Educators’ and Applicants’ Views of the Postdoctoral Pediatric Dentistry Admission Process: A Qualitative Study

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Abstract: The postdoctoral application and matching process in dental education is a high-stakes and resource-intensive process for all involved. While programs seek the most qualified candidates, applicants strive to be competitive to increase their likelihood of being accepted to a desirable program. There are limited data regarding either subjective or objective factors underlying the complex interplay between programs and applicants. This qualitative study sought to provide insight into the stakeholders’ experiences and views on the matching process. Telephone and in-person interviews were conducted with ten pediatric dentistry program directors and ten recent applicants to pediatric dentistry programs in the United States in 2013-14. Participants were selected to represent the geographic (five districts of the American Academy of Pediatric Dentistry) and institutional (hospital- or university-based) diversity of pediatric dentistry programs. Interviews were recorded and transcribed verbatim. Veracity and need for more information were the themes most often articulated by both groups. The program directors most valued teachability and self-motivation as desirable applicant characteristics. The applicants relied primarily on subjective sources to gather information about programs and prioritized location and financial factors as pivotal for their rankings. Both groups appreciated the uniformity of the current application process and highlighted several weaknesses and areas for improvement. These results shed light on the postdoctoral matching process in pediatric dentistry via a qualitative description of stakeholders’ experiences and viewpoints. These insights can serve as a basis for improving and refining the matching process.

Keywords: dental education, pediatric dentistry, advanced dental education, graduate dental education, school admission criteria

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Pediatric dentistry is one of the most sought-after dental specialties in the United States, with the numbers of applicants and residency positions offered increasing steadily over the last 11 years. A review of the profile of applicants to pediatric dentistry residency programs published in 2006 reported significant increases in grade point average (GPA) and National Board Dental Examination (NBDE) scores, as well as an increase in the proportion of female applicants. The latest data indicate a more than 59% increase in the number of applications since 2005. These facts highlight the increasing need for and interest in postdoctoral training in pediatric dentistry, as well as the potential challenges in managing a growing applicant pool while maintaining a high-quality, fair, and streamlined application process.

The dental postdoctoral application and matching process is a high-stakes and resource-intensive process for graduate program directors and applicants. Both sides have a vested interest in making the best choice and creating the best possible approximation of an ideal match. From a program’s perspective, selecting candidates for residency is a challenging process, reflecting a complex interplay among applicants, their applications, program faculty, current and prospective residents, and the program environment. Although there is no published quantitative evaluation of the current application and selection process for pediatric dentistry residency programs, it can be argued that the existing system is not ideal. Great efforts have been made to create a uniform and fair application process that reflects an applicant’s credentials, academic performance, and career goals.
However, the current system appears insufficient in capturing salient aspects of applicants’ character, ability to relate to children, response to criticism, and work ethic as it has been found to be in ophthalmology. Moreover, the changes to pass/fail reporting of the NBDE, a trend towards pass/fail grades in dental schools, and variance in reporting class rank have made objective comparisons of applicants even more difficult. This issue is compounded by the inherent “noise” of the application and evaluation process, as well as competition for limited positions. This issue is relevant not only to pediatric dentistry, but to other dental and medical postdoctoral training application processes.

Programs seek the most qualified candidates, while applicants strive to be competitive for acceptance by a desirable program. However, applicants are often limited in their ability to obtain critical programmatic information including the programs’ curricular profile, mission, values, strengths, and weaknesses. Although the majority of advanced education programs utilize the American Dental Education Association Postdoctoral Application Support Service (ADEA PASS) as a single point of application, each program maintains specific application requirements. Individual program websites and the American Academy of Pediatric Dentistry (AAPD) program listings do not necessarily portray a program’s distinctive elements. Applicants also weigh noncurricular factors in their decision making, including stipend support, tuition, facilities, program length, and location.

