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Original Article

Characteristics and motivational factors of candidates applying to the Master in Health Professions Education (MHPE) program

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المخلص

أهداف البحث: هدفت الدراسة لتحديد الخصائص والعوامل التحفيزية للمتقدمين لبرنامج الماجستير في تعليم المهن الصحية في جامعة تابعة للقطاع العام، كراتشي.

طرق البحث: شملت هذه الدراسة الوصفية المقطعية، التي أجريت من سبتمبر حتى أكتوبر 2022، جميع المتقدمين البالغ عددهم 60 متقدم لبرنامج الماجستير في تعليم المهن الصحية في جامعة جناح السند الطبية. تم توزيع استبانة عبر نموذج غوغل تضمن أسئلة لجمع المعلومات الديموغرافية، وعدد قليل من الأسئلة ذات الخيارات للاختيار، و34 عبارة للاستجابة بمقياس من خمس نقاط. كما تضمنت سؤالا مفتوحا حول العوامل التحفيزية. تم تحليل البيانات باستخدام برنامج الحزمة الإحصائية للعلوم الاجتماعية واستخدام اختبار "تي" للعينات المستقلة لتحديد الفروقات بين مجموعات المتقدمين بناء على العوامل الديموغرافية.

النتائج: استجاب 48 مشاركا، بمتوسط عمر 7.3 ± 35.8 سنة، وكان الغالبية من الذكور (81.3%)، وخريجي برامج الطب وطب الأسنان (عدد 29)، ويعملون في أقسام التعليم الطبي (عدد 36). معظم المتقدمين أرادوا الانضمام إلى البرنامج لتحسين مهاراتهم في التدريس، خاصة لتدريس المهارات النفسحركية (96%) والبحث التعليمي (90%). علمت الأغلبية (64.6%) عن البرنامج من خلال الزملاء، بينما اختار 29.9% متابعة البرنامج بشكل مستقل. كانت دوافعهم الرئيسية نابعة من عدم قدرتهم على الحصول على قبول في أماكن أخرى (متوسط الدرجات 0.87 ± 4.58) والاعتقاد بأن الجهد المطلوب للحصول على الدرجة كان ضئيلا (متوسط الدرجات 0.94 ± 4.42). بالنسبة لخريجي الطب

وطب الأسنان، ظهرت استجابات متشابهة، مما أظهر ارتباطا ذا دلالة إحصائية. ومع ذلك، كان هناك عدم اتفاق مشترك حول هيكل البرنامج وأعضاء هيئة التدريس كعوامل تحفيزية.

الاستنتاجات: كانت الدوافع الرئيسية للحصول على درجة الماجستير في تعليم المهن الصحية هي تحسين مهارات التدريس. كانت الدوافع للتقدم لهذا البرنامج تحديدا هي الفضل في القبول في أماكن أخرى والاعتقاد بأن الجهد المطلوب لإكمال هذا البرنامج كان ضئيلا. يجب أن يتم نشر أهداف وغرض البرنامج بشكل أفضل مع إدخال تغييرات في معايير وإجراءات القبول من أجل تشجيع الأفراد الذين لديهم دافع لمتابعة التعليم الطبي كمسار مهني.

الكلمات المفتاحية: المتقدم؛ الخصائص؛ تعليم المهن الصحية؛ العوامل التحفيزية؛ برنامج الماجستير

Abstract

Objective: To determine characteristics and motivational factors of applicants applying for MHPE program at a Public-sector University, Karachi.

Methods: This cross-sectional descriptive study, conducted from September till October 2022, included all 60 applicants of MHPE program at Jinnah Sindh Medical University. The survey questionnaire was administered (google form) and comprised questions seeking demographic information, few questions with options to select and 34 statements to be responded on 5-point scale. One open-ended question asking motivational factor/s. Data was analyzed using SPSS and independent sample *t*-test was used to determine the differences between groups of applicants based on demographic factors.

