

For this analysis, a variety of sources including scientific articles, pedagogical reports, and personal experiences in teaching medical disciplines such as general surgery, nursing practice in surgery, and patient care with a surgical focus in an online format were consulted. It is imperative to underscore that the success of distance education for medical professionals hinges not only on the utilization of technology but also on the cultivation of interactive medical communities. Collaborative problem-solving of clinical tasks and case discussions foster the development of professional identity. The analysis indicates that employing interactive virtual lectures, online simulation workshops, and virtual clinical cases enables medical students to acquire practical skills in real-time. Based on this analysis, it can be inferred that effective distance education for foreign medical practitioners demands a comprehensive approach. Interactive methodologies, teacher support, and the integration of virtual tools facilitate not only the assimilation of theoretical knowledge but also the development of practical skills essential for future medical professionals. The conclusions of this work can be used for the further development of distance medical education, ensuring the high quality of training of specialists in the field of medicine.

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MOTIVATIONAL FACTORS INFLUENCING UNDERGRADUATE STUDENTS TO PURSUE DENTISTRY AS FUTURE CAREER AT UKRAINIAN UNIVERSITIES

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People have various motivations and perceptions when choosing a future career. The purpose of this article is to compare the motivational factors for selecting dentistry as a career among local and international students at Ukrainian universities. A qualitative design was employed, using a 24-item questionnaire with closed-ended questions to survey Master's degree students in Dentistry. Students' perceptions of motivational factors were assessed on a five-point Likert scale. Statistical analysis, including the χ^2 -test and regression analysis, was conducted to identify differences. A total of 121 local and 59 international students participated in the questionnaire about motivation factors for pursuing dentistry. In the local group, 69.42% were female and 30.58% were male, while the international group comprised 32.20% females and 67.80% males. No significant differences were found between local and international students regarding professional status, income potential, entrepreneurial opportunities, practical skills, desire to work in healthcare, desire to work with people, or the wish to provide public service ($P>0.1$). However, international students expressed higher agreement regarding personal experiences with dental care and work experience. Conversely, local students placed less importance on factors like influence from friends and personal advice compared to international students. Recommendations for promoting education at the university include highlighting the professional status and income potential of dentistry, promoting practical skills development, and emphasizing the social value of the profession. To attract applicants from abroad, messaging about personal experiences in dentistry and graduates' recommendations on social networks could be effective strategies.

Keywords: local students, international students, motivation, dentistry, perception.

Introduction

People have diverse motives and perceptions when selecting a future career path. Dentistry stands out as an academic program with stringent enrollment requirements, making it essential to understand students' motivations for choosing this field [1]. This insight aids in recruiting and retaining future dentists to meet the population's oral health needs. Furthermore, recognizing students' perspectives assists educators in effectively motivating them throughout their undergraduate studies. However, motivating factors may vary across time and between countries due to differences in education systems, healthcare infrastructure, and economic conditions.

Many studies exploring career motivations in dentistry have originated from developed or middle-income countries, where economic and professional considerations play pivotal roles in career decision-making [2, 3, 4, 5]. The current study focuses on Ukraine, an emerging lower-

middle-income country. In 2020, a significant portion of adults over 18 years old in Ukraine required dental treatment, and the dentist-to-population ratio was comparable to that of the UK [7]. Additionally, Ukraine's healthcare system underwent substantial transformation between 2015 and 2020, resulting in a reduction in dental clinics and human resources [6]. To address the dwindling dentist-to-population ratio, the Ukrainian government has allowed universities to admit over two thousand local students annually. These graduates may pursue postgraduate studies in Ukraine or Eastern European countries and have the option to work in either public or private dental facilities.

Ukraine also helps to prepare the national health workforce for some African and Asian countries. Studies from those countries reported that high income [5], influence from parents [8], and desire to help people [9] were the key motivational factors to choose dentistry as a carrier. In addition, the

students' gender may influence their motivation to choose dentistry [3,10].

The researches of Ukrainians scientists are devoted to the motivation of students to study different medical disciplines [11,12, 13]. However, researchers have not yet explored the motivations of students studying in Ukraine that influence their choice of a career in dental education. Therefore, this study aims to compare the motivational factors for selecting dentistry as a career among both local and international students at a university in Ukraine.

Material and methods

This study utilized the quantitative phenomenological research design to explore the motivation factors for choosing dentistry as a career for the undergraduate students of Poltava State Medical University. In September 2021, we surveyed local and international undergraduate dental students of both sexes about their motivation to choose this profession. Students from year three-four represented the respondents of the Dental Faculty (284 citizens of Ukraine) and respondents of the International Faculty (127 citizens of African and Asian countries).

The survey focused on students' motivation to choose dentistry as a career (24 items) and included details about the student's age, sex, nationality, and parents' occupation. All items were closed-ended. Twenty-three items were questions from the standard Gallagher survey [1], representing the students' view on professional careers, healthcare, and people, influences of academic factors, career advising, and family and friends. One question was about other motivation factors. The reliability of the survey was tested

using Cronbach's alpha coefficient, which showed a very good value (P = 0,094). The survey questions explore the students' perception of motivation factors on a five-point Likert scale. The answers ranged from very important (5) to not important (1).

