinal involvement of faculty and typically involve cohorts that disassemble upon completion of the program.

We searched MEDLINE (via Ovid), Embase (via Elsevier and Ovid), CINAHL (via EBSCOhost), and Web of Science (via Clarivate Analytics) from inception through March 6, 2020. The search was developed and conducted on March 29, 2019, by a professional health sciences librarian and updated on March 6, 2020, by one of us (C.S.D.). It comprised keywords and associated synonyms related to each concept of teaching and academies, including the following: teaching, teachers, education, educators, health professionals, medical educators, medical science, scholars, scholarship; academy, academies, institute, society, community, and collaborative. Searches were restricted to the English language. We supplemented the database searches by exploring gray literature resources (conference abstracts, medical education association websites, and dissertations/theses repositories), hand-searching personal libraries, and through citation-tracking using the reference lists of the included publications. See Supplemental Digital Appendix 1 at http://links.lww.com/ACADMED/B112 for our reproducible search strategies.

Our screening process included 2 steps. First, at least 2 team members (S.U., M.-J.H., or K.N.H.) screened the titles and abstracts of all articles identified during our database searches and designated each publication as "reject" or "potentially include." Disagreements were discussed and resolved. Next, the full texts were read by 2 team members (S.U., M.-J.H., or K.N.H.) and were included or excluded according to our evolving criteria listed above. The entire team discussed instances where one of us was unsure or when there was disagreement about the designation of articles, and we resolved these by team consensus.

Citation management

We used the online version of EndNote (Clarivate Analytics, Philadelphia, PA) to manage the citations retrieved by our librarian and a Google Drive folder (Google, Mountain View, CA) to share PDF files of the articles with our team members.

Organizing framework for data extraction and analysis

In 2004, Irby and colleagues[5] described the characteristics of 8 academies in the United States. These characteristics

included their mission, activities, funding, and impact. Subsequent national surveys of academies[3,4] examined similar characteristics, all of which represent elements of a logic model. Thus, we chose logic modeling as a framework to capture how academies were described in the literature and to organize our data. For institutions that are developing academies, a logic model is a powerful device to justify a budget and to create a transparent, comprehensive implementation and evaluation plan that logically links the input of resources, academy activities, specific deliverables ("output"), outcomes, and impact on local culture.[23] A logic model is a theory in action that rests on if-then statements (e.g., if certain resources are made available then certain activities can be undertaken) and promotes understanding of why or how academies have an impact. Our charting tool contained the following logic model elements:

1. Description of the problem that an academy aims to address (typically in the form of a mission statement).
2. Resources provided to an academy.
3. Activities that an academy undertakes if resources are provided.
4. Output: the number of products and services resulting from activities or the number of participants involved in the activities. These are typically expressed in absolute numbers (e.g., number of publications, number of workshops offered, number of participants). Output measures do not reflect the effects of or change achieved by an academy.
5. Outcomes: intentional, measurable changes that are brought about by engagement with an academy. These changes are observed in academy members and in other faculty who engaged in academy activities. Typically, but not always, outcomes are measured with quantitative methods. Examples include: an increase in publications, earlier promotion of clinician-educators, increased satisfaction in teaching, and an increase in curricular innovations.
6. Impact: the broader effect of an academy that occurs as a result of the outcomes. The impact is often described in terms of the problem/need that an academy aims to address. The impact can be on an individual level (e.g., improved self-esteem of educators, feeling part of a community of educators) or an organization level (e.g., a change in culture or a reinvigorated educational mission). Typically, but not always, impact is examined with qualitative methods.

We collectively created our charting tool in Google Forms and refined it after 3 of us (S.U., M.-J.H., and K.N.H.) tested its utility with 10 purposively selected papers that included opinion pieces, case studies, and empirical research. Besides the logic model elements described above and standard publication information, we also captured type of scholarship, theoretical frameworks cited by authors, and characteristics of academy membership and parent organization. Publication characteristics were extracted by E.H.; the remaining charting was done independently by 2 team members (S.U., M.-J.H., or K.N.H.). Discrepancies were then discussed and resolved. We analyzed quantitative data with frequency counts and descriptive statistics. Three of us (S.U., M.-J.H., and K.N.H.) collaboratively used thematic analysis to organize the qualitative, narrative data.

Results

We identified a total of 513 publications. After applying our inclusion and exclusion criteria, the final dataset consisted of 43 publications (35 articles, 5 abstracts, and 3 letters to the editor).[1–6,10,17,18,24–57] The entire study flow is depicted in Figure 1.

