

Postgraduate Selection in Medical Education

Citation for published version (APA):

Caretta-Weyer, H. A., Eva, K. W., Schumacher, D. J., Yarris, L. M., & Teunissen, P. W. (2023). Postgraduate Selection in Medical Education: A Scoping Review of Current Priorities and Values. *Academic Medicine*, 98(11), S98-S107. <https://doi.org/10.1097/ACM.0000000000005365>

Document status and date:

Published: 01/11/2023

DOI:

[10.1097/ACM.0000000000005365](https://doi.org/10.1097/ACM.0000000000005365)

Document Version:

Publisher's PDF, also known as Version of record

Document license:

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Postgraduate Selection in Medical Education: A Scoping Review of Current Priorities and Values

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Abstract

Purpose

The process of screening and selecting trainees for postgraduate training has evolved significantly in recent years, yet remains a daunting task. Postgraduate training directors seek ways to feasibly and defensibly select candidates, which has resulted in an explosion of literature seeking to identify root causes for the problems observed in postgraduate selection and generate viable solutions. The authors therefore conducted a scoping review to analyze the problems and priorities presented within the postgraduate selection literature to explore practical implications and present a research agenda.

Method

Between May 2021 and February 2022, the authors searched PubMed,

EMBASE, Web of Science, ERIC, and Google Scholar for English language literature published after 2000. Articles that described postgraduate selection were eligible for inclusion. 2,273 articles were ultimately eligible for inclusion. Thematic analysis was performed on a subset of 100 articles examining priorities and problems within postgraduate selection. Articles were sampled to ensure broad thematic and geographical variation across the breadth of articles that were eligible for inclusion.

Results

Five distinct perspectives or value statements were identified in the thematic analysis: (1) Using available metrics to predict performance in postgraduate training; (2) identifying the best applicants via competitive

comparison; (3) seeking alignment between applicant and program in the selection process; (4) ensuring diversity, mitigation of bias, and equity in the selection process; and (5) optimizing the logistics or mechanics of the selection process.

Conclusions

This review provides insight into the framing and value statements authors use to describe postgraduate selection within the literature. The identified value statements provide a window into the assumptions and subsequent implications of viewing postgraduate selection through each of these lenses. Future research must consider the outcomes and consequences of the value statement chosen and the impact on current and future approaches to postgraduate selection.

Postgraduate selection has presented stakeholders with significant challenges, both practical and philosophical. In recent years, application numbers to residency training in North America and to (sub)specialty training worldwide have increased dramatically.¹⁻⁴ Simultaneously, there have been increasing calls for a more holistic approach to the review of candidates' applications⁵⁻⁸ and a focus on selecting more diverse candidates^{9,10} rather

than relying exclusively on metrics such as grades and test scores. Additionally, anticipating an ever-increasing mismatch between the number of applicants and the number of available positions, many see a new inflection point for selection on the horizon^{1,3} that could lead to a crisis of overapplication, increasing reliance on metrics identified to be inequitable and biased, and degradation of programs' ability to adequately and fairly review each application.¹

for the problems seen and generate viable solutions. To gain a deeper understanding of the current landscape of how those working within this arena are grappling with the myriad problems and priorities it faces, as an effort to facilitate further progress, we performed a scoping review to analyze the framings and perspectives presented within the postgraduate selection literature.

Method

We conducted a scoping review following the previously defined framework proposed by Arksey and O'Malley¹³ and subsequently expanded by Levac et al¹⁴ It was composed of 5 phases: (1) identifying the research question; (2) identifying potentially relevant articles; (3) selecting articles for inclusion; (4) extracting and charting data; and (5) collating, summarizing, and reporting results. The sixth stage, knowledge translation through consultation

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Acad Med. 2023;98:S98-S107.

First published online August 1, 2023

doi: 10.1097/ACM.00000000000005365

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Supplemental digital content for this article is available at <http://links.lww.com/ACADMED/B461>.

with stakeholders, was not conducted because our goal was to understand how postgraduate selection is being prioritized and conceptualized in the literature; stakeholder perspective will become the focus of a more extensive research program. Thematic analysis was used to examine and categorize identified papers.

