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ORIGINAL CONTRIBUTION

Is it worth it? A qualitative analysis of the impact of medical education fellowships on careers

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Abstract

Objectives: Medical education fellowships provide training in teaching, assessment, educational program administration, and scholarship. The longitudinal impact of this training is unknown. The objective of this study was to explore the impact of medical education fellowships on the careers of graduates.

Methods: The authors performed a qualitative study with a constructivist-interpretivist paradigm using semistructured interviews in 2021. The authors used a purposeful randomized stratified sampling strategy of graduates to ensure diversity of representation (gender, region, fellowship duration, and career stage). Two researchers independently analyzed interview transcriptions using a modified grounded theory approach.

Results: The authors interviewed 10 graduates and identified three overarching concepts: motivations for pursuing fellowship, benefits of training, and drivers of career development. Graduates sought training because of their desire for growth and career preparation and at the advice of mentors. Fellowships provided knowledge and skills in a structured learning environment, supported by mentors and a collaborative community. Fellowship training shaped the careers of graduates by increasing their self-efficacy, enhancing their outcome expectations, refining their goals, and influencing their professional identity formation. They acquired expertise that prepared them for jobs, developed credibility, felt competitive in the job market, anticipated successful promotion, reached for greater goals, broadened their educational worldview, and evolved their professional identity as a result of fellowship training.

Conclusions: Fellowship training in medical education provides knowledge and skills, a structured learning environment, and important relationships that shape the careers of graduates by impacting their self-efficacy, outcome expectations, goal creation, and professional identity formation.

INTRODUCTION

The availability of formal postgraduate training in medical education grew significantly over the past few decades, resulting in the creation of more than 40 medical education fellowships in the field of emergency medicine (EM) alone.^{1,2} Medical education fellowships offer many advantages, including professional development, protected time, dedicated mentorship, and continued clinical practice, all of which are important to early career success in academic medicine.³⁻⁵ However, the impact fellowships have on graduates' careers is unclear.

Prior research attempted to assess the outcomes of medical education fellowships in a number of ways, including studies of the curricular structure of these fellowships and cataloging the publications and other academic achievements of fellowship graduates and by soliciting the opinions of academic chairs.^{2,4-10} Missing from this research are the perspectives of fellowship graduates on their own careers. They can also provide important insights to residents considering such training, inform departmental leaders contemplating a greater investment in medical education, and guide fellowship directors making iterative improvements to their existing curricula.

Social cognitive career theory has been used successfully to explore careers in academic medicine across multiple specialties, and it is likely an appropriate lens for assessing the careers of medical education fellowship graduates.¹¹⁻¹³ This model examines self-efficacy beliefs, outcome expectations, and goal representations to better understand critical developmental features of individual careers.^{11,14,15} We aimed to understand the motivations for pursuing a medical education fellowship and the impact of medical education fellowships on careers. To do so, we explored the perspectives of fellowship graduates using qualitative methods framed by social cognitive career theory.

METHODS

Study design

We conducted semistructured interviews with medical education fellowship graduates. We performed a qualitative analysis of those interviews using a modified grounded theory approach with a constructivist-interpretivist paradigm informed by social cognitive career theory.^{11,14-18}

Study setting and participants

All graduates of EM-sponsored medical education fellowships in the United States were eligible to participate. We identified graduates through email contact with fellowship directors as part of a previous outcome assessment of EM medical education fellowships.²

We employed a purposive randomized stratified sampling strategy to reduce bias and ensure diversity of representation.¹⁶ We

included the following strata: fellowship duration (1 year or 2 year), region (west, midwest, northeast, south), gender (male, female), and career stage (5 years or less from residency graduation, > 5 years). We divided graduates into these strata and then randomly sorted them. Many graduates were listed in multiple strata because we included them in any strata that matched their characteristics.

We then recruited potential participants in a stepwise fashion. As an example, we first invited Graduate A from Strata 1 on the randomly generated roster. If that graduate declined to participate or failed to respond after 1 week, we invited the next graduate. If the graduate agreed to participate, we included them as a representative in the other strata the individual represented. We stopped contacting eligible participants once we had a minimum representation of two graduates from each stratum, recognizing that a single individual may satisfy multiple strata. We planned to contact additional graduates only if we had not achieved saturation after the initial round of interviews.^{17,19}

Instrument development

We developed a new instrument after literature review to maximize content validity, with special attention to the core tenets of social cognitive career theory. We utilized open-ended questions to maximize the depth of response and ensure capture of unanticipated responses.^{11,14,15} The guide was read aloud among the study investigators for refinement of question phrasing, matching of content to construct, and overall quality. We piloted the instrument with a small sample of representative subjects to optimize response process validity. We made minor revisions for clarity based on feedback from pilot testing to optimize content and internal structure evidence. The final interview guide is available as Appendix S1.