Publication characteristics

Table 1 lists the characteristics of the 43 included publications. As we anticipated, no literature reviews were identified. Most publications (26, 57.8%) were case reports or opinion pieces, and 11 (24.4%) presented empirical findings (2 publications were coded in 2 categories so n = 45, see Table 1). The majority of publications (34, 79.1%) originated from the United States. The earliest work we could identify was a case study by Simpson and colleagues[2] published in 2000 describing the establishment of the first academy in the United States. Since then, there has been a steady increase in publications with 16 (37.2%) published in the last 5 years. While 12 publications (27.9%) described academies housed within a school of medicine or other health professions schools (including a school of veterinary medicine,[24] a chiropractic college,[25] and a dental college[26]), others pertained to academies that were university-wide, in a hospital or clinical department, or part of a national organization. For example, we found publications pertaining to academies serving members of national specialty organizations in emergency medicine,[27,28] surgery,[29] rheumatology,[30] and gastroenterology.[31]

Mission statements and academy aims

Descriptions of academies' missions (or the problems academies aimed to address) coalesced around the central themes originally put forth by Irby and colleagues[5]: reinvigorate the educational mission and change the culture of academic medicine. These central themes were operationalized into several subthemes (see Figure 2): support the career development of educators, build community, recognize and value teachers, advance educational scholarship, improve teaching skills, and stimulate innovation.

Figure 3 summarizes how the 43 publications operationalized each element of the logic model: the academies' resources, activities, deliverables (output), outcomes, and impact. A complete and more detailed version is provided in Supplemental Digital Appendix 2 at http://links.lww.com/ACADMED/B112.

Theoretical frameworks

Twelve publications[1,2,4,5,10,26,34,36,37,39,49,55] used theories or models to explain or predict phenomena related to academies. We identified 4 general areas represented by these frameworks: identity formation, organizational culture, diffusion of innovation, and organizational change. For example, Searle and colleagues[4] used Dearing's evolution of diffusion and dissemination theory[58] to explain the rapid rise of academies. In addition, Simpson and colleagues[2] used Bolman and Deal's framework for analyzing cultural change[59] and Kotter's 8-step process to describe organizational change.[60]

We also identified a fifth category—educational scholarship, curriculum, and evaluation—that included models and criteria commonly used to guide scholarly work in health sciences

