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Perspectives from program directors on the selection process for Saudi periodontics residency programs: a cross-sectional study

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Abstract

Background Applying to periodontics programs in Saudi Arabia holds significant importance for both applicants and periodontics program directors. As of today, there has been no investigation into how periodontics program directors (PDs) identify and select potential candidates for their programs. The aim of this study is to assess the factors taken into consideration during the selection process for periodontics programs by PDs in Saudi Arabia.

Methods In this cross-sectional study, an electronic survey was sent out to Periodontics PDs of the Saudi Commission for Health Specialties (SCFHS) in Saudi Arabia. Variables of interest included the Grade Point Average (GPA), Saudi Dental License Exam (SDLE), research, interview, service and electives, letter of recommendation, and other miscellaneous factors. A degree of importance scale was used to measure the significance of each factor for PDs.

Results This study surveyed 16 PDs with a response rate of 72.7%. The majority of PDs were from the Central and Western Regions. Approximately 56% of the PDs were affiliated with universities. The study identified, from the perspective of PDs, that the most important factors were the reputation and performance of the applicant during clinics or interactions with staff, followed by general research experience. Additionally, interview performance was rated equally with SDLE score and GPA, as well as factors such as undertaking periodontics elective rotations during internship and working in the same department. Regardless of the region or number of years of experience, all PDs considered the most significant factor to be the reputation and performance of the applicant during clinics or interactions with staff.

Conclusion This study sheds light on the factors perceived by program directors in Saudi Arabia that influence the selection process for applicants to periodontics programs. By understanding these factors, dental graduate students can better customize their applications and experiences to meet the expectations of admission committees.

Keywords Periodontics, Periodontics program, Program directors, Residents, Influencing factors, Saudi Arabia

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Background

The field of periodontics dentistry in Saudi Arabia has been rapidly growing over the last few years. It is estimated that Saudi Arabia has about 700 periodontists, including those who are in periodontics training programs, according to data from the Saudi Commission for Health Specialties as of May 2023 [1]. Although the number of dentists in Saudi Arabia is growing annually [2–4], according to several studies, the latest study indicated that there are about 43,000 dentists registered in Saudi Arabia [1]. Given the shortage and uneven distribution of periodontists in Saudi Arabia, as well as the growing number of young population [5], policymakers must prioritize areas with low numbers of these professionals. Additionally, with the anticipated high competition among graduate students seeking admission to Saudi periodontic programs, there is an urgent need to identify the crucial factors for applicant acceptance into these programs. Halawany et al. showed that last year dental students in Saudi Arabia had an intention to pursue their postgraduate dental education [6].

The Periodontics Residency Programs in Saudi Arabia is supervised by the Saudi Commission for Health Specialties (SCFHS) and there are approximately 20 approved centers [2, 3, 7, 8]. Periodontics program directors (PDs) play a crucial role in identifying and selecting potential candidates for their programs. The selection process involves numerous factors, including academic achievements, clinical expertise, research involvement, communication skills, and personal attributes. However, there is limited information available regarding the specific factors that program directors prioritize when selecting candidates for their programs. Several similar studies have investigated the selection process primarily in medical and some dental programs [3, 4, 6, 9–13]. For instance, a survey of program directors for orthodontic specialty programs in the United States showed that the interview process emerged as a consistent component across all programs. The primary factors taken into account for each applicant were interview ratings, dental school class rank, and letters of recommendation [10]. Another study focused on periodontics program in the United States revealed that the top five critical factors in selecting residents were interview ratings, dental school clinical and periodontics grades, personal statement, and letters of recommendation [11].

In Saudi Arabia, there is limited research on this topic. A recent study conducted among Saudi plastic surgery program directors found that favorable impressions during interviews, previous experience, and research background were significant factors [12]. Another study involving Saudi urology and emergency program directors highlighted rotation performance as a crucial factor in the application process [9, 13]. However, regarding

periodontics, to our knowledge, there have been no previous studies examining the factors influencing program directors when selecting candidates for their programs in Saudi Arabia.