Programs have a vested interest in selecting the most qualified applicants, but it is unclear what attributes are the most valid predictors of resident success. According to a 2007 survey by Majewski et al., program directors consider NBDE scores, clinical grades, dental school class rank, and dental school GPA as critical elements of an application. However, these quantifiable measures are gradually being replaced by less objective methods of evaluation, whereas evidence from medicine suggests that even these objective metrics are limited in their ability to predict success in a residency program. Programs rely on letters of recommendation and personal statements, but these may not reflect a candidate’s true character and values. Similarly, the interview has been found in psychiatry to have questionable value in predicting resident success. The Personal Potential Index (PPI) as part of the ADEA PASS application was introduced to assist programs in evaluating noncognitive factors such as resilience and integrity, but there are currently no published data regarding its acceptance and effectiveness in the selection process.

Given the shortcomings and knowledge gaps regarding the current applicant and program evaluation processes, the aim of our study was to provide a qualitative description of stakeholders’ views of the postdoctoral pediatric dentistry application and matching process. Our ultimate goal is to offer insights and recommendations for making improvements for both applicants and programs.

**Materials and Methods**

The study was approved by the University of North Carolina at Chapel Hill Institutional Review Board (#13-2008). This qualitative study was based on in-depth interviews with U.S. pediatric dentistry graduate program directors and recent applicants (who were then current residents); it aimed to understand and describe their experiences with the current matching process, including their recommendations on how to improve it.

A sampling frame reflecting the five AAPD geographic regions and pediatric dentistry program type (hospital-based, university-based, or combined) was created to guide recruitment of potential study participants and enhance the diversity of participating programs and applicants. Eligible interviewees were randomly selected from ten strata representing combinations of the two factors (AAPD district and program type) and invited to participate in the study. The final sample size was determined by taking into consideration both representation of all strata (minimum of one representative from each stratum) and descriptive saturation (non-emergence of new themes) during the qualitative data analysis. Thus, our final study sample was comprised of ten program directors and ten recent applicants, each representing one sampling stratum. All participants provided written consent prior to participation.

Semistructured, 60-minute interviews were conducted either in person or via telephone by a study investigator (KR) under the guidance of a qualitative research expert (PM). A detailed interview guide was developed to serve as the basis of the qualitative research expert (PM). A detailed interview guide was developed to serve as the basis of the qualitative research expert (PM). A detailed interview guide was developed to serve as the basis of the qualitative research expert (PM). A detailed interview guide was developed to serve as the basis of the qualitative research expert (PM). A detailed interview guide was developed to serve as the basis of the qualitative research expert (PM).
emphasis was placed on selection factors, definitions of resident success, and the success of their program in obtaining ideal matches. For the recent applicants, the interview revolved around their views of the application and matching process, their perceived quality of the match, and their expectations versus actual experiences in their program. All participants were also asked to provide recommendations to improve the current process.

Interviews were recorded, transcribed verbatim, and subsequently coded line-by-line using ATLAS.ti software, Version 7.0 (ATLAS.ti GmbH, Berlin, Germany). A qualitative description framework was used to form inquiry and guide qualitative data analysis.10,11 Interpretation of data was based on the generation of first- and higher order codes, which were subsequently categorized to represent themes. Reporting was based on primary themes, code co-occurrences, and insightful quotations.

### Results

Both the program directors and recent applicants were forthright about their experiences with the application and matching process. Interviews coalesced around a single point: everyone wants more information. The program directors would like to have objective ways to evaluate applicants (e.g., GPA and class rank) because those data points are comparable and immutable. Similarly, the recent applicants desired more accurate information about programs. They reported that the application process is onerous due to each program’s unique supplemental application, undercutting the major strength of the ADEA PASS application: its uniformity across programs. Four major themes emerged from the qualitative analysis: veracity, concerns regarding data sources, identifying residents who are equipped to succeed, and balancing personal needs and professional goals.

### Veracity

According to both the program directors and recent applicants, the biggest challenge in the application process involves questions of veracity. This was a consistent theme across virtually all interviews. Program directors questioned the veracity of numerical scores reported in the PPI as well as letters of recommendation, which were criticized for having insufficient depth of commentary and thus forcing directors to rely on what they called “reading between the lines” rather than “direct honest assessment.” One director complained, “Let me tell you, people that turn out to be shady—you can never figure it out from their application because they’re good at covering it up.”