Study protocol

We conducted semistructured interviews using the Zoom video conferencing platform.^{20,21} A single member of the study team (JJ) with advanced training and experience in qualitative research conducted all interviews. Each interview was approximately 30–60 min in length. During the interviews, JJ performed real-time member checking to ensure understanding of the intended meaning.²² All interviews were recorded and transcribed verbatim. Transcripts were reviewed, edited for accuracy, and deidentified prior to analysis. We uploaded all interview transcripts into Dedoose, a collaborative qualitative analysis software platform (<http://www.Dedoose.com>). We collected data between March and April 2021.

Data analysis

Two researchers experienced in qualitative methods (JJ and JR) independently performed the data analysis using a modified

grounded theory approach.¹⁶⁻¹⁸ The researchers performed both open and axial coding, examining data line by line to identify recurring concepts and assign codes.¹⁶⁻¹⁸ Following this review, the two researchers met to establish a final coding scheme and then independently applied that coding scheme to all transcripts. Overall inter-rater agreement was 93.7% (2974 codes agreed upon/3175 codes applied). The researchers resolved discrepancies through in-depth discussion and negotiated consensus. They further refined the codes into themes using the constant comparative method.²³

Reflexivity

We remained cognizant that the two investigators who performed the primary coding and analysis (JJ and JR) both completed 2-year medical education fellowships and are fellowship program faculty members; further, JR is a fellowship director.²⁴ These commonalities might have yielded homogenous author opinions about the data and analysis. To address this, we used a negative case analysis when we identified outlier data, allowed adjustments of discordant hypotheses as needed, and focused our analysis on what participants actually said rather than implied meanings during coding.¹⁶ To enhance the trustworthiness of our analysis, we used memos to record theoretical and reflective thoughts.¹⁶⁻¹⁸ The institutional review board of the David Geffen School of Medicine at UCLA approved this study.

RESULTS

Characteristics of study subjects

We invited 10 graduates to participate, five from 1-year fellowships and five from 2-year fellowships. All consented to be interviewed. We reached saturation after the eighth interview; however, we analyzed the remaining two interviews to ensure diversity of representation and confirm that no important themes were missed. We report the characteristics of participants in [Table 1](#).

We identified three overarching concepts from our participants' interviews: (1) Motivations for pursuing fellowship training, (2) benefits of fellowship training, and (3) drivers of career development ([Table 2](#)). Overall, participants were uniformly positive about their fellowship experiences and the value of fellowship training to their careers.

Motivations to pursue fellowship training

Social cognitive career theory helps to characterize "how career choices are made." We identified three main motivators for participants to pursue a medical education fellowship: desired growth,

mentorship, and career preparation. Most participants reported multiple motivating factors.

Desired growth

Participants pursued fellowships to address gaps in their own knowledge and improve their skills. One participant noted, "It was about the skill set and learning what I didn't know ... and I thought the best route to get that was to do a fellowship" (P4). Many participants were interested in gaining specific skills. About half of our participants had an occupational interest in education that informed their choice to pursue fellowship. They reported a love of learning and a love of teaching, and they saw fellowship as an opportunity to further pursue these intellectual interests.

Mentorship

Advice from mentors was identified as a strong motivator for participants to pursue fellowships. Said one participant, "There was definitely guidance from mentors at the time, [to do fellowship]" (P10). They also looked up to role models who held educational leadership positions and wanted to learn from them. The desire for mentorship in medical education was an important outcome expectation, and fellowship was a means to obtaining it. "[I wanted to] use the time to get some mentorship around professional development and medical education in academic emergency medicine" (P3).