Conducting this study will provide valuable insights for dental graduate students to align their applications and experiences with the expectations of admission committees. Additionally, it aims to enhance the quality of periodontics education and training, ultimately benefiting the overall periodontal workforce in Saudi Arabia. Therefore, the study aims to assess the factors perceived by program directors in Saudi Arabia that influence the selection process for applicants to periodontics program.

Methods

The data source and study population

This was a cross-sectional study design that targeted all Periodontics PDs of the Saudi Commission for Health Specialties (SCFHS) in Saudi Arabia between December 19th, 2023, and January 23rd, 2024.

A web-based survey was constructed using Google Forms (Google Form, Mountain View, CA, USA), utilizing a validated questionnaire adapted from previous study with a few minor modifications [14]. The English version of the modified questionnaire is provided in the supplementary material. The survey was distributed to all PDs of the SCFHS's Periodontics programs in Saudi Arabia to have a national representative sample of Saudi Arabia Periodontics programs, using email and WhatsApp. A second reminder was sent one week later to encourage participation. The study's participation was optional, and the responses were compiled using anonymous data collection techniques. An Institutional Review Board approval granted from the King Abdullah International Medical Research Center, given that no human subjects or relevant data were involved (IRB/2994/23).

Variables of interest

The survey was divided into two main sections. The first part included demographic data, such as gender, whether currently or formerly a program director, hospital settings (University, Ministry of Health, Military, Private, or General Organization), and years of experience as PD. The second section contained 30 items divided into seven categories Grade point average (GPA), Saudi dental license exam (SDLE), Research, Interview, Service and Electives, Letter of Recommendation, Others). Participants were asked to evaluate the importance of each item using a 5-point Likert scale, with 5 indicating "Strongly Agree" and 1 indicating "Strongly Disagree." All 30 items are presented in Tables 1 and 2, respectively.

Table 1 Distribution of program directors by different variables

Variable	No. (%)
1 Gender	
Male	10 (62.5)
Female	6 (37.5)
2 Do you currently hold a position of Periodontics program director?	
Yes	12 (75)
No, I am a former program director	4 (25)
3 How many years have you been working as a program director?	
0–1	5 (31.3)
1–3	6 (37.5)
3–5	3 (18.8)
More than 5 years	2 (12.5)
4 In which region do/did you work as a program director?	
Central	7 (43.8)
Western	7 (43.8)
Eastern	1 (6.3)
Northern	0 (0)
Southern	1 (6.3)
5 What is/was the hospital setting?	
University	9 (56.3)
Ministry of Health	4 (25)
Military	2 (12.5)
Private	0 (0)
General Organization	1 (6.3)

Statistical analysis

We performed a descriptive analysis for all variables examined in this study. In addition, we utilized a scale of importance to assess the significance of each factor. In this scale, responses such as “Agree” and “Strongly Agree” were classified as positive responses, labeled as “Yes.” Conversely, responses like “Neutral,” “Disagree,” and “Strongly Disagree” were categorized as negative responses, denoted as “No.” Microsoft Excel (Version 2403 Build 16.0.17425.20176) was employed for all data analyses.

Results

Descriptive statistics

The demographic characteristics of the study population are presented in Table 1. Sixteen program directors contributed to this study, yielding a response rate of 72.7%. Among the 16 participants, 62.5% were male. A higher percentage of participants are currently serving as program directors (PDs) of periodontics programs. More than two thirds of the participants have been working as PDs for a minimum of 1 year (68.7%). The majority of the PDs were from the Central and Western Regions, with none from the northern region. About 56% of the

Table 2 Importance ratings of admission factors (%): GPA, SDLE, and Research

Variable	No.(%)
1. GPA	
The grade point average (GPA) improves the chance of getting accepted	9 (56.3)
Being in the dean’s honorary list improves the chance of getting accepted	8 (50)
Candidates who gained awards or honors have a better chance of getting accepted in your program	8 (50)
Reputation of the medical school where the applicant graduated from influence their chance of acceptance in your program	8 (50)
2. SDLE	
Saudi Dental License Exam (SDLE) score is important	8 (50)
The periodontics SDLE score is important	6 (37.5)
A candidate who passed international licensing examinations, such as the United States Integrated National Board Dental Examination (INBDE), have a better chance of being accepted in your program.	4 (25)
3. Research	
Having a general experience in research is important (By experience, we mean evidence of knowledge in research through courses in medical research and publications)	13 (81.3)
Quantity of publications is important (Regardless if they are in Periodontics or not)	4 (25)
Quality of publications is important (In terms of proper design, well execution, and writing quality).	10 (62.5)
Publishing in prestigious journals is important	10 (62.5)
Publications in Periodontics is the most important.	11 (68.8)
Presenting posters or oral presentations in events improves the chance of acceptance.	10 (62.5)

program directors were affiliated with universities, while none were from private institutions.