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Results: 48 participants responded, mean age was 35.8 ± 7.3 years, with predominantly males (81.3%), graduates of medical and dental programs ($n = 29$), and employed in medical education departments ($n = 36$). Most of the applicants wanted to join the program to improve their teaching skills, especially psychomotor skills teaching (96%) and educational research [90%]. Majority (64.6%) learned about the program through peers, whereas 29.9% independently chose to pursue the program. Their primary motivation stemmed from their inability to secure admission elsewhere and the belief that minimal effort was needed to acquire the degree (mean score 4.58 ± 0.87 and 4.42 ± 0.94), respectively. For medical and dental graduates, comparable responses emerged, displaying a statistically significant correlation ($p < 0.05$). However, there was mutual disagreement regarding the program's structure and faculty as motivating factors.

Conclusion: Primary motivations to earn an MHPE degree were to improve teaching skills. Motivations to apply to this particular program was the failure to be accepted elsewhere and the perception that minimal efforts were needed to complete this program. The program goals and purpose need to be better propagated along with changes in the admission processes in order to encourage those individuals to apply who are motivated to pursue medical education as a career.

Keywords: Applicant; Characteristic; Health Professions Education; Master's program; Motivational factor

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Introduction

With the emerging necessity of well-established medical education departments in health sciences institutes, various certification courses and post-graduate programs in Health Professions Education (HPE) are offered globally.¹ Such programs receive candidates from a variety of educational backgrounds, with the intent of developing their knowledge and skills to be better teachers and educators. The graduates of these programs have made important contributions in transforming academic and educational processes in health sciences, introducing novel concepts and innovative techniques of teaching and learning.² The University of Illinois at Chicago has offered the Master in HPE (MHPE) program since 1967, which is considered the earliest MHPE program in the world.² Since then, there has been a sustained increase in the number of postgraduate programs in medical/health professions education. In 2013, there were 121 programs reported internationally,³ which increased to 150 in 2018, with the current number being approximately 159.⁴ Initially, these programs were only available in the developed world.⁵ However, over time, a number of postgraduate programs in this field have emerged in developing countries including Pakistan.^{6,7} In a study conducted in 2012, there were 13 MHPE programs in Asia

with none in Pakistan.⁵ Currently, there are 12 higher education institutions in Pakistan that offer the MHPE program, signaling consistent and progressive growth in this particular specialty.⁶

Analyzing the characteristics and motivational drivers of individuals seeking admission to an educational program is instrumental for understanding the value attributed to that particular program. Studies have reported the demographics of candidates in different health professions specialties such as medicine,⁸ dentistry,⁹ dental hygiene,¹⁰ and other postgraduate courses.^{11,12} However, for a program like HPE, which is slightly different from mainstream medical, dental, and allied health disciplines, it can be assumed that individuals may be driven by motivational factors distinct from those observed for other fields.¹³

Despite the numerous programs in medical education that have emerged globally and the heightened demand of medical education experts, no published literature could be found analyzing the characteristics of applicants of MHPE. Studies have been conducted to determine aspects of MHPE programs, including course information on institutional websites,¹⁴ tuition costs,¹⁵ and factors influencing completion rates,¹⁶ but the demographics of MHPE applicants and factors that motivate applicants to pursue this program have not been explored. Without these data, it is difficult to determine the level of interest individuals have in pursuing HPE and the impact they will subsequently create in this domain.

The aim of this study was to analyze the characteristics and motivational factors of candidates applying to the MHPE program at the Institute of Medical Education (IME) at Jinnah Sindh Medical University (JSMU; Karachi, Pakistan), which is one of the largest public universities to offer the MHPE program.

Materials and Methods

This cross-sectional descriptive study was conducted at the IME at JSMU from September to October 2022 after approval from the institutional review board (Reference No. JSMU/IRB/2022/651). All eligible applicants (health care professional qualifications with at least 16 years of education, from institutions recognized by the Higher Education Commission and/or Pakistan Medical and Dental Council, currently employed in a teaching institution for at least for 1 year) to the MHPE program of IME at JSMU for session 2023–2024, the details and contact information of which were obtained from the Admissions Department of JSMU, were included. Any applicant who did not consent to be part of the study or withdrew their application was excluded.