Career preparation

Participants also sought fellowship training to prepare them for their future careers. In addition to advanced knowledge and skills, participants saw fellowship training as an opportunity to develop their niche, gain credibility, and expand their network. Some sought fellowship to "... develop a niche that would provide me career opportunities and credibility that would otherwise not be afforded to me without [fellowship]" (P5). Participants recognized that fellowships were increasingly becoming a requirement for certain academic jobs. Participants also sought fellowships for networking and collaborations in the field. Perceiving the value of an expanded network, one participant recounted, "I thought that [fellowship] would be a good launching point to collaborate with other learners and educators who are outside of my specialty" (P5).

Benefits of fellowship training

'How career success is attained' is central to social cognitive career theory. We identified three direct benefits of fellowship

TABLE 1 Characteristics of participants

	N (%) Total N = 10
Gender male	5 (50)
Region of fellowship	
West	3 (30)
Midwest	2 (20)
Northeast	3 (30)
South	2 (20)
Number of years since fellowship graduation, mean \pm SD	4.7 \pm 2.6
Current academic rank	
Instructor	2 (20)
Assistant professor	5 (50)
Associate professor	2 (20)
Professor	0 (0)
None	1 (10)
Current position*	
Residency program director	4 (40)
Assistant/associate residency program director	2 (20)
Medical education fellowship director	2 (20)
Clerkship director	1 (10)
Simulation director	1 (10)
Research director	1 (10)
Other	5 (50)
Number of peer-reviewed research manuscripts, mean \pm SD	14.2 \pm 10.9
Received grant funding for research	7 (70)
Duration of fellowship 2 years	5 (50)
Completed advanced degree as part of fellowship	5 (50)

*Individuals may hold more than one position.

training: knowledge and skills, a structured learning environment, and relationships.

Knowledge and skill acquisition

Medical education fellowships provided foundational training in learning theory and scholarship that helped prepare graduates for career success. Participants highlighted developing skills in learning theory, teaching, program evaluation, curriculum design, and scholarship. One participant stated that their “fellowship experience was very useful in terms of getting a solid introduction to things like curriculum design and foundational meta-literature, and ... the general skill set that people in academic medicine need to have” (P7). Knowledge gains in research and scholarship were similarly important to graduates. They discussed the “humbling experience” (P10) of learning to perform rigorous scholarship, while also lauding how a formal scholarship course was “a game changer ... in the way that I think about publication and the way that I think about projects” (P4).

Structured learning environment

Fellows felt that specific resources and curricular features within the learning environment were drivers of success. Protected time to learn new skills was important, as one described:

Truly having structure and protected time was invaluable ... just having a time that was built specifically to go over foundational knowledge and explore things that often we don't have the time to do when we are really overwhelmed with clinical or administrative responsibilities (P10).

The fellowship structure afforded participants opportunities to apply their new foundational knowledge and demonstrate learned skills. One participant described, “It really helped me put into practice things that I was learning in a way that I don't know I would have been able to have done if I didn't have the structure ...” (P10).

The apprenticeship model of fellowship training allowed participants the opportunity to step outside their comfort zone and

TABLE 2 Results of qualitative analysis

	Major themes	Subthemes
Motivations to pursue fellowship training	Desired growth Mentorship Career Preparation	
Benefits of fellowship training	Knowledge and skill acquisition Structured learning environment Relationships	Learning theory Teaching Curriculum design Program evaluation Research and scholarship Protected time Opportunities to apply knowledge and skills Exposure to breadth of career opportunities in medical education Titled administrative role Mentors Collaborative networks
Drivers of career development	Self-efficacy Outcome expectations Goals Professional identify formation	Career affirmation Competitive for jobs Career acceleration Successful promotion Focus goals Reach for greater goals Shift of goals from self-focused to other-focused Identification as an educator Recognition of interests and niche development Broadened educational worldview

learn from failures in an encouraging learning environment. One participant explained, "... there was an opportunity to take risks, knowing you had the safety net" (P6). When discussing a weekly review of their progress on manuscript writing, one participant connected the ways in which fellowship structure and encouragement from mentors were critical elements to the success of graduates:

[weekly meetings] really forced you to do some of that work that could otherwise get on the back burner. And then have all this positive affirmation around it, even if it was terrible, you know, people like "Oh, you got five paragraphs written, that's great. They're terrible, we're going to throw them

out, but you did it." And I think that can be really helpful and inspiring when you're first getting started (P9).

Additionally, the learning environment exposed fellows to the breadth of the field of medical education, "opening [their] eyes" (P4) to the broad range of possibilities within medical education. Fellowships "allowed individuals the opportunity to explore UME [undergraduate medical education], or GME [graduate medical education], or faculty development ..." (P4) locally, while also opening participants up "... to the idea that there are these larger national organizations that set priorities and help shape the way we think about EM education" (P9).