Identifying the research question

We defined the following research question: How is postgraduate selection described in the recent medical education literature? By answering this question, we aimed to identify key problems and explore how conceptualizations relate to proposed solutions.

Identifying the relevant studies

We determined the search strategy in consultation with a university librarian. We searched PubMed, EMBASE, Web of Science, ERIC, and Google Scholar using the following search terms: residency selection, selection criteria, selection systems, selection processes, specialty registrar selection, and postgraduate admissions. These database searches were chosen to provide a comprehensive representation of current approaches to examining selection specifically within postgraduate medical education across a variety of contexts. Postgraduate medical education was chosen because of a recent shift from a focus on traditional metrics to a more holistic approach to selection. This has accompanied substantial challenges posed by demand outstripping the supply of available residency positions. We excluded articles that focused on medical school admissions or on other disciplines given significant differences in approach compared with postgraduate selection. We included concept papers, perspectives, and editorials as these potentially contain conceptualizations of selection not previously empirically studied. We included any articles published after January 2000 because the adoption of electronic application services began around the turn of the century and the resultant expansion in the literature soon followed. We limited articles for inclusion to those published in the English language. We also scanned the reference lists of the articles we identified and selected articles to include as detailed in the next section. The search was performed between May 2021 and February 2022.

Study selection

Covidence (Veritas Health Innovation, 2022) was used to download the abstracts and full-text articles yielded from the database searches; duplicates, based on title and abstract, were removed. One author (H.A.C.-W.) independently screened all article titles and abstracts to determine eligibility for full-text review against the exclusion criteria (Figure 1). Researchers D.J.S. and L.M.Y. screened a subset of 30 titles and abstracts independently to ensure uniform application of the selection criteria.

Figure 1 shows a flowchart indicating this search and selection process. Our initial search was designed to obtain a broad scope of the literature, with an aim to capture the totality of perspectives in graduate or postgraduate medical education selection. Our search of the literature yielded 5,404 articles from 6 databases. 4,225 articles remained after removing duplicates. Seventeen were added from reference screening and citation alerts. Of these, 1,952 were excluded for reasons noted in Figure 1. A sample of 100 articles were included in the full-text review with effort to ensure broad thematic and geographical variation across the breadth of articles that were eligible for inclusion: An initial sample of 30 papers was chosen at random as a starting point; after they were analyzed in depth, a subsequent 50 were selected to confirm, refute, and elaborate our initial understanding of the evolving themes and maximize variation within our sample by selecting across region or country of origin, date of publication, and potential contexts from which authors drew their perspectives. After reviewing 80 manuscripts in detail, no new themes or priorities were being identified. We then read 20 additional manuscripts to confirm no new information that would challenge, elaborate, or change our themes was identified. We did confirm this and sampling concluded.

Data characterization

The first author (H.A.C.-W.) developed a data tracking and extraction system including the first author, manuscript title, publication year, journal, geographic location, specialty, article type (description, justification, or clarification), problem identified,

research question, methodologic approach, proposed solution, and summary of key findings. Given the aim of examining how authors describe the selection process and the diversity of research methodologies and perspectives employed, the author team chose to use Braun and Clarke's approach to thematic analysis to drive our consideration of the manuscripts.

All authors performed an iterative, step-by-step thematic analysis of the first 10 included articles, reading them to extract the value statement, the priorities expressed, and the authors' approach to selection. The author team then independently constructed codes and categories. Preliminary codes and notes explaining what each meant were generated, and the authors subsequently met multiple times to discuss and refine the initial codes and potential themes. Three reviewers (H.A.C.-W., D.J.S., L.M.Y.) subsequently carried out independent analyses of the next 30 articles to further refine the themes.

Collating, summarizing, and reporting results

The first author (H.A.C.-W.) thematically analyzed all remaining full-text articles using the data extraction sheet. The extraction process was iterative and refined based on regular discussions between the first author (H.A.C.-W.) and the rest of the research team. Mind maps were used to illustrate potential links between themes. A final description of themes and subthemes was agreed upon by the authors at the conclusion of the analysis via consensus discussion.