By the same token, the recent applicants were concerned about programs portraying themselves inaccurately prior to and during the interview process. As a result, the applicants said they relied on current residents, dental students, and other applicants to discover the “truth” about programs.

### Concerns Regarding Data Sources

Program directors evaluate applicants based on their credentials, which include self-reported information on activities, work history, research efforts, and a personal statement, as well as third-party evaluations via the PPI and formal letters of evaluation. Program directors also value objective information, such as class rank or NBDE scores, which are typically reported by the applicant’s dental school. These directors appeared to struggle in evaluating and comparing applicants from institutions that provide measures of relative academic performance (e.g., class rank or GPAs) with those from institutions that simply report pass/fail. When the interviewer asked, “How do you compare folks from a pass/fail institution versus ones with letter grades or GPAs or ranks?,” one director chuckled and said, “That’s the million dollar question. I don’t know how to compare them.”

All program directors interviewed lamented the loss of information regarding the relative academic achievement of candidates. A high value was placed on objective sources, correlating well with their concerns about subjective sources. These concerns were typically related to both the PPI and formal letters of recommendation. These directors perceived an apparent lack of calibration among evaluators and a potential conflict of interest as evaluators try to offer fair appraisals of applicants while simultaneously getting them accepted into programs. “I try sometimes to read between the lines,” said one program director, “but it’s very difficult to gauge from that. Everybody seems to be the top 5% of anyone they’ve ever worked with.” Another commented, “I think . . . is this person really that good of a person, or . . . is this just someone writing the recommendation who didn’t put a lot of time into this and they’re just kind of blowing smoke at it?”
The applicants said they rely on word of mouth for the majority of their information related to programs, in no small part from senior dental students and residents. They use the AAPD website to formulate their initial lists of programs and then apply based on conversations with people they know: faculty, current residents, or friends who applied in previous years. One resident explained, “Are they doing IV [sedation]? Are they doing oral [sedation]? How many GA [general anesthesia] cases are you doing? You don’t really get that information . . . on the Internet anywhere. That really comes from the residents.”

Lack of available information from programs themselves appears to be an important issue. The program directors routinely reported that they “sell” their programs to applicants via word of mouth and the interview process. This selling function challenges applicants to develop an objective opinion of programs prior to investing the hundreds of dollars, time away from school or work, and potentially other missed interviews associated with attending a specific program’s interview. In general, the interviewed program directors appeared to take little interest in promoting their programs via the AAPD website or their programs’ websites. One program director admitted, “Our websites are all pretty lame.” Another stated, “Frankly, on a website, you can’t really tell what . . . we actually do here.” A resident pointed out that “sometimes the [AAPD] website would not match up with the PASS, and that would not match up with [the program’s] website.”

These program directors said they use interviews to evaluate qualitative aspects of applicants’ character and develop a sense of their ability to work with children. Programs’ current residents also typically help to evaluate applicants throughout the interview process, including the pre-interview social evening hosted by many programs, with a focus on determining their potential “fit.” The applicants said they viewed the resident interactions similarly as a way to determine whether the program would be a good fit. The interview is also used by program directors to allow the applicants to interact with current residents, so that those residents can accurately portray the program. For the applicants, the interview is viewed as a preview of how they would be treated if enrolled in the program, although one could surmise that programs are on their best behavior for interviews.

Identifying Residents Equipped to Succeed

These program directors said they look for a specific set of attributes in applicants. They favor those who can work effectively with people in terms of teamwork and possess a good work ethic, interpersonal skills, and “teachability.” They prefer candidates who have gone beyond the standard dental school curriculum in terms of obtaining pediatric dentistry experience. They want someone who is mature, can think critically, and is able to work independently. Research experience is viewed positively. They cite highly motivated students as those who rise beyond expectations to become exceptional residents. When combined with the preference for objective measures of a candidate’s relative academic performance, it is clear that program directors are looking for someone who has also concretely demonstrated some degree of academic success as a dental student. In evaluating this degree of academic achievement, the directors indicated they value some dental schools above others in terms of rigor and reputation.