Formal administrative roles appointed during fellowship were helpful to career exploration, continued engagement in their work,

and self-efficacy. Being named to a titled role as a fellow, like acting assistant program director, allowed graduates to obtain "... hands-on administrative experience [that was] very important" (P5). Titled roles provided fellows experiences that they might not otherwise have had, while engendering a sense of legitimacy as a junior educator. One graduate explained, "I think a lot of doing a medical education fellowship ... is getting credibility, so I think the title contributes to that aspect" (P5).

Relationships

All 10 participants discussed the ways in which fellowship mentors and collaborative networks contributed to their success. The "focused mentorship" (P1) and "sheltering hand" (P6) that faculty provided during fellowship was critical to graduates' growth. In the context of growing as a didactic teacher, one graduate noted how "... having a very critical eye ... helped immensely, knowing that I was going to get really granular feedback" (P9). Participants also stressed the importance of the relationships developed outside of their fellowship mentorship structure, specifically communities of practice outside of emergency medicine and research networks for scholarship. They cited both the inspirational value of finding a tribe of "people out there who feel as passionate as I do about what most people would think are super nerdy things, who want to collaborate, who want to share ..." (P9) as well as the practical value of a larger network of colleagues. As one participant revealed, "I had no idea there was this other community out there ... And it turns out, having friends, good friends, is good" (P1). These relationships validated their sense of belongingness in the field and prepared them to participate in a broader community of practice. One graduate described how feeling "... an integration into a greater medical education community helped me learn about how to actually be part of that community" (P5).

Drivers of career development

Social cognitive career theory offers insights into "how careers evolve." When examining how the careers of graduates were impacted by fellowship training, we found evidence that aligned with the core domains of social cognitive career theory: self-efficacy, outcome expectations, and goals. Additionally, the theme of identity formation also emerged as an important outcome of fellowship training.

Self-efficacy

The knowledge and skills acquired during fellowship strengthened participants' self-efficacy. Participants discussed a gradual growth in their belief in themselves, feeling that they "... had things to contribute" (P7). One noted, "I had no goals, I had no experience, no exposure, no knowledge, no skills ... at the beginning of fellowship. Then

two years later, I had done all these things and gained these tools and this confidence and this knowledge" (P1). Their fellowship activities translated to practical skills that increased their confidence. Fellows developed the skills of researchers, teachers, and leaders, and these abilities shaped what they thought of themselves. These skills led to a feeling of expertise, which further increased their self-efficacy. Having "... junior learners and other faculty come to me for advice" led one participant to feel like they were "bringing some sort of unique expertise to the table" (P5). Another participant shared an anecdote that revealed their own recognition of their newfound ability:

... There was one point where just hearing the words coming out of my mouth, I was thinking like, "where did I learn how to talk like that?" It was something ... that I just wouldn't have been capable of coming up with, you know, a year or two years ago (P4).

At the same time, their comfort with these new abilities increased. This developing comfort was paired with a sense of belonging, giving one fellow a belief that, "I deserve to be here. I know what I'm talking about and I have the chops for it" (P1). This increased self-efficacy was further supported by the "credibility" (P5) that graduates felt came from a formal fellowship. This credibility helped lead to "educational opportunities outside of people who know me and outside of the department" (P5). Finally, graduates felt well prepared for job tasks, noting their transition to leadership positions was "seamless" (P1).

Outcome expectations

Participants commented on the perceived career consequences of their fellowship training, including career affirmation, being competitive for jobs, and career accelerants that would lead to successful academic promotion. Fellowship training was career affirming for many graduates in a way that "cemented" (P9) their chosen career direction. One participant elaborated, "When I went into it initially I didn't understand all the things that fell under the domain of medical education. And, getting a better understanding of that helped affirm that I was doing the right thing" (P5).

As they waded into the postfellowship job market, they felt "competitive" (P7) for jobs and had high expectations for securing desired positions. One participant noted that with 2 years of fellowship including a master's degree, "I should probably get some kind of titled position ..., so I applied only to clerkship director positions, assistant program director positions" (P1).