Results

Descriptive summary

When examining all articles eligible for inclusion, the body of literature on postgraduate selection has expanded significantly since the year 2000. However, the greatest expansion occurred quite recently with 1,669 (73.4%) of the manuscripts eligible for inclusion published in the last 10 years. Of these manuscripts, nearly two-thirds are from the United States and slightly more than 80% are from North America. The remaining manuscripts are representative primarily of postgraduate selection in Europe, New Zealand, and Australia.

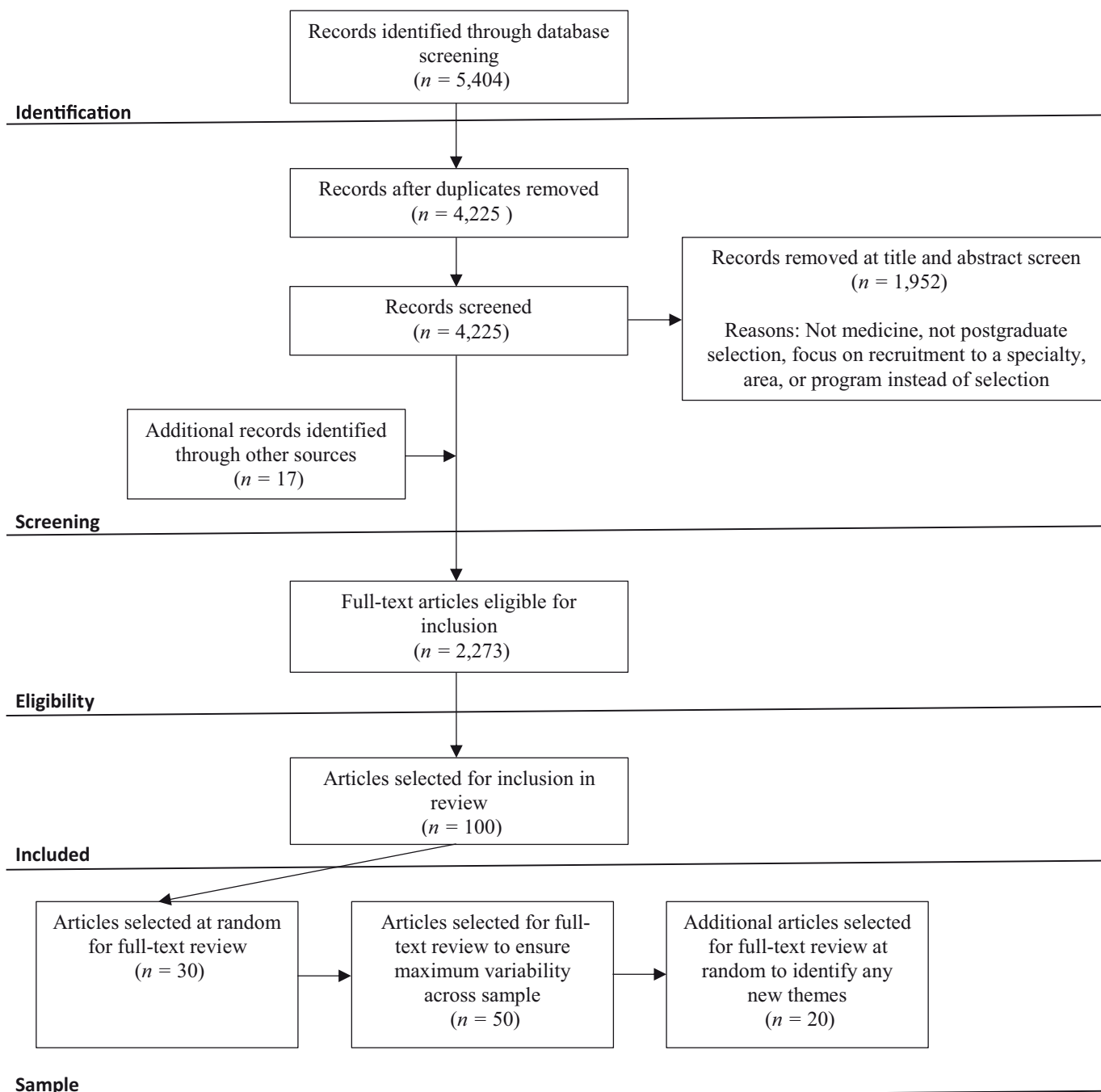


Figure 1 Flowchart of the search process and results of the scoping review.