Data collection instrument

A self-administered questionnaire was developed considering all possible and relevant motivational factors based on a literature search and experiences of the three authors (medical educators involved in the admissions process and teaching in the MHPE program). The literature was systematically searched for pertinent research articles based on the specialty of program, level of students (undergraduate, postgraduate), and type of study response (quantitative, qualitative). Common themes applicable to MHPE, identified from studies

seeking motivational factors of participants inducted in various other programs including convenience, promotion opportunities, faculty and institutional factors, were selected to be included in the questionnaire. In addition, factors of relevance established by the authors based on their professional background specific to MHPE were incorporated, including determinants such as careers in health professions education, support in current responsibilities and anticipated improvement in knowledge, and skill related to teaching practices. The first part of the questionnaire asked for demographics of applicants, with one open-ended question inquiring about the main reason for applying to an MHPE program. The responses to the open-ended question in Section 1 were analyzed quantitatively with similar responses grouped together, and their frequency calculated. The second part comprised items that explored the specific areas that the participants wanted to learn in this program, their source of information regarding the JSMU MHPE program, and the individuals/entities that influenced them to apply. The third part comprised 34 items with responses on a 5-point Likert scale (with 5 = Strongly Agree, 4 = Agree, 3 = Neither Agree or Disagree, 2 = Disagree, 1 = Strongly Disagree), with each option representing a score rather than a category. The questionnaire was presented to two experts in medical education (faculty with designation of Director of Medical Education) with more than 15 years of administrative, teaching, and research experience in programs other than JSMU for face and content validity, where the format of the questionnaire, wording, and overall appearance were ensured to be in alignment with the research objectives, and the content was determined to be appropriate and relevant. After incorporating their suggestions, the questionnaire was pilot tested on four individuals already studying in the MHPE program, to further evaluate the face validity. To assess the reliability of the questionnaire, Cronbach's alpha was calculated, giving a value of 0.7. The question was further modified based on the feedback of the participants of the pilot test regarding clarity of the item.

Data collection process

The final version of the questionnaire and consent form were distributed (through Google forms link via the WhatsApp social media application). The consent form clearly conveyed that participation in the study and the responses of applicants would bear no effect on the outcome of their application or their final selection in the program and that no information of the respondents would be disclosed. A timeline of 2 days was given to the participants to complete the form. The participants were not required to disclose their identity or their affiliated institute in the questionnaire. Incomplete forms with missing data were excluded from the study.

Statistical analyses

The descriptive variables were analyzed using SPSS version 22.0. Frequency, percentages as well as means and standard deviations (SDs) were used to determine demographic data variability and factors influencing the decision of the applicants along with their choice to pursue medical education as a full- or part-time career. Since

responses on the Likert scale were calculated as scores for quantifying data effectively and facilitating interpretation, their mean and SDs were calculated and the independent samples *t*-test was applied to determine if there were any differences between the participants on the basis of their various characteristics.

Results

A total of 60 candidates applied for admission to the MHPE program for the 2022–2024 session. A Google link for the questionnaire was sent to all applicants, of whom 48 responded (response rate 80%). Cronbach's alpha was calculated as 0.822, showing good internal consistency reliability. The demographics of the participants are shown in Table 1. In response to the open-ended question, categories or themes were determined, where the majority ($n = 22$, 45%) of respondents wrote that they had applied with the intention of improving their teaching skills (Table 2).

Figure 1 shows the skills that applicants were most interested in learning during the MHPE program. Participants could select multiple options, and the majority gravitated towards choosing to develop their ability to impart practical skills as well as for educational research (96% and 90% affirmative responses, respectively). Study

Table 1: Characteristics of candidates applying to the MHPE program at JSMU (n = 48).

S. no	Variables	Data
1	Age	35.8 ± 7.3 (mean ± SD)
2	Sex	Frequency (%)
	Female	9 (18.8)
	Male	39 (81.3)
3	Marital status	
	Single	9 (18.8)
	Married	39 (81.3)
4	Qualification	Graduation:
	Degree	<ul style="list-style-type: none"> • Only Medical graduates (14) • Only Dental graduates (15) Postgraduation: (4 with BDS and 13 with MBBS) <ul style="list-style-type: none"> • MCPS (3) • M. Phil (5) • MRCS (1) • FCPS (8) Master's in Physiotherapy (2)
5	Location	Karachi: 39 Hyderabad: 5 Lahore: 4
6	Employment status	
	Employed:	45
	Level:	Junior (31–69%) Senior (14–31%)
	Related to medical Education	36
	Unemployed:	3
7		

Table 1 (continued)

S. no	Variables	Data
	Main Reason to Apply to the MHPE Program	Improving teaching skills: 22 Career growth and promotions:10 Reform in medical education: 8 Emerging field: 6 Community service: 2

Table 2: Frequency of responses to question regarding the main reason for applying to the MHPE program (n = 48).