Many graduates viewed fellowship training as a career accelerant that would lead to successful promotion. After writing 3-, 5-, and 10-year goals as a fellow, one graduate noted that fellowship "accelerated that plan quite a bit" (P5). Fellows noted that their initial lukewarm expectations around promotion evolved into confidence that they would be successfully promoted. Fellowship helped "take the pressure off" (P10) promotion considerations as junior faculty, providing graduates a realistic timeline of promotion. One participant

elaborated, "... previously when I looked at the requirements for associate professor I was like there's no way I'm ever going to have this many publications. But through fellowship it was demystified for me a little bit by having time and energy and mentorship and resources available to learn those skills" (P5).

Goals

Fellowship impacted the career aims, desires, and intentions of graduates in multiple ways. For some, it helped focus their goals by "... just narrowing down what kind of role I wanted or was looking to do" (P8). For other graduates, fellowship changed their goals. One participant stated, "The experiences in fellowship—getting to be in that role and then also getting to explore other areas—that sort of changed what I ended up wanting to do" (P3). Graduates also remarked that fellowship prompted them to reach for greater goals, supporting them to make a broad or sustained impact on the field and to seek leadership roles beyond the department level. One participant noted, "I think definitely the idea of, wanting something beyond program director, thinking about you know, DIO, higher level national level involvement, certainly came about because of my fellowship" (P9). It was interesting to note that the postfellowship goals of some graduates shifted from being self-focused to being focused on others. One participant remarked, "I feel like I've been transitioning from developing my own projects and trying to move things forward myself to now ... more thinking about how do I give back locally and help other people advance their ideas of that scale also? So basically, I'm starting to move inward to help others sort of expand ..." (P4).

Professional identity formation

Participants noted that fellowship training impacted their representations of themselves as physicians, resulting in graduates thinking and feeling like educators. One graduate stated, "It certainly cemented my idea, as my identity as a medical educator... You know, realizing that that is how, first and foremost, that I identify myself ... And that is intrinsic to what I do, the decisions that I make, the projects I say yes or no to, and I think all of that was certainly started in fellowship" (P9).

Additionally, participants' professional identities were enhanced in fellowship by recognizing their personal interests within medical education and developing their personal niche. One graduate remarked, "... All of those things were interests prior to fellowship, but fellowship helped me to articulate them and realize that they could be micro-niches ... once I did fellowship, I was like oh, this is why I like MedEd [medical education] because I've been doing all this stuff that also falls under the category of MedEd [medical education]" (P5).

Nearly all of our participants felt that the exposure fellowship training provided broadened their educational worldview. Participants spoke of their eyes being "opened" (P5) and "broadened" (P9) during fellowship, giving them a deeper and wider view of

what was professionally possible in their careers. As one participant aptly put, "I knew that I had this interest but never knew what it was, never knew that it was an actual career path ... then once I had those [fellowship] experiences, that just really opened the doors to realizing that there's so much to explore in the field" (P10).

DISCUSSION

Our study revealed key themes in the motivations and development of careers for clinician educators in EM from a stakeholder group whose opinions had not been examined previously. These included important benefits and outcomes of fellowship. Our sample of graduates were uniformly positive in their descriptions of their fellowship experiences and it was clear that they place great value on their training. The findings of our analysis align well with social cognitive career theory.^{11,14,15}

The "Choice Model" of social cognitive career theory describes how educational and career decisions result largely from self-efficacy beliefs and outcome expectations, influenced by personal and environmental factors that may be positive or negative.^{15,25} There is an interplay of personal interests, environmental factors, self-efficacy, and outcome expectations in the Choice Model that parallels the experiences of our participants. For instance, our participants described their choice to pursue fellowship based on their interest in medical education, perceived skill deficit (lower self-efficacy) and desire to grow additional knowledge and skills, supported by the influence of their mentors, and outcome expectations that fellowship training would help prepare them for their future careers.

Fellowship created an ecosystem that allowed participants to develop as medical educators, increasing their self-efficacy, augmenting their outcome expectations, refining their goal representations, and developing their professional identity. The importance of this ecosystem on career development cannot be overstated; specifically, our participants emphasized the positive influence of their training programs that allowed for protected time, acquisition of new skills, and an opportunity to apply what they learned. This aligns with prior literature identifying protected time, skill development, and experiential learning as important to professional development.²⁶⁻²⁹ Additionally, our findings demonstrate that mentors and educator communities are important influences on the professional development of clinician educators. This is not surprising and is corroborated by multiple prior studies that demonstrate the importance of mentors and their respective impact on academic careers.^{26,27,29-31} The importance of a titled role for fellows is interesting and prior literature has noted that professional titles matter.^{32,33} Titles may be particularly important for individuals, such as fellows, who are less likely to be perceived as experts.³³ Finally, deliberate exposure to a range of career possibilities was important to broaden the mindset of participants. This is logical as it is impossible for trainees to make choices about their careers without knowing the possibilities.