The consent form and information sheet of the research project were emailed to each participant. After receiving the participants' consent, students got the link to the Google form with questions. Students of the Faculty of Dentistry answered the Ukrainian variant, and students of the International faculty – the English variant of the questionnaire. Only thoroughly answered questionnaires were considered for further analysis to guarantee the correct interpretation of the results. All the personally identifiable information had been anonymized. The data collected with Google Forms was converted into an xls-spreadsheet and further imported into SPSS software (SPSS version 20,0; SPSS Inc., Chicago, Il, USA) for systematization, tabulation and statistical analysis using Chi-square test and regression analysis. The average agreement score of the student's perception is calculated to summarize the rate of "very important" and "important" answers. The results were classified as statistically significant if P < 0,05,

Results

Responses were obtained from 121 to 284 local students and 59 to 127 international students (response rates = 42,60% and 46,46%). The sample size was 180 dental students who agreed to answer an anonymous survey, representing 121 local and 59 international students. The characteristics of the sample are shown in Table 1.

Table 1. Characteristics of respondents.

Variable	Local students (n, %)	International students (n,%)
Age (in years):		
19-20	90 (74,38%)	6 (10,17%)
21-25	30 (24,79%)	47 (79,66%)
above 25 years	1 (0,73%)	6 (10,17%)
Sex:		
female	84 (69,42%)	19 (32,22%)
male	37 (30,58%)	40 (67,78%)
Parents' occupation:		
education	5 (4,13%)	12 (20,34%)
farming	17 (14,06%)	1 (1,69%)
financial	18 (14,87%)	7 (11,87%)
medicine	18 (14,87%)	10 (16,95%)
trading, service, industry	63 (52,07%)	29 (49,15%)

Among the local students, 117 respondents were Ukrainians, and 4 had other nationalities. Among the international students, 47 were Arabs from Morocco, Egypt, Tunisia, Jordan, Palestine, Libya, and the UAE, one was Pakistani, five were Iranians, and six were Africans. 74,37% of the local students were 19-20 years old, while 79,60% of the international students were 21–25-year-olds.

In the local group, the female students accounted for 69,42%, while the male students constituted 30,58%. The sample of international

students was represented by 32,20% of females and 67,80% of males. Parents of 29 international students (49,16%) and 41 local students (33,88%) worked in the education, medicine, and financial sector (P = 0,049).

When average agreement rates were calculated, more than 80% of the studied respondents selected dentistry as their preferred career because of the motives of professional jobs, healthcare, and people (Figure 1).

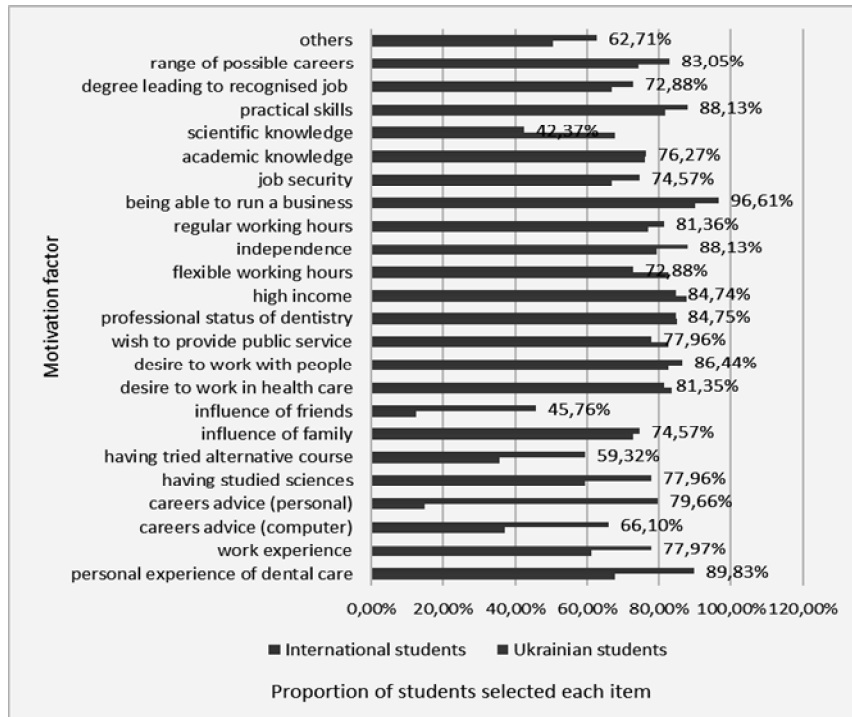


Figure 1. Average agreement rates about different motivation factors in the local and international students.