Of the 100 papers included in our sample (Supplemental Digital Appendix 1 at <http://links.lww.com/ACADMED/B461>), two-thirds were empirical studies and one-third were perspectives or commentaries. Of the empirical studies, the vast majority were descriptive (i.e., they outlined what was done or present a new selection model), using Cook, Bordage, and Schmidt’s classification¹⁵; few focused on justification (i.e., answering the question “did it work?”

by making a comparison with another intervention) and nearly none offered clarification (i.e., uncovered the processes that underlie the observed effects).

Value statements

Our analysis found that authors in medical education described postgraduate selection from 5 distinct perspectives, each of which highlighted a particular value they prioritized: (1) Using available metrics to predict

performance in postgraduate training; (2) identifying the best applicants via competitive comparison; (3) seeking alignment between applicant and program in the selection process; (4) ensuring diversity, mitigation of bias, and equity in the selection process; and (5) optimizing the logistics or mechanics of the selection process. While these perspectives are not mutually exclusive, most papers were found to have a single framing and all had a dominant value

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statement the authors used to frame their work. Here, we present each perspective, including details of the manuscripts written or studies conducted that enabled identification of the priorities presented within the value statement.

Using available metrics to predict performance in postgraduate training.

Manuscripts written from the perspective of using available metrics to predict performance focus on identifying and analyzing individual measures or a grouping of measures that will predict who will perform the best in postgraduate training. Manuscripts in this category suggest that there is a combination of measures such as clerkship grades, test scores, and skills simulations that will predict performance on outcome measures such as Accreditation Council for Graduate Medical Education (ACGME) Milestones or a graduate rank order list (re-ranking at the time of graduation).^{16–22} Manuscripts vary in whether they focus on predictions of success in the specialty overall^{20–35} or specifically within training programs.^{16,18,19,36–41} Authors of manuscripts in this category describe priority being given to selecting those who will do well during postgraduate training and also focus on avoiding those who will need remediation or be disruptive to program leadership.^{8,16,29,31,37,42–46} For example, Burkhardt et al reflected this dichotomy, while focusing on academic success, by stating:

While training programs actively seek applicants who will succeed and thrive in residency, they also attempt to identify and avoid applicants who will require significant, dedicated, time-consuming resources to fulfill the minimum clinical and professional competency standards. Determining factors that are associated with thriving (or struggling) through training is so far an enigma.¹⁶

Cullen et al focused on identifying measures that describe or quantify “noncognitive” traits and predict future performance in difficult-to-measure domains such as professionalism and communication, which often lead to challenging remediation situations for program directors:

Behaviors such as teamwork, accountability, and respect correlate with improved patient outcomes, higher patient satisfaction, and greater adherence to treatment plans. Conversely,

unprofessional behaviors are associated with negative faculty assessments of professionalism and later disciplinary action by state medical boards. Despite the importance of these noncognitive competencies, they are not well measured during medical education selection processes.⁴²

Identifying the best applicants via competitive comparison. In contrast to manuscripts focused on identifying metrics with which to predict high or low performance, another group of manuscripts center on identifying the best applicants by comparison resulting in what is experienced as a competitive process for both programs and applicants. As such, these manuscripts contain descriptions of ways in which programs compare candidates,^{7,47–60} and how applicants set themselves apart from one another for ranking purposes.^{61–64} They describe the use of standardized tests, clerkship grades, letters of evaluation, asynchronous video interviews, and other comparative metrics that set applicants against one another.^{48–50,54,55,57–61,64}