Participants noted the impact of fellowship training on their professional identity formation. This is not surprising given the

professional beliefs and behaviors influenced by fellowship training. The core tenets of social cognitive career theory—self-efficacy, outcome expectations, and goals—have also been shown to affect professional identity formation.^{34,35} As participants demonstrated increased self-efficacy through skill acquisition and the development of expertise, they were more likely to achieve the outcome expectations they set for their career. Fellowship training catalyzed a cyclical nature of skill acquisition, employment that meets their outcome expectations, refinement of goals, enhanced self-efficacy, further achievements, and formation of new professional identities, yielding further career opportunities, and so on.

The experiences of our participants and resultant changes in their self-efficacy, outcome expectations, goals, and identity formation offer a roadmap for future iterations of existing fellowship curricula. Program directors should derive and implement best practices that enhance these core tenets of social cognitive career theory and professional identity formation, understanding that these are informed by multiple external and internal sources and become powerful driving forces in any career.

LIMITATIONS

This study has limitations. We interviewed a small sample of graduates from medical education fellowships within a single specialty, so the results may not be generalizable to other fields. We purposefully sought diverse representation of participants, but it is possible that we may have missed important perspectives from graduates who were not interviewed. Additionally, our interview guide may have inadvertently omitted important questions that could have impacted our findings. Finally, interview studies are limited by recall bias and several response biases, including acquiescence bias, courtesy bias, and social desirability bias. Despite these limitations, we believe this study provides important insights on the impact of medical education fellowships on the careers of graduates.

CONCLUSIONS

Fellowship training in medical education provides knowledge and skills, a structured learning environment, and important relationships that shape the careers of graduates by impacting their self-efficacy, outcome expectations, goal creation, and professional identity formation.

AUTHOR CONTRIBUTIONS

Jaime Jordan, Michael A. Gisoni, David Diller, Ryan Pedigo, James Ahn, and Jeffrey Riddell conceived of and designed the study. Jaime Jordan collected the data. Jaime Jordan, Jack Buchanavage, and Jeffrey Riddell analyzed the data. All authors contributed to the drafting of the manuscript and critical revision for important intellectual content.

CONFLICT OF INTEREST

The authors declare no potential conflict of interest.