Degree of importance

The degree of importance of several factors for periodontal program acceptance is presented in Tables 2 and 3, respectively. Firstly, the grade point average (GPA) received a significant weight of 56%, followed by being recognized in the dean’s list, receiving awards or honors, and the reputation of the applicant’s medical school, all at 50%. Regarding the Saudi Dental License Exam (SDLE), both the overall and periodontics-specific scores carry substantial weight, with 50% and 37.5% of respondents, respectively. However, passing international licensing exams, like the United States Integrated National Board Dental Examination (INBDE), has a less significant impact on acceptance at 25%.

Thirdly, regarding the research-related factors, having general experience in research was highly important, with 81% of program directors emphasizing its value. Conversely, the quantity of publications, regardless of their field, is less crucial, with an importance degree at 25%. However, the quality of publications, publishing in prestigious journals, and presenting posters or oral

Table 3 Evaluation of Factors Impacting Program Acceptance (%): Interview, Service and Electives, Letter of Recommendation, and Others

Variable	No. (%)
1. Interview	
The Interview carry the same weight as the SDLE score and the GPA.	12 (75)
I prefer candidates who are well dressed during the interview.	9 (56.3)
I look for the level of knowledge in periodontics during the interview.	4 (25)
2. Service and Electives	
Taking periodontics elective rotations during internship is important.	12 (75)
Working as “service resident” improves the chance of accepting an applicant.	11 (68.8)
Candidates who worked/took electives in our department have a better chance of getting accepted.	12 (75)
Reputation and performance of the applicant (during clinics or between staff) influence their chance of acceptance.	16 (100)
Candidates who worked/took electives abroad have a better chance of getting accepted.	7 (43.8)
Candidates who worked/took electives with a distinguished Periodontics Dentist have a better chance of getting accepted.	7 (43.8)
3. Letter of Recommendation	
Having a recommendation letter is important.	9 (56.3)
Having multiple recommendations is important.	6 (37.5)
Recommendations from Periodontists are important.	11 (68.8)
Reputation of the recommending person is important	10 (62.5)
Mode of recommendation, such as phone calls or written letters is important	8 (50)
Quality of the language and content of the recommendation is important	10 (62.5)
4. Others	
Community service activities and volunteering improve the chance of acceptance	10 (62.5)
Being fluent in English is important	10 (62.5)

presentations at events are considered important factors, with more than 60% of respondents attributing significance to improving acceptance chances.

In Table 3 shows factors that have impact on the program acceptance, including aspects related to Interviews, service and electives, letter of Recommendation, and other miscellaneous factors. First, interviews received a significant importance to program directors with 75%, carrying a considerable weight equivalent to that of GPA and SDLE scores. In addition, candidates’ being well dressed during the interview had considerable importance, at 53.6%, while assessing their knowledge in periodontics is less significant at 25%.

Regarding service and electives, the reputation and performance of applicants, especially during clinics or interactions with staff, are crucial to all program

Table 4 Most Important Factors for Program Acceptance by Region (%)

Most important category based on region (Highest %)*	Category
Central	1. Reputation and performance of the applicant (during clinics or between staff) influence their chance of acceptance. 2. A recommendation letter from a periodontist 3. Interview
Western	1. Reputation and performance of the applicant (during clinics or between staff) influence their chance of acceptance.
Eastern	1. Reputation and performance of the applicant (during clinics or between staff) influence their chance of acceptance. 2. Working as a service resident 3. Candidates who worked in same department 4. A recommendation letter from a periodontist
Southern	1. Reputation and performance of the applicant (during clinics or between staff) influence their chance of acceptance.