Importantly, the focus of papers in this category is on examining who has been top performers in the past rather than prioritizing prospective identification of who will become top performers in a new context.^{7,47,51,54,58} The resultant process is experienced both by applicants and programs as inducing competitiveness.^{53,55,58,60–63} This is exemplified by Stain et al:

The stratification of programs by competitiveness may allow students applying to surgery to measure their applications against the highest-ranked students at a range of programs.⁵¹

However, there are challenges to employing this perspective, as highlighted by Katsuftrakis et al:

Few standardized measures exist to facilitate comparison of applicants, and the heterogeneous nature of provided information limits its utility.⁷

Other manuscripts in this category emphasize finding novel ways to compare one applicant with another using any defensible means possible for the purpose of determining a ranking.^{7,47,51–54,56,57,59} Others advocate for uniform medical school or standardized assessments to provide the requisite

data that would allow the comparison of applicants within school or, ideally between schools,^{48–50,60} as exemplified by Salari:

Program directors desire data that allow for objective comparisons of applicants from different medical schools. Thus, standardized, stratifying metrics remain important for this hypercompetitive process.⁶¹

Such comparative processes are not exclusive to programs comparing applicants, however, as some manuscripts focus on students competing with one another. Students appear in many articles to believe there is a need to compete, constantly seeking ways to stand out to the programs that are comparing them:

The cutthroat nature of resident selection has caused our future colleagues to spend months rather than weeks preparing for just Step 1. Even with prolonged study periods, many students still find themselves fearful of not matching at all, let alone in their preferred specialty or at their preferred program, based only on their Step 1 score. By addressing the underlying hypercompetition of resident selection, such as by clarifying other important selection criteria, these systemic issues will improve.⁶¹

This results in the desire for transparency on the part of programs.^{61–64} Applicants then tend to ask for measures that are within their control such as using narratives, research experience, or clerkship grades to demonstrate why they should be ranked more highly than another applicant to whom they might be directly compared.^{61,63}

Seeking alignment between applicant and program in the selection process.

A third perspective represented in the literature describes a perceived need for an optimal “match” or “fit” between an applicant and a program. By contrast with the prior categories, these manuscripts are not focused on predicting overall performance or on norm-referencing candidates in a universal sense. Rather, authors in this category describe making efforts to identify candidates who are optimally aligned (i.e., who “fit”) with a particular postgraduate training program and its mission or values.^{65–75} These manuscripts describe the need to use data, characteristics, tools, methods, or analyses to delineate and optimize

alignment within the postgraduate selection process.^{5,67–69,74,75}

Additional methodologies and assessment strategies may allow programs to identify best-fit candidates more efficiently and effectively, while decreasing remediation and attrition rates and improving resident satisfaction, thus increasing the ROI of our current selection system.⁷²

The focus on “fit” in manuscripts from this category is a means to optimize both program satisfaction with trainees and trainee satisfaction with the program.^{65,68,72} This is thought to decrease attrition and optimize programmatic and specialty-level performance.^{70,75}

Two key approaches are proposed. The first is by increasing transparency on behalf of both parties,^{5,12,76–78} requiring postgraduate training programs to determine what it is they can offer and requiring applicants to identify their priorities and desires:

A more efficient, data-driven process for students to identify compatible programs and support residency programs in screening applications could improve the experience for all stakeholders.⁵

The second approach to achieving the aims of this perspective focuses on aligning the applicants with the job they will do or the environment in which they will work or train.^{65–73} This is often done via an extensive job analysis of the specialty or program to identify the necessary work elements and/or characteristics required of individuals to perform within the specialty and program for which they are selected:

Job analysis techniques form the basis of developing any selection system. Classifying the combination of core and specific competencies ensures that both generic and specialty-specific skills are recognised. This identification process informs the development of selection criteria (in addition to aiding careers counseling for trainees) and is the basis of a reliable, valid and legally defensible selection system.⁶⁸

Ensuring diversity, mitigation of bias, and equity in the selection process.