Categories	Improve teaching skills	Pursue career in medical education	Trending field with good scope	For professional growth
n	22	14	8	4
%	45.8%	29.1%	16.6%	8.3%

participants reported that they mostly learned about the MHPE program at IME, JSMU, from friends, peers, and colleagues (64.6%) (Figure 2). Persons/entities that influenced the participants' decision to apply in the MHPE program are shown in Figure 3. Most applicants reported that they decided independently to apply for the MHPE program (29.2%). Results for Section 2 of the questionnaire, related to the motivational factors for applying to MHPE program at IME, showed that study participants disagreed with most factors/items expected to affect their choice to apply (Table 3). Only a few factors were affirmed by them as plausible reasons to apply. Respondents also disagreed with most of the statements regarding their plans after attaining the MHPE degree. Most did not plan on having either a full- or part-time career in medical education following completion of their MHPE degree.

No statistically significant difference was seen in the responses to the items on the basis of demographic

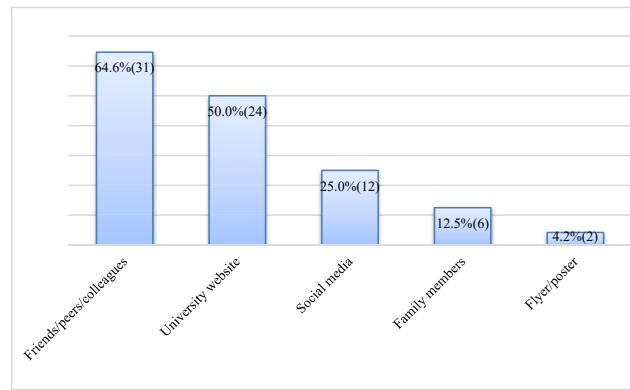


Figure 2: Reported resources through which study participants were informed about the JSMU MHPE program (Respondents could select more than one options).

characteristics. However, a statistically significant correlation was observed among participants with only basic qualifications in medicine or dentistry (Table 4) regarding the perception that pursuing MHPE qualification at JSMU did not demand extensive effort, and that they applied to this

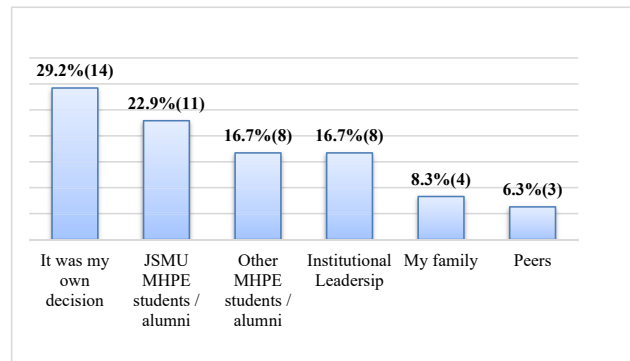


Figure 3: Persons that influenced the participant's decision to apply to the MHPE program (n = 48).