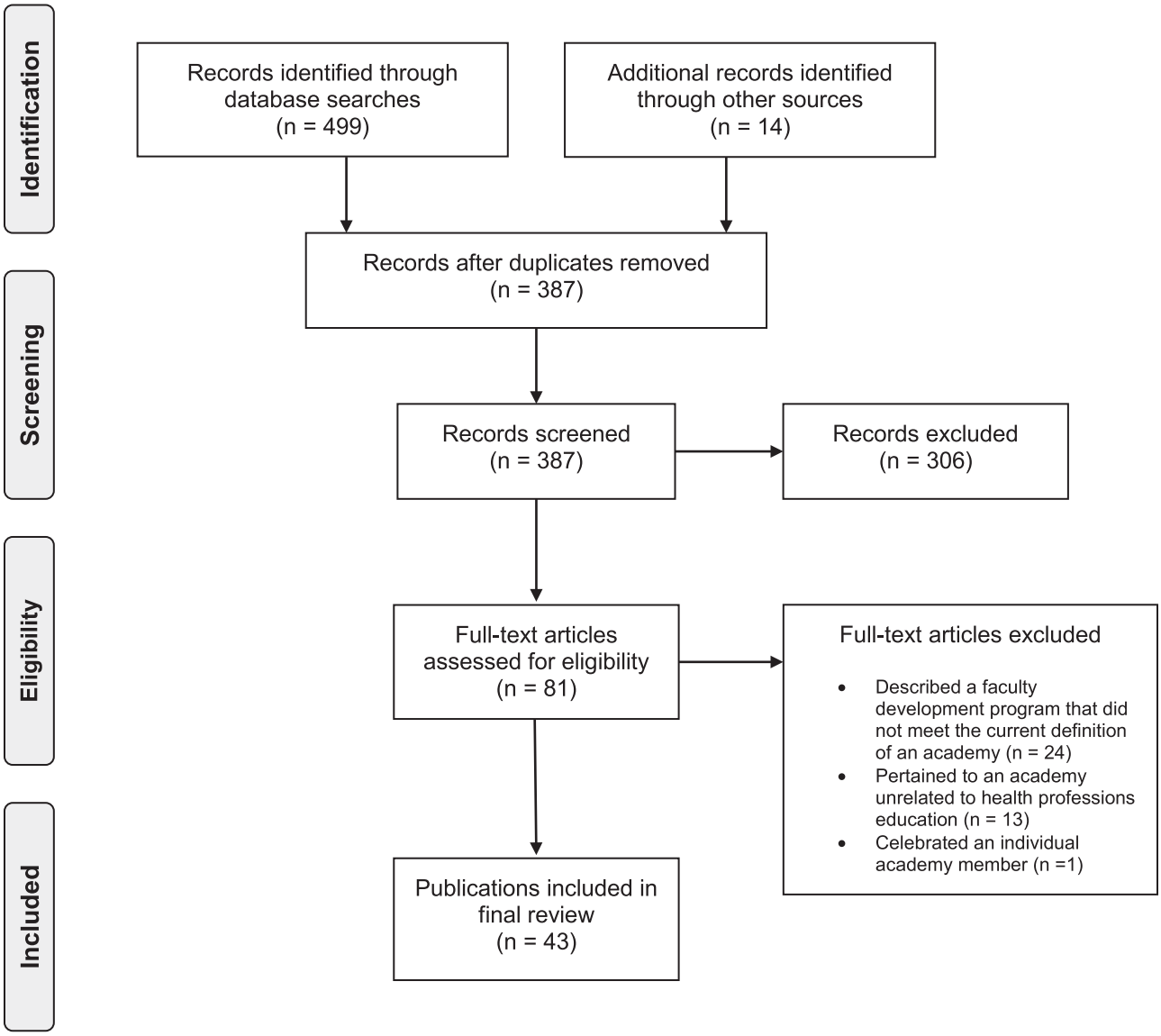

Figure 1 Article search and selection process for a scoping review of the literature on academies in health professions education. A detailed search strategy can be found in Supplemental Digital Appendix 1 at http://links.lww.com/ACADMED/B112.

education. Although these models (e.g., Kirkpatrick Evaluation Model, https://www.kirkpatrickpartners.com/) may not meet the strictest definition of theoretical framework, they were used to guide the authors' work.

Characteristics of academies

Fifteen publications (34.9%) described the governance of an academy,[1,5,17,18,24,28,29,33–36,39,43,52,56] including executive, standing, and advisory committees. Twenty-one publications (48.8%) discussed membership and selection criteria. A few of these described academies with multiple categories of membership[28,38,43,56] (e.g., scholars, fellows, distinguished scholars, and associates in Harvard's academy[56]), but most pertained to academies with one type of membership,[1,2,4,5,18,26,31,33,35–37] including several that did not require an application process but welcomed everyone with teaching responsibilities.[24,29,39,43,46,52] Seven publications (16.3%) outlined a membership renewal process,[18,32,33,35,38,43,56] and 6 (14.0%) stated there was a service obligation.[1,18,28,33,38,56]

Discussion

In this scoping review, we identified 43 publications that discussed academy-like structures in HPE organizations. These articles were published in a broad range of journals and offered guidance for prospective and existing academies on how to evaluate or enhance current operations. More than half were case reports or opinion pieces. Empirical studies were less common, but we noted an encouraging uptick in such work published in the last 5 years.[25,36,47,48,50,52]

The vast majority of publications described academies in the United States. Originally, these academies were exclusively situated in medical schools. Starting in 2007, 1 year after the inception of the Academy of Medical Educators in the United Kingdom,[43] scholarship emerged regarding academies in other countries and other types of organizations or organizational levels, such as hospitals, interprofessional health campuses, and national organizations. To accommodate these different contexts, alternate

Table 1

Characteristics of Publications Regarding Academies in Health Professions Education, 2000–2020