Manuscripts written from the perspective of ensuring diversity, addressing bias, and achieving equity focus on the selection of a diverse workforce,^{9,79–84} use of an equitable screening process,^{10,81,85} and mitigating bias.^{80,82,86–90} While manuscripts in previous

categories focus on training programs and applicants, articles in this category focus on the end goal of meeting the needs of diverse patients and society. They emphasize increasing the diversity of postgraduate trainees within programs via equitable and unbiased selection processes.^{9,10,80,81,83,85,87,89} Authors of these manuscripts highlight that doing so will require a significant commitment and the employment of multifaceted approaches.

Three interrelated priorities underpinned this perspective. The first focuses on the need for a diverse workforce to care for a diverse patient population^{9,79–81,84} given that prior research demonstrates patients who have a provider who looks like them tend to have better outcomes.^{91–94} Such findings are contrasted with a significant lack of diversity in most specialties and programs.^{84,91,95} Manuscripts in this category focus on the need to deliberately address this in the selection process itself.^{9,79–81,83,84} Targets are myriad and range from deliberately interviewing a more diverse candidate pool to addressing bottleneck measures that disadvantage underrepresented applicants such as the USMLE Step 1 exam:

Our data reveal that increasing Step 1 score metrics disproportionately affect applicants who are female, are older, and have URM status. Indeed, even a Step 1 score of 220 resulted in a disproportionate impact on diversity, suggesting that there is no Step 1 score metric that does not potentially decrease applicant diversity.⁸¹

The second priority underpinning this category centers on the myriad biases that exist within current selection processes including the use of specific measures and common selection practices such as letters of recommendation and interviews.^{79,82,87–90,96} Manuscripts here cite current measures and implicitly held beliefs as conveying bias against women, those underrepresented in medicine, and those who are socioeconomically disadvantaged. One striking example details the experience of Black applicants on interview day:

Being interviewed while Black involves a collision of microaggressions and feelings and experiences related to stereotype threat, tokenism, imposter syndrome, and homophily. Many of these experiences are rooted in unconscious bias, whereas some can be born from overt racism. In turn, Black interviewees collect impressions that make them doubt that they will be welcomed and valued in medicine.⁸²

Papers in this category emphasize the need for bias mitigation in the selection process and provide insights into how to approach that task. Both Erkman and colleagues and Otugo and colleagues, for example, provide multistep processes that include training in bias mitigation for faculty, blinded evaluation of candidates, using standardized letters of reference and structured interviews, employing upstander training, protocols for virtual interviews, and a guide to holistic review among others.^{79,89}

The final priority within this category is the equitable and standardized application of selection criteria across all applicants both within and between programs.^{9,10,79,85} Manuscripts written from this perspective focus on the inequitable use of various measures as many strategies such as honor society membership and research publications disadvantage specific populations.^{10,79} They also note the uneven application of these measures to each applicant as part of the selection process.¹⁰ These manuscripts call for standardized approaches to be implemented and applied equitably across all applicants.

Optimizing the logistics or mechanics of the selection process. Manuscripts written from the perspective of optimizing the logistics or mechanics of the selection process express concern with the logistics of application review, interview invitation, and mechanics of the matching process used in many jurisdictions. Problems in this domain center around the continuously increasing volume of applications and how this affects programs' abilities to review candidates,^{1,6,97–100} the toll this takes on applicants and their subsequent behavior,^{1,99,101–103} and the ability to optimize screening and interviewing when both applicants and programs continue to struggle with the logistics of the selection procedure.^{100–102,104–109}

The central thesis of manuscripts written from the North American context is that the rapidly escalating volume of applications to each program creates an enormous burden.^{1,6,98,99} This makes it impossible for programs to meaningfully screen and holistically review every applicant; therefore, programs often rely on measures such as standardized test scores to cull applications:

U.S. residency programs face a mismatch between application numbers and program review resources that has led many programs to shift away from holistic review.⁶

Manuscripts in this category prioritize the identification of ways to absolutely or functionally decrease the number of applications that faculty must fully review such as using application caps, an early match process, preference signaling, or other methods.^{1,6,99,100}