*No periodontics program in Northern region

directors (100%). In addition, engaging in periodontics elective rotations during internship and gaining experience or taking electives within the department of the program director hold significant weightage, each at 75%. Moreover, working as a “service resident” had remarkable importance in acceptance, with 68.8% of respondents indicating its significance. On the other hand, experience working or taking electives abroad and working with a distinguished periodontics dentist were considered of relatively less importance in acceptance, at 43.8% each compared to other factors.

Top factors according to regions

Table 4 shows the most important factors for program acceptance by region. In Table 4 which shows the Central region, the most significant factor is the reputation and performance of the applicant during clinics or interactions with staff, closely followed by the importance of a recommendation letter from a periodontist and the interview process. In the Western and Southern regions, the reputation and performance of the applicant during clinics or interactions with staff are identified as the most critical factors affecting acceptance in both regions. Similarly, in the Eastern region, the reputation and performance of the applicant during clinics or interactions with staff hold primary importance. However, working as service resident, candidates who worked in the same department, and a recommendation letter from a periodontist are other important factors for Eastern region program directors (PDs).

Factors relation with years of experience

All program directors (PDs) with less than 4 years of experience consider the reputation and performance of the applicant during clinics or interactions with staff as the most influential factor in the program acceptance process as presented in Table 5. Additionally, 90% of PDs value candidates who have worked or taken electives within the department. Moreover, 80% of PDs highly regard those who have worked as a “service resident,” obtained a recommendation letter from a periodontist, and consider interviews to have the same weight as GPA and SDLE. Conversely, PDs with more than 4 years of experience prioritize the reputation and performance of the applicant during clinics or interactions with staff, along with the quality of recommendation letters. Other important factors include having general experience in research and taking periodontics elective rotations during internship.

Discussion

This study explored the perspectives of program directors in Saudi periodontics programs regarding their selection process for graduate students. The findings revealed that the most critical factor for admission was the reputation and performance of the applicant during clinical rotations. This emphasis can be partially attributed to the program directors’ desire to accept candidates who are familiar with their program and demonstrate a strong passion. Our findings contradict multiple studies in Saudi Arabia that showed good impression in the

interview as the most important factor, which more likely illustrates that PDs value their personal interaction with candidates greatly [12, 13]. Additionally, general experience in research emerged as the second most important factor for acceptance. This likely reflects the program’s emphasis on research, given that periodontal residents are expected to engage with classic and contemporary literature throughout their training. It is also worth mentioning that several studies in Saudi Arabia highlight research experience as at least one of the top 4 factors [12, 13, 15–17].

Surprisingly, interview performance carried equal weight with the Saudi Dental Licensing Examination (SDLE) score and GPA, despite the SDLE accounting for 55% of the Saudi Commission for Health Specialties (SCFHS) score matching [18]. Program directors appear to prioritize the interview, possibly because all interviewees have already passed the SDLE and met the minimum requirements for their programs. This prompts PDs to focus on critical factors such as performance and research experience. Although our findings agree with similar studies in the US for Periodontics and Orthodontics PDs, which found the interview to be a significant factor, our study finds that reputation and performance are even more critical among Saudi periodontics PDs [10, 11]. Furthermore, given the absence of similar Saudi studies in the dental field, our findings align with other Saudi studies in the medical field, such as those in urology and plastic surgery [12, 13]. These studies also identified performance during rotation at the respondent’s center as the top factor. This might be a trend influenced by cultural or educational factors, but further studies are needed to investigate. Other significant factors included completing periodontics elective rotations during internship and participating in work or electives within the same department. This underscores the importance for graduate dental students to actively engage with and be attached to periodontic programs, enabling them to gain exposure to the field and develop connections within the department.

Regarding the region of the program, the majority of PDs were located in the Central and Western regions. Interestingly, all PDs, regardless of their program’s region, consistently consider the reputation and performance of the applicant during clinics to be the most significant factor for acceptance. Additionally, it seems that the region of the program also influences other factors for acceptance beyond the top factor. For example, PDs from the Central region also consider a recommendation letter from a periodontist to be an influential factor. Therefore, graduate students aiming to apply for periodontics residency programs should carefully consider these findings.