Characteristic	No. (%)	References
Publication type (n = 45)[a]		
Case report	17 (37.8)	1,2,5,18,24,27,28,31,32–40
Perspective/Opinion	9 (20.0)	6,10,32,41–46
Quantitative	4 (8.9)	4,18,25,47
Qualitative	3 (6.7)	36,48,49
Mixed method	4 (8.9)	30,50–52
Other	8 (17.8)	3,17,26,29,53–56
Year of publication (n = 43)		
2000–2005	8 (18.6)	2,3,5,6,17,18,35,56
2006–2010	9 (20.9)	1,4,27,29,42,43,45,46,57
2011–2015	10 (23.3)	26,30,31,33,37,41,49–52
2016–2020	16 (37.2)	10,24,25,28,32,34,36,38–40,44,47,48,53–55
Country of origin (n = 43)		
United States	34 (79.1)	1–6,17,18,24–28,30,31,33–41, 44,45,47,48,50,51,53–56
United Kingdom	5 (11.6)	32,42,43,46,49
Australia	2 (4.7)	29,57
Canada	1 (2.3)	10
Singapore	1 (2.3)	52
Multi-institutional authorship (n = 43)		
Yes	19 (44.2)	3,5,10,17,27,28,30,31, 33,38,39,41,42,47–49,51,52,56
No	24 (55.8)	1,2,4,6,18,24–26,29,32, 34–37,40,43–46,50,53–55,57
Where academy is situated (n = 43)		
(Inter)national organization	11 (25.6)	27–29,31,32,42,43,46,48,49,57
University-wide organization	6 (14.0)	33,36,39,40,52,54
School-based organization	12 (27.9)	1,2,17,18,24,26,34,35,50,53,55,56
Department- or hospital-based organization	5 (11.6)	30,37,38,41,51
Insufficient information provided	9 (20.9)	3–6,10,25,44,45,47

[a]There were 2 publications[32,36] that were coded in 2 categories.

approaches to academy membership were needed, from "open-to-all" to a "select group" of distinguished educators. These evolving academy structures and membership approaches were highly organization-specific and broader than previously published definitions of HPE academies.[3–5]

Despite the diversification of academies, our review demonstrates that their core mission remained largely the same: to reinvigorate the organization's teaching mission by supporting educators (see Figure 2). When articles mentioned specific faculty roles or groups, they most often described clinician-educators. We speculate that this increasing prevalence in the literature may parallel the growth of clinician-educator promotion pathways.[47] It also reveals that less attention has been paid to initiatives that support and advance PhD basic science educators. As a 2018 survey confirmed,[61] basic science educators continue to fall behind in support and recognition for their teaching. If academy initiatives exist to fill this gap, they are underrepresented in the literature.

We found an abundance of articles describing the development and implementation of academies. This may reflect the lighter burden of writing a case report compared with planning and conducting a rigorous evaluation study. Clearly, interest in practical information about the operations, benefits, and other characteristics of academies persists more than 30 years after the launch of the first academy.[1] Our logic model framework, however, revealed that other aspects of academies were rarely addressed in the literature. Most notably, the evaluation of academies was largely limited to output measures (e.g., number of members, number of workshops, etc.) and rarely included outcomes that examined the changes in academy participants or the impact on the organization at large. As Cofrancesco and colleagues noted, "A key lesson is the need to collect more and varied data, at baseline, before implementing new programs and to have a robust evaluation plan."[34] To this end, academy leaders will likely need the support and expertise of seasoned program evaluators and educational researchers.

Similarly, the impact of academies on organizations at large remains understudied, despite a call for such work by Dewey and colleagues in 2005.[3] As Corral and colleagues stated, "Understanding the impact of [an academy] on organizational culture is particularly important when [its] aim [is] to reinvigorate the educational mission."[36] Evidence of the "intangible effects [of academies] in considering 'return on investment'"[50] is paramount to persuade those who hold the purse strings to continue funding academies. While some articles[18,32] present anecdotal evidence or describe the impact of academies in aspirational terms, we found only a few rigorous studies of impact.[36,50] For this, academy researchers likely need to resort to qualitative methodologies in which theoretical frameworks are critical. Although 12 articles in our review mentioned a theoretical framework or model, few studies meaningfully applied them and can serve as exemplars for future academy-related research.[2,4,36,39,49]

Besides the dearth in outcomes and impact studies, our scoping review revealed additional gaps in the published research, suggesting the following opportunities for future investigation. First, our review revealed the expansion of the academy model beyond medical schools, serving interprofessional campuses[36,39,40,52] and other health professions schools. Thus, there are opportunities for comparative study