In contrast, the primary focus of manuscripts written from the applicant perspective center on the angst experienced. Consternation stems from poor transparency on the part of programs, nonstandardized interview offer dates, a poorly understood application filing process, issues with advising, and lack of coordination across specialties and programs with regard to uniformly mounting logistics of the selection procedure.^{101,102,104-109} Applicants subsequently spend a disproportionate amount of time and money on the logistics of the application and interview season.^{100,102,103,105} Manuscripts here describe ways by which programs and specialty societies have sought to standardize many of these logistical components to ease the burden placed upon candidates:

A universal program application deadline, a universal final application status date, a 72-hour response period to accept an interview offer, and a limit on the number of interview offer slots available that matches the number of applicants invited.¹⁰⁵

Finally, programs outside North America frequently describe difficulties aligning applicants with areas of need for trainees to care for patients.¹¹⁰⁻¹¹² These areas are often rural or underserved. Many countries have sought and implemented logistical processes to mitigate difficulties in matching trainees with sites for training that align with patient and societal needs or to keep trainees in training programs in general. These processes are required to ensure workforce needs are met across all areas and include specific matching algorithms, focusing on recruiting a more socioeconomically diverse workforce, specific incentives, etc.

Discussion

We identified 5 key value statements in our analysis of the postgraduate selection literature: (1) Using available metrics to predict performance in postgraduate training; (2) identifying the best applicants via competitive comparison; (3) seeking alignment between applicant and program in the selection process; (4) ensuring diversity, mitigation of bias, and equity in the selection process; and (5) optimizing the logistics or mechanics of the selection process.

In the 2018 Ottawa conference consensus statement, Patterson and colleagues present 3 main approaches to postgraduate selection: individually focused processes (centered around academic success and subsequent readiness), competency-based processes (requisite knowledge, skills, and behaviors that drive readiness to perform a job), and societal expectations (student diversity, social accountability, workforce planning, and inclusion).¹¹³ Each of these approaches focuses on a different priority outcome within the selection process. While we did not set out to confirm or refute these proposed approaches, the 5 value statements we empirically generated fall largely into one category or another. The value statements around competition and metrics to predict performance were distinct, but are both individually focused. The logistics of the application process could also be included in the individually focused category as both the applicant and the program are individually centered as key stakeholders and limits on applications are often derived from individual preferences that are tied to perceived “competitiveness” for a specific program or specialty. The value statement around alignment between applicant and program is most closely aligned with the competency-based category as they are both focused on the requisite competencies needed to perform within a given profession. And, finally, the category of diversity, equity, and bias is the only one that addresses selecting candidates who meet societal expectations.

By further critically considering the nuances of variability in the values and problems being addressed within the current literature, we can gain insight into the assumptions and implications of viewing postgraduate selection through

each of these value statement lenses and identify gaps and opportunities for future research. Each, after all, has implications for how stakeholders approach postgraduate selection that are both philosophical and practical. At the philosophical level, for example, by framing the problem of selection around valuing competition, many manuscripts suggest that this is the only way by which a rank list may be formulated to result in a match with the best applicants. Yet, other manuscripts take the stance that it is alignment between an applicant and a program that results in an ideal match. Both of these approaches as well as those examining predictive measures and diversity, equity, and bias result in a comparison between applicants; however, the definition of a “best match” is widely disparate depending upon the value statement through which one examines the selection process.

At a practical level, it is worth noting that what value statement one chooses has implications for how one approaches the selection process. When using a value statement that falls into the individually focused process category, for example, it is easy for competency-based processes and societal expectations to fall by the wayside. In other words, the effort undertaken simply to grapple with how to compare one applicant with another in a feasible, meaningful, and defensible way is considerable given the pragmatic need to select candidates each year on a set cycle. Each value statement inherently prioritizes one group of stakeholders over another as the priorities of individuals, the program, the profession, patients and society, are not always perfectly aligned. While most program directors likely value all of these stakeholders, they either explicitly or implicitly prioritize one over the others when they adopt one value statement over the rest. That can be problematic when it is done subconsciously because each statement presents distinct opportunities to engage with a broader contextual discussion around who is foregrounded and who stands to benefit most from the approaches suggested by any given value statement. It also allows us to begin to identify what is missing from the current literature to guide future research directions.