The interviewer’s question “What is it that makes a successful resident?” generated the following responses from program directors: “Willingness to learn . . . willingness to work hard . . . someone mature enough to be a self-learner”; “If there’s someone who, in comparison to their peers, academically performed poorly, that makes them less competitive unless there’s an extenuating circumstance”; and “Everybody probably has in their mind a list of the better dental schools out there. I’d rather take a person from this school with this GPA, than a person from that school with that GPA.”

Hospital program directors placed a higher priority on applicants’ self-motivation and prior clinical exposure to pediatric dentistry. Several stated their preference for applicants with a solid foundation of pediatric dentistry didactic knowledge, and some even give knowledge-based exams to applicants during the application process. “We have to have residents who can sort of hit the ground running,” explained one program director. “I don’t necessarily want to be teaching them Pediatric Dentistry 101.”

Alternatively, university-affiliated program directors placed a higher value on the “teachability” of applicants, looking for residents who were intellectually curious and demonstrated a willingness to learn. These program directors placed less emphasis on previous clinical experience in pediatric dentistry,
but showed a stronger interest in selecting applicants who had research experience. As one director commented, “Number one: be willing to learn from every single person, be it your co-resident, your second year, your assistants, everybody.”

Balancing Personal Needs and Professional Goals

Residents want and seek programs that actively support them and help them develop excellence in clinical pediatric dentistry. All the applicants we interviewed mentioned program location as something they considered in their decision making process, with many saying it was their most important selection factor. Financial concerns were also important to the majority of these recent applicants, and most stated that it was important that their residency experience resulted in a net financial benefit. The applicants who matched to hospital-based programs were more concerned with their program type compared to their university-based program counterparts, who were more concerned regarding degree options. Both groups of residents said they took into account the needs of their significant others when selecting programs.

The program directors expressed some concern with candidates’ stated ranking of their program preference versus their actual ranking. One noted, “Every year there’s always a student that sits there and lies to you in the interview and says, ‘You’re my number one choice,’ and clearly you weren’t, when you get your [match].”

Both the program directors and recent applicants said they were happy overall with the match process, acknowledging that it seemed the fairest way to place applicants in programs. The program directors indicated that they would benefit from removing the quantitative evaluation from the PPI altogether because of inconsistency among reviewers and suggested that, instead, the content of the PPI (targeted, direct questions to evaluators about aspects of the applicant’s character) could replace the formal letters of recommendation. This would ensure that the desired domains of evaluation were addressed. Furthermore, these directors suggested the evaluations should be completed by someone who has observed the applicant in various settings and should not require specific evaluator roles (e.g., program director, department chair). According to program directors, it may be helpful for dental schools to evaluate and compare their applicants collectively and provide a summative evaluation generated by the school’s pediatric dentistry faculty. This evaluation would replace the dean’s letter. A 2x2 photo was requested by many directors and could be made mandatory for the ADEA PASS application.

The applicants requested that all supplemental materials for individual schools should be removed from the application process. The applicants also indicated that they would benefit from program transparency; that is, the program information provided at interviews should be made available to applicants on either the school’s or the AAPD website. They felt that information regarding numbers of clinical procedures, typical schedules, research experiences, call schedules, and financial conditions (stipend and tuition) should be accessible via the AAPD’s program listing. The applicants expressed that programs electing to charge a supplemental application fee should clearly state this on the AAPD website and that programs should list the contact person available to answer questions.