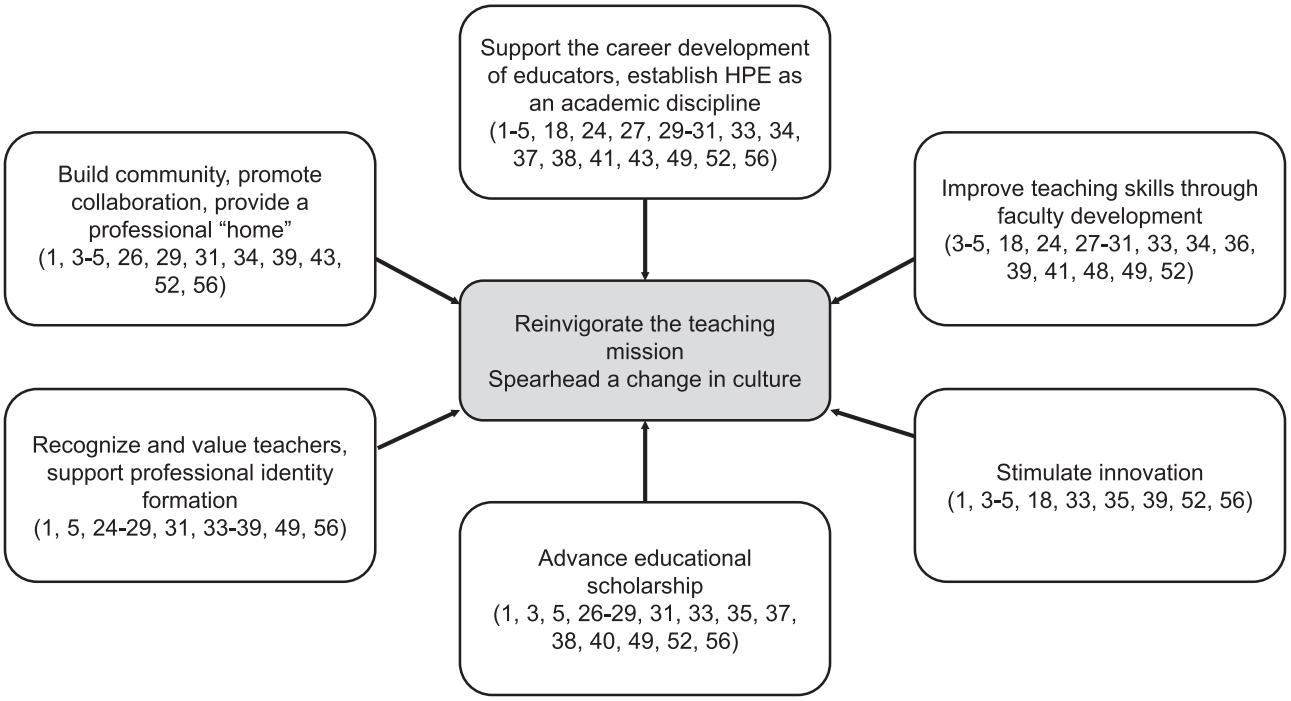

Figure 2 Results of a thematic analysis of the mission and goals of HPE academies as described in the literature, 2000–2020. Corresponding references are included in parentheses. Abbreviation: HPE, health professions education.

and inquiry about the potential contributions of academies to HPE.

Second, the most recent survey of academies published in 2010 by Searle and colleagues[4] does not reflect the variety in academies that have been established in the United States since. While their core mission remains supporting the work of teachers and promoting their career paths, organizations differ in the ways in which they operationalize the concept of academies to fit their needs. This trend warrants a new comprehensive survey to capture these variations in the academy model and their institutional contexts.

Third, ongoing support for existing academies has become increasingly relevant now that the academy movement has entered its fourth decade. How do we ensure academies remain a viable model and get continued leadership support? How do we address "founders' fatigue" or navigate a change in school leadership? While several articles suggested ways to