Future research needs

This scoping review demonstrates a substantial focus in recent literature on postgraduate trainee selection on the comparison of the achievements between individual applicants. That is, descriptors of methods of comparison, whether for prediction or retrospectively, abound above all other perspectives. Even the competency-based and societal expectations approaches identified incorporate an element of comparison in efforts to examine alignment with a program, specialty, or job or the ability of a given individual to meet the needs of a specific patient population. However, there is little higher-order integration across any of these domains when attempting to shift more toward ensuring competence and meeting the needs of society while selecting individual applicants. It was rare, in fact, to see manuscripts that acknowledged more than one value statement and, as a result, no one manuscript appears to take the approach of considering how integration across framings might be achieved in current approaches to selection let alone in the design of novel interventions.

Here we offer preliminary reflections on a variety of potential pathways for future investigation. First, as assessment paradigms shift more toward competency and outcomes orientation, further research is needed to identify the processes necessary to enable program directors to effectively consider multiple value statements (including equity and program alignment) and the needs of multiple stakeholders (individual, specialty, society) given that selection by definition necessitates some form of exclusion. The value statements identified here may provide means through which to examine the integration of individual applicant comparison, relevant competency outcomes, and societal priorities in relation to what programs are doing currently by explicitly identifying them as competing lenses that require deliberate contemplation to ensure alignment between selection priorities and shifts in society and assessment. Determining how to move forward, in other words, requires a more critical examination of stakeholder perspectives using integration and clarification research approaches that can be stimulated by engaging in meaningful comparison between applicants' views,

program directors' views, and the available evidence base in relation to the value statements outlined herein. Second, it is critical to examine the tensions between these value statements and how/if they are addressed and managed (either explicitly or implicitly) within current and prospective approaches to selection. The approach chosen, as well as the tensions and stakeholders involved, should determine the selection measures to be used to ensure that it is the values and desired outcomes that drive selection processes rather than inertia. Finally, we note that there is great promise in some value statements regarding alignment and equity that are tied into competency-focused and societal expectations approaches, but little research exists to date that speaks to whether these approaches truly result in improved training and practice outcomes. These questions will require a greater depth of focus of research in postgraduate selection in the coming years with a particular eye to examining the impact on all stakeholders as well as intended and unintended outcomes.

Limitations

There are several limitations to our scoping review. First, our sampling strategy, while designed to ensure broad thematic and geographical variation across the breadth of articles that were eligible for inclusion with an aim toward theoretical sufficiency, may yet have yielded new themes or insights had we included additional articles. Second, the focus of our scoping review was on the problems and priorities presented within the postgraduate selection literature. As such, we did not include the gray literature such as innovation abstracts, white papers, or policy statements. However, the value statements gleaned from our analysis of the published literature may provide a useful lens through which to view the gray literature. Finally, we chose not to pursue the optional phase of knowledge translation through consultation with stakeholders. This was done deliberately as this is the first study in a program of research, of which examining stakeholder perspectives is a subsequent study. Stakeholder viewpoints may meaningfully differ or provide more nuanced insight into these value statements than can be inferred from analysis of the published literature.

Conclusions

This scoping review provides insight into the value statements authors use to describe postgraduate selection within the literature. These value statements provide a window into the assumptions and subsequent implications of viewing postgraduate selection through each of these lenses. It is clear that comparison of applicants is key to each value statement; however, each of these approaches centers a different stakeholder group at the expense of others. Future research must begin to consider the outcomes and consequences of the value statement chosen, the stakeholders included and neglected, and the impact on current and future approaches to postgraduate selection.

Acknowledgments: The authors wish to thank Chris Stave, university librarian at the Stanford University School of Medicine.

Funding/Support: None reported.

Other disclosures: None reported.

Ethical approval: Reported as not applicable.

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