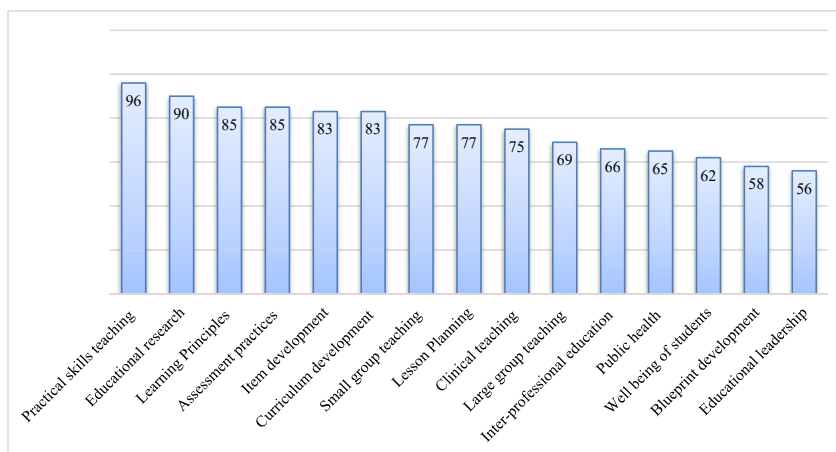


Figure 1: Affirmative responses (in percentages) reported by study participants regarding the skills that they were most interested in learning through the MHPE program.

Table 3: Mean of the factors that influenced the decision of the applicants to apply to the MHPE program at JSMU.

	Factors	Mean \pm SD	
	I applied to the JSMU MHPE program because:		
1	I was not admitted to any other MHPE program	4.58	0.871
2	It does not require much effort to get this degree	4.42	0.942
3	There is dearth of postgraduation opportunities in my primary discipline	3.38	0.362
4	I will obtain additional salary and/or benefits after completing the MHPE	3.06	1.311
5	It is a requirement to get promoted	2.85	1.271
6	I can continue my job along with pursuing the program	1.85	0.922
7	My colleagues speak highly of this program	1.73	0.939
8	The venue is convenient for me	1.75	0.887
9	Medical educators seem to be in demand	1.60	0.736
10	The program is accredited by the Higher Education Commission and Pakistan Medical and Dental Council	1.52	0.825
11	The structure of the program is suitable for me	1.31	0.552
12	The faculty is very experienced and well reputed	1.19	0.445
13	I needed to improve my teaching and assessment skills	1.17	0.377
14	The institution has a good reputation	1.10	0.309
	Completing the MHPE program would enable me to:		
1	Have a part-time career in medical education	2.46	1.148
2	Improve my chances of getting a job in a medical/dental college after retirement	2.35	1.041
3	Improve my chances of promotion	1.92	0.942
4	Have a full-time career in medical education	1.63	0.959
5	Improve my chances at getting a leadership position	1.83	0.753
6	Improve my chances of getting a job outside Pakistan	1.71	0.849
7	Network with experts in the field of medical education	1.58	0.871
8	Support my current responsibilities at work	1.23	0.592
9	Diversify my professional training	1.29	0.504
10	Conduct research in medical education	1.23	0.472
11	Improve my knowledge regarding HPE	1.15	0.412
12	Make me a better teacher	1.08	0.279
	Through completion of my MHPE degree from JSMU, I aim to:		
1	Start an MHPE program in my own institution	3.02	1.280
2	Start a Certificate in HPE program in my own institution	2.58	1.280
3	Establish a department of medical education in my institution	2.27	1.250
4	Conduct research in medical education	1.45	0.536
5	Develop links with HPE professionals in other institutions	1.33	0.559
6	Teach and assess my students in a better way	1.27	0.536
7	Conduct faculty development activities at my institution	1.23	0.559
8	Learn innovative ways to approach education	1.25	0.526

Table 4: Statistically significant factors influencing candidates with undergraduate qualification in dentistry and medicine to apply for the MHPE program.

Item number	Factors	Dentistry	Medicine	p-Value
		(n = 18)	(n = 28)	
		Mean \pm SD	Mean \pm SD	
	I applied to the JSMU MHPE program because			
2	It does not require much effort to get this degree	4.11 \pm 1.23	4.68 \pm 0.61	0.002
11	The structure of the program is suitable for me	1.11 \pm 0.32	1.36 \pm 0.55	0.001
12	The faculty is very experienced and well reputed	1.00 \pm 0.00	1.25 \pm 0.51	0.001
13	I was not admitted to any other MHPE program	4.39 \pm 1.19	4.70 \pm 0.61	0.023
	Completing the MHPE program would enable me to			
4	Become a better teacher	1.00 \pm 0.00	1.11 \pm 0.31	0.002
5	Conduct research in medical education	1.11 \pm 0.32	1.25 \pm 0.51	0.038

Bold p-value: significant (<0.05).

program as they were unable to secure admission in other MHPE programs. Similarly, neither group of participants considered the program's structure or reputation and expertise of the faculty to be motivating factors.