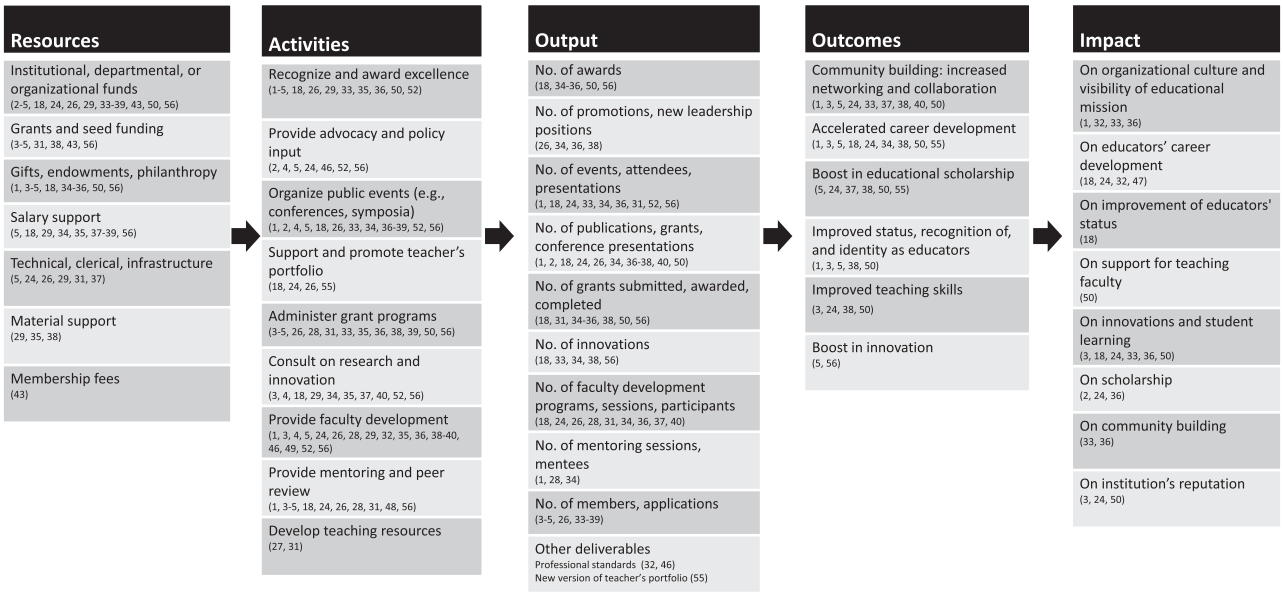

Figure 3 Results of a scoping review of the literature on academies in health professions education organized by a logic model framework, including resources provided to academies, activities undertaken by academies, output (i.e., number of products, services, and participants), outcomes (i.e., changes brought about by engagement with an academy), and impact (i.e., broader effect on the organization at large). Corresponding references are included in parentheses.

address sustainability—such as aligning academy activities and outcomes with the institutional priorities,[24,27,31,37–39] bringing in new academy leadership with a fresh vision,[24] and ensuring sufficient resources with a line item on institutional budgets[39]—none provided evidence that these strategies were effective or justified. Academies require substantial material, human, and financial resources, and, as we argued here, outcomes and impact studies are critical to establish that such investments are worthwhile and justified.

Finally, we found that identity formation is a topic that is gaining traction. For better or worse, the institutional environment affects how teachers develop their identities as educators and influences their career choices, productivity, and work satisfaction.[10] A seminal paper by Sabel and Archer[49] unveiled an identity crisis and an "ugly duckling" syndrome among HPE educators. To address this, some have argued[1,44] that faculty development programs in general and academies specifically build communities of practice and promote a common identity among participants as members of the teaching profession. And indeed, in a survey of academy members at a teaching hospital,[38] a majority agreed that participation in their academy had a positive impact on their identity as an educator. This fledgling area of research deserves more attention.[10,49]

Our review has several limitations. First, we excluded articles not published in English, so it is possible that we missed relevant papers pertaining to academies in non-English-speaking countries. Also, we did not include the optional sixth step of Arksey and O'Malley's framework[21] and did not seek input from stakeholders, which could have led to additional references. Second, a logic model is a linear representation of causal relationships. For instance, impact is conceived as an effect of outcomes. It is conceivable, however, that relationships are nonlinear and that other components of a logic model (or aspects of an academy) can have a direct impact on institutional culture. For instance, institutions implementing certain academy activities, such as faculty development workshops, can send a message to faculty that leadership cares about their professional development and thus can improve the institutional culture, regardless of the outcomes of the workshops themselves.

In conclusion, the literature we reviewed was dominated by descriptions of individual academies, pointing to a diversification of academy models and to an academy movement that is expanding its reach. Evidence that this movement brings about a durable change in culture in which the contributions of educators to an organization's teaching mission are recognized and valued remains elusive and is mostly anecdotal. A shift in scholarship is needed toward rigorous evaluation studies of the outcomes and impact of academies. Given the increasing variety in academy models, these studies must be supported by theoretical frameworks lest their findings apply only to a local, idiosyncratic implementation. With rigorous evaluation studies grounded in sound theoretical frameworks, the academy movement can demonstrate that it can affect a change in culture by restoring the teaching mission of academic medicine and elevating teaching as a legitimate academic career path.

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