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REFERENCES

- Gottlieb M, Chan TM, Clarke SO, et al. Emergency medicine education research since the 2012 consensus conference: how far have we come and what's next? *AEM Educ Train*. 2020;4(S1):S57-S66.
- Jordan J, Ahn J, Diller D, et al. Outcome assessment of medical education fellowships in emergency medicine. *AEM Educ Train*. 2021;5(4):e10650.
- Sutkin G, Wagner E, Harris I, Schiffer R. What makes a good clinical teacher in medicine? A review of the literature. *Acad Med*. 2008;83(5):452-466.
- Lown BA, Newman LR, Hatem CJ. The personal and professional impact of a fellowship in medical education. *Acad Med*. 2009;84(8):1089-1097.
- Thomas LR, Roesch J, Haber L, et al. Becoming outstanding educators: what do they say contributed to success? *Adv Health Sci Educ Theory Pract*. 2020;25(3):655-672.
- Coates WC, Runde DP, Yarris LM, et al. Creating a cadre of fellowship-trained medical educators: A qualitative study of faculty development program leaders' perspectives and advice. *Acad Med*. 2016;91(12):1696-1704.
- Babineau M, Fischer C, Volz K, Sanchez LD. Survey of publications and the H-index of academic emergency medicine professors. *West J Emerg Med*. 2014;15(3):290-292.
- DeLuca LA Jr, St John A, Stolz U, Matheson L, Simpson A, Denninghoff KR. The distribution of the h-index among academic emergency physicians in the United States. *Acad Emerg Med*. 2013;20(10):997-1003.
- Liaw W, Petterson S, Jiang V, et al. The scholarly output of faculty in family medicine departments. *Fam Med*. 2019;51(2):103-111.
- Clarke SO, Jordan J, Yarris LM, et al. The view from the top: academic emergency department chairs' perspectives on education scholarship. *AEM Educ Train*. 2018;2(1):26-32.
- Bakken LL, Byars-Winston A, Wang MF. Viewing clinical research career development through the lens of social cognitive career theory. *Adv Health Sci Educ Theory Pract*. 2006;11(1):91-110.
- O'Sullivan P, Niehaus B, Lockspeiser T, Irby D. Becoming an academic doctor: perceptions of scholarly careers. *Med Educ*. 2009;43(4):335-341.
- Kumar K, Roberts C, Thistlethwaite J. Entering and navigating academic medicine: academic clinician-educators' experiences. *Med Educ*. 2011;45(5):497-503.
- Fouad NA. Social cognitive career theory introductory review. In: Swanson JL, Fouad NA, eds. *Career Theory and Practice: Learning Through Case Studies*. 3rd ed. SAGE Publications Inc.; 2014.
- Lent RW, Brown SD, Hackett G. Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *J Vocat Behav*. 1994;45(1):79-122.
- Ravitch SM, Carl NM. *Qualitative Research: Bridging the Conceptual, Theoretical, and Methodological*. Sage Publications; 2016.
- Watling CJ, Lingard L. Grounded theory in medical education research: AMEE guide no. 70. *Med Teach*. 2012;34(10):850-861.
- Denzin NK, Lincoln YS. *The SAGE Handbook of Qualitative Research*. 5th ed. Sage Publications; 2017.
- Morse JM. The significance of saturation. *Qual Health Res*. 1995;5(2):147-149.

20. Archibald MM, Ambagtsheer RC, Casey MG, Lawless M. Using Zoom videoconferencing for qualitative data collection: perceptions and experiences of researchers and participants. *Int J Qual Meth.* 2019;18:160940691987459.
21. Zoom Video Communications. Accessed June 15, 2022 at <http://zoom.us>
22. Korstjens I, Moser A. Series: practical guidance to qualitative research. Part 4: trustworthiness and publishing. *Eur J Gen Pract.* 2018;24(1):120-124.
23. Bradley EH, Curry LA, Devers KJ. Qualitative data analysis for health services research: developing taxonomy, themes, and theory. *Health Serv Res.* 2007;42(4):1758-1772.
24. Corbin J, Strauss A. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory.* Sage Publications; 2014.
25. Lent RW. Social Cognitive Career Theory. In: Brown SD, Lent RW, eds. *Career Development and Counseling: Putting Theory and Research to Work.* 2nd ed. Wiley; 2013:115-146.
26. Rushing GD, Mokadam NA. Faculty development: using education for career advancement. *Thorac Surg Clin.* 2019;29(3):321-328.
27. Teshima J, McKean AJS, Myint MT, et al. Developmental approaches to faculty development. *Psychiatr Clin North Am.* 2019;42(3):375-387.
28. Soliman AS, Stainton L, Chamberlain RM. Experiential learning in career development. *J Cancer Educ.* 2021;36(4):874-879.
29. Jordan J, Coates WC, Gottlieb M, Soares WE 3rd, Shah KH, Love JN. The impact of a medical education research faculty development program on career development, through the lens of social cognitive career theory. *AEM Educ Train.* 2020;5(3):e10565.
30. Straus SE, Straus C, Tzanetos K. International campaign to revitalise academic medicine. Career choice in academic medicine: systematic review. *J Gen Intern Med.* 2006;21(12):1222-1229.
31. Sambunjak D, Straus SE, Marusic A. Mentoring in academic medicine: a systematic review. *JAMA.* 2006;296(9):1103-1115.
32. Professional titles matter. *Nat Microbiol.* 2018;3(12):1329.
33. Ro C. Why we use women's professional titles less than men's. BBC. Accessed June 15, 2022. <https://www.bbc.com/worklife/article/20210216-why-do-professional-titles-actually-matter>
34. Sarraf-Yazdi S, Teo YN, How AEH, et al. A scoping review of professional identity formation in undergraduate medical education. *J Gen Intern Med.* 2021;36(11):3511-3521.
35. Byram JN, Robertson KA, Dilly CK. I am an educator: investigating professional identity formation using social cognitive career theory. *Teach Learn Med.* 2022;34(4):392-404.

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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