Additionally, they strongly disagreed with the statements pertaining to the intention of aspiring to become better educators or conducting research in medical education upon obtaining this degree.

Discussion

This research was conducted to determine the demographic characteristics and motivational factors of the applicants for admission to the MHPE program at IME, JSMU in 2022. In recent years, due to the interest, focus, and emphasis of relevant regulatory bodies to set up dedicated medical/health education departments in every health science institute globally as well as in Pakistan, this specialty has gathered significant limelight.¹⁷ An increase was noted in the number of applicants ($n = 60$) to the JSMU MHPE program in 2022 compared to the previous years (2018 = 24, 2019 = 14, no admissions taken during coronavirus disease 2019 (COVID-19) pandemic in 2020, 2021 = 24). It was perceived that initially this field was less known; however, this discipline came to the limelight during the COVID-19 pandemic, when the role of qualified medical educationists was realized in devising appropriate and effective teaching, learning and assessment strategies for students in an effort to prevent any lapse in the continuity of their academic journey.¹⁸

In this study, the mean age of the applicants was between 30 and 40 years. In another study, an increasing proportion of candidates under 30 years were reportedly interested in medical education specialization.¹⁹ A possible explanation could be that the majority of applicants initially may have tried to enter postgraduate programs in medicine/dentistry, but due to a dearth of opportunities, were unable to do so and later decided to apply to the MHPE program. Intrinsic motivation has been reported as one of the most important factors in MHPE graduates for completing their thesis.²⁰ Without the right impetus, even after securing admission to an MHPE program, students joining the program as a last choice or applying because they considered it to be an easier program compared to others, may find it difficult to fulfill the necessary academic requirements for successful graduation or have the motivation to improve health science education. The findings showed that the factors that the authors of this study, as medical educationists, expected to be the most important for applicants in selecting the MHPE program turned out to be less significant than anticipated.

There was minimal or no representation of other health-care disciplines such as nursing, physiotherapy, or pharmacy within this cohort of applicants. This could be because there was no mandatory requirement for a qualified health professions educator from the concerned regulatory and accrediting bodies or that a need for such qualified professional was not felt by the respective institutions, thus indicating the need for developing targeted activities designed to encourage individuals belonging to other fields of health sciences to apply. Senior leadership at different health care institutes may be approached, so they can motivate their faculty and staff to seek admission to MHPE programs.

Even though the majority of graduates of medical and dental programs in Pakistan are female,^{21,22} this study's participants were mostly male. The reason for this needs further exploration. Perhaps an anticipated chance for promotion to leadership and higher authority positions, after completion of an MHPE degree, holds more promise for male applicants. The majority of participants were from Karachi, which is understandable in terms of

convenience of the program venue and logistics. However, even applicants from other cities such as Hyderabad and Lahore had applied to the JSMU MHPE program. This is an indication that applicants are willing to pursue this program even at relative inconvenience.

Studies have shown that for many employed individuals, the prospects of improvement in career or the ability to perform better is a major motivating factor for enrolling in postgraduate program.^{10,23,24} Similar findings were observed in this study where the majority of applicants were employed at a junior position and had decided independently to apply for the program, indicating some degree of self or intrinsic motivation.

The interest of applicants in improving their ability to teach practical skills is a positive factor, since health sciences comprise a wide variety of psychomotor skills for which students need to be proficient. In addition, interest in educational research is also promising since there is a dearth of research related to the practice of health sciences education. Graduates with a postgraduate degree in medical education have reported more confidence, self-sufficiency, and enhanced engagement in their educational practices and consider themselves better prepared to undertake research in medical education.¹

The primary source for receiving information regarding the JSMU MHPE program was reportedly through colleagues and peers, followed by the university website. The information and its source regarding a program is a quintessential factor in how the program is perceived and who it attracts for admissions. In this technological era, the institutes' website is an essential tool to disseminate pertinent information about what a program is offering, admission requirements, expectations from candidates, as well as the worth of the program, and hence, reaches a greater number of individuals in a more effective manner. Therefore, it is crucial that institutional websites adequately convey this information, ensuring that relevant and genuinely interested individuals apply for the program after thoroughly understanding what the program entails.¹⁴