All program directors, regardless of their years of experience, considered the reputation and performance

Table 5 Factors Related to Years of Experience of Program Director (PD)

Top 3 categories based on years of being a PD (Highest %)	No. (%)
Less than 4 years	
Reputation and performance of the applicant (during clinics or between staff) influence their chance of acceptance.	11 (100)
Candidates who worked/took electives in our department have a better chance of getting accepted.	9 (81.8)
Working as “service resident” improves the chance of accepting an applicant.	9 (81.8)
Recommendations from Periodontists are important.	9 (81.8)
The Interview carry the same weight as the SDLE score and the GPA.	9 (81.8)
4 and more years	
Reputation and performance of the applicant (during clinics or between staff) influence their chance of acceptance.	5 (100)
Quality of the language and content of the recommendation is important	5 (100)
Having a general experience in research is important (By experience, we mean evidence of knowledge in research through courses in medical research and publications)	4 (80)
Taking periodontics elective rotations during internship is important.	4 (80)

of the applicant during clinical rotations or interactions with staff to be the most significant factor for acceptance. Interestingly, both former and current PDs consistently rated this as the most important factor for program admission, likely benefiting applicants regardless of any change in PDs. However, PDs with a minimum of four years of experience also considered the quality of the language and content of recommendation letters to be a secondary differentiating factor in their acceptance process. This can be partially explained by the fact that experienced PDs are more likely to rely on trusted peers. On the other hand, PDs with less than four years of experience significantly consider candidates who have worked or taken electives in their department, worked as service residents, or have recommendations from periodontists. This focus may ensure that candidates are already familiar with the specific expectations of their programs.

These findings carry significant implications for both graduate students and policymakers. This study is the first of its kind within Saudi Arabia's postgraduate dental programs, evaluating the perspectives of Program Directors on the Selection Process for Saudi Periodontics Residency Programs. It serves as a fundamental reference for future candidates, providing insights into factors influencing acceptance, including regional differences and the impact of program directors' experience. Secondly, this study represents a crucial step for policymakers to thoroughly evaluate the process of selecting program directors based on objective criteria, thereby aiming to enhance the overall quality of periodontics programs in Saudi Arabia.

This study had several limitations. Firstly, the absence of periodontics programs in the northern region of Saudi Arabia may raise concerns about the generalizability of the study findings. However, policymakers planning to initiate a new program in that region may benefit from the study findings. Secondly, although our study achieved a good response rate, the uneven distribution of periodontics programs presents a potential limitation. Thus, future studies targeting a larger sample size may offer more valuable insights. Thirdly, while the admission committee may consist of individuals in addition to the PDs, this study primarily surveyed PDs and did not consider the impact of other individuals on the decision-making committee. Lastly, our study may be susceptible to biases due to its design, including response bias and participation bias. Therefore, further research addressing these limitations is warranted.

Conclusion

This study provides valuable insights into the factors influencing acceptance from the perspectives of Program Directors for Saudi Periodontics Residency Programs. These findings can be beneficial for policymakers

and graduate students. Further research is warranted to explore additional factors impacting acceptance into periodontics residency programs.

Abbreviations

PDs	Program Directors
SCFHS	Saudi Commission for Health Specialties
SDLE	Saudi Medical Licensing Exam
GPA	Grade point average
INBDE	Integrated National Board Dental Examination

Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s12909-024-06241-0>.

Supplementary Material 1

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Author contributions

YA generated the research idea. All authors (YA, HA, ET) participated in modifying the survey and writing the proposal and the manuscript. All authors (YA, HA, ET) participated were responsible for data collection. ET was responsible for the data analysis. All authors (YA, HA, ET) have read and approved the final version of the manuscript.

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Data availability

The datasets generated and/or analyzed during the current study are not publicly available but are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

The study was approved by the institutional review board (IRB) of KAIMRC (King Abdullah International Medical Research Center), and the institutional review board (IRB) number was (IRB/2994/23). Informed consent was obtained from all the participants.

Consent for publication

Not Applicable.

Competing interests

The authors declare no competing interests.

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