Discussion

The results of our qualitative study of a geographically and institutionally diverse sample of pediatric dentistry graduate program directors and recent applicants provide novel insights into these stakeholders’ views and experiences with the pediatric dentistry postdoctoral application and matching process, including specific recommendations on how to improve it. Our findings shed light on the actual decision making processes for both parties. For example, both sides desired more and higher-quality information to support their decision making. We found that program directors struggled with the decreasing amount of objective academic information available for candidates and thus desired meaningful and accurate letters of recommendation, authentic and revelatory personal statements, and interviews focused on gaining understanding of a candidates’ ability to learn, be a team member, self-motivate, and deliver clinical care. The recent applicants reported the lack of uniform and up-to-date program information. For example, specific descriptions of clinical and didactic experiences provided by a program were not typically available. The AAPD program listing site, the ADEA PASS search engine, and individual program websites are all individually administered and updated on different schedules, potentially leading to discrepancies and confusion for applicants.
Our findings are consistent with earlier reports of program directors’ and applicants’ views and preferences. The program directors we interviewed suggested that certain character traits, including a willingness and an eagerness to learn, self-motivation, and the ability to work well with others stood out as being particularly valuable in their evaluation of applicants, lending credence to the identification of the interview as a critical aspect of evaluation. The applicants cited two critical non-curricular factors: the program’s location and the financial arrangements for residents, which is aligned with the report of da Fonseca et al. All the recent applicants interviewed stated that they did not consider programs that showed a net negative financial impact (a program’s tuition exceeds its stipend or the program offers no stipend at all). According to 2014 data on the AAPD program listing and available program websites, there is a vast range of tuition and fees and of resident stipends: from $71,524 annual tuition and fees to a $65,000 tuition-free stipend.

Applicants relying on second-hand sources of information would benefit from a clear distillation of programs’ clinical and didactic characteristics prior to the interview. With finances so clearly at the forefront of decision making, it seems insensitive to withhold available program information until the interview. The AAPD program listing, which acts as the de facto clearinghouse for information regarding programs, could require yearly programmatic updates as a condition of accreditation. More robust information regarding specifics of training, perhaps as granular as number of operating room cases, sedation regimens used, etc., could be provided as a part of a summative table of most salient program characteristics. The AAPD program listing’s long-form text section should be a forum for programs to offer straightforward descriptions.

These stakeholders’ views converged on the effectiveness of the current ADEA PASS application in collating applicants’ academic and work history. The PPI intends to provide targeted evaluations of knowledge, creativity, teamwork, resilience, planning, organization, ethics, and integrity, and the professional evaluations allow an evaluator to provide insight into an applicant’s character and qualifications. The personal statement allows applicants to provide a narrative directly to programs.

Our findings should be viewed in light of the study’s limitations, including reliance on the forthrightness of interviewees and the inability to make generalizable inferences for the entire population of program directors and recent applicants in the U.S. or other countries. However, our study benefits from a diverse sample covering all AAPD districts, including both university-based and hospital-based programs, as well as program directors and recent applicants. Moreover, the rigorous qualitative methodology employed allowed for an in-depth exploration of processes, notions, and emotions that are categorically challenging but may inform future surveys and quantitative research approaches.

Conclusion

This qualitative study sought to provide insight into stakeholders’ experiences with and views on the application and selection process in advanced pediatric dentistry programs via interviews with ten program directors and ten recent applicants. The results indicate that both groups desire greater transparency and more complete information that can lead to the most informed decision making and thus the best possible match for both parties. To address these concerns, program specifics like stipend, tuition, and numbers and types of specific clinical procedures should be made available to applicants prior to submitting an application, preferably at a centralized site like the AAPD program listing, and applications should provide content that accurately reflect the applicants in their personal statements, letters of recommendation, and other evaluations. Future studies should examine how to best present and communicate this information and determine if factors exist in applications to validly and reliably predict success in residency. As the numbers of applicants and available positions continue to rise, obtaining the best possible match for both programs and applicants becomes more challenging. Applicants may have to consider casting a wider net to guarantee a match, and programs may feel increased pressure in making themselves the top choice for the most competitive applicants. In addition to its implications for pediatric dentistry education, this study offers insights that may be useful for other match and non-match dental specialty selection processes, particularly those that utilize the ADEA PASS application and an interview.

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