This study identified many areas that need attention with respect to MHPE program. It is essential to develop admission policies and standards which are rigorous enough to scrutinize potential candidates so only applicants who realize the requisite dedication and commitment towards improvement in health sciences education are inducted into the program. This could include the mandatory submission of a personal statement identifying the motivation behind applying and the anticipated utility of this qualification in their personal and professional growth. In addition, the idea that this qualification is received without rigor and dedication needs to be dispelled through relevant seminars, platforms and forums, highlighting the commitment and diligence required for this Master's program.

Despite applicants having indicated that research in medical education was a skill they wanted to learn, in subsequent responses, they did not affirm their aim of conducting medical education research. In another study, it was found that junior doctors were interested in learning about the clinical aspects of medical education, but were not inclined towards pursuing research.²⁵ Only limited interest was reported by the applicants in initiating MHPE programs at

their respective institutes after graduation, with partial inclination towards arranging capacity building activities or progressive sessions.

Even though most respondents possessing only basic qualification in medicine/dentistry, they still reported their reluctance to adopt health professions education as a dedicated career. Similar findings have been reported in other studies, where barriers were identified for healthcare professionals towards pursuing academic careers. These included lack of information on entry routes to academic degrees and career pathways as well as a dearth of attractive positions post-qualification and significant recognition.^{16,19} Globally, HPE has now been recognized as a discipline in its own right.²⁶ In this regard, career counseling sessions could be arranged by medical education departments or institutes where the MHPE program is being offered, to provide aspiring applicants a vision for career opportunities available in HPE.

Limitations

The number of participants in this study was relatively small and was from a single center, limiting the generalizability of results. It is important to consider that research carried out in various institutions that provide the same program may present varying outcomes. Furthermore, a qualitative element would have provided an in-depth exploration of factors that influence or motivate candidates to apply for an MHPE program. Data could also be collected from another cohort of MHPE applicants for comparison in a future research, as well as from candidates applying for an MHPE program being conducted in a private sector institute, for further meaningful insights.

Strengths

Despite these limitations, this is the first study to identify the demographics and motivational factors of applicants to an MHPE program. The results of this study found that medical and dental graduates were the primary applicants to this program at JSMU, and that professionals from other fields in health sciences are not applying in greater numbers. Provisions could be made to incorporate the findings of this study into the selection process for future candidates, ensuring that only individuals willing to pursue an HPE with the goal of improving the learning and assessment processes in the fields of medicine, dentistry, and other health sciences be accepted.

Conclusion

For the 2022 admissions to the MHPE program being offered by the IME, the majority of applicants were in their 30s, male, and graduates of medical and dental programs from Karachi. Most were already employed in medical education departments. Although a significant number of MHPE applicants wanted to improve their skills in teaching, particularly for psychomotor components, their main motivation for applying to the MHPE program at IME, JSMU was that because they could not find admission for this degree elsewhere and the presumption that it would not take much effort to complete this degree. Based on the results, it is

recommended that awareness strategies be adopted to encourage professionals in related healthcare disciplines to apply. To admit applicants with greater motivation and interest in the field of medical education, the applicants should submit a personal statement identifying the reasons and potential application of this qualification to their personal, professional, and institutional advancement. In addition, the true essence of the rigor and diligence that is required to accomplish the MHPE degree needs to be highlighted at various forums so that only individuals who are keen to pursue this field apply.

Source of funding

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Conflict of interest

The authors have no conflict of interest to declare.

Ethical approval

The protocol for the study has received ethical approval from the institutional review board (Reference No. JSMU/IRB/2022/651).

Authors contributions

SA conceived and designed the study, conducted the study, provided the research materials, reviewed the data collection tool, and wrote the initial draft of the manuscript. **SS** developed the data collection tool; organized, analyzed, and interpreted the data; and reviewed drafts of the manuscript. **SKA** reviewed and revised the data collection tool and the final draft of article. **FA** collected the data and provided logistics support. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

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