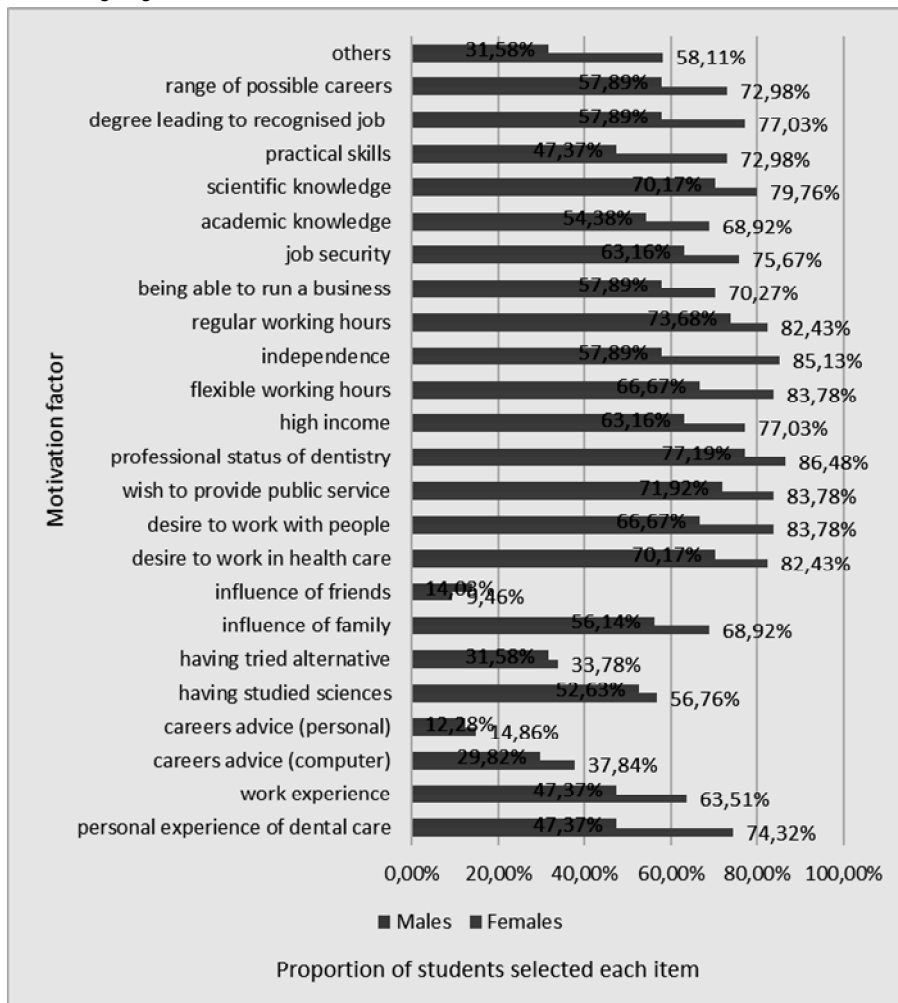


Figure 2. Importance of different motivations of the local students by sex.

There were no differences between the local and international students regarding professional status of dentistry (85,12 % and 84,75%, respectively), high income (84,74% and 87,60%, respectively), ability to run a business (90,08% and 96,61%), practical skills (81,82% and 88,13%, respectively), desire to work in health care (83,47% and 81,35%, respectively), desire to work with people (82,64% and 86,44%, respectively), and wish to provide public service (82,64% and 77,96%) ($P > 0,1$).

Regarding personal dental care experience, the international students showed a higher agreement about 89,83% vs the local students – at 67,77% ($P=0,0014$). Also, work experience was the item with higher agreement among the international students (77,97%) compared to the local students (61,15%) ($P=0,02$). In the local students, the influence of friends (12,39%) and personal advice (14,88%) were motivation factors with the lowest agreement, especially compared to the international students (45,76% and 79,66% accordingly) ($P<0,0001$). Computer advice (37,19%) and alternative course (job) (35,53%) were items with the low agreement in the local students than in the international students (66,1% and 59,32%) ($P<0,01$). Scientific knowledge had lower importance for the international students (42,37%)

compared to the local students (67,77%) ($P=0,0012$). Perception of other motivation factors was not different in both groups of students (50,41% and 62,71%) ($P > 0,1$). The average agreement score of other studied items was not different in the local and international students (all $P > 0,05$).

Sex of the local students impacted their perception of the importance of different motivation factors (Figure 2). For females, personal experience of dental care ($P = 0,004$), desire to work with people ($P < 0,05$), flexible working hours ($P < 0,05$), practical skills ($P < 0,001$), degree leading to recognized job ($P < 0,05$), and other factors not mentioned in the survey ($P = 0,007$) were more critical compared to males.

In addition, the sex of the international students impacted on their motivation factors to choose dental education (Figure 3). Desire to work in healthcare ($P = 0,04$), and other factors not mentioned in the survey ($P = 0,02$) were more important for females.

Regression analysis was carried out on the factor scores with parents' occupation and the sex of students as predictor variables. It was found that none of the studied factors was significantly predicted by the parents' occupations and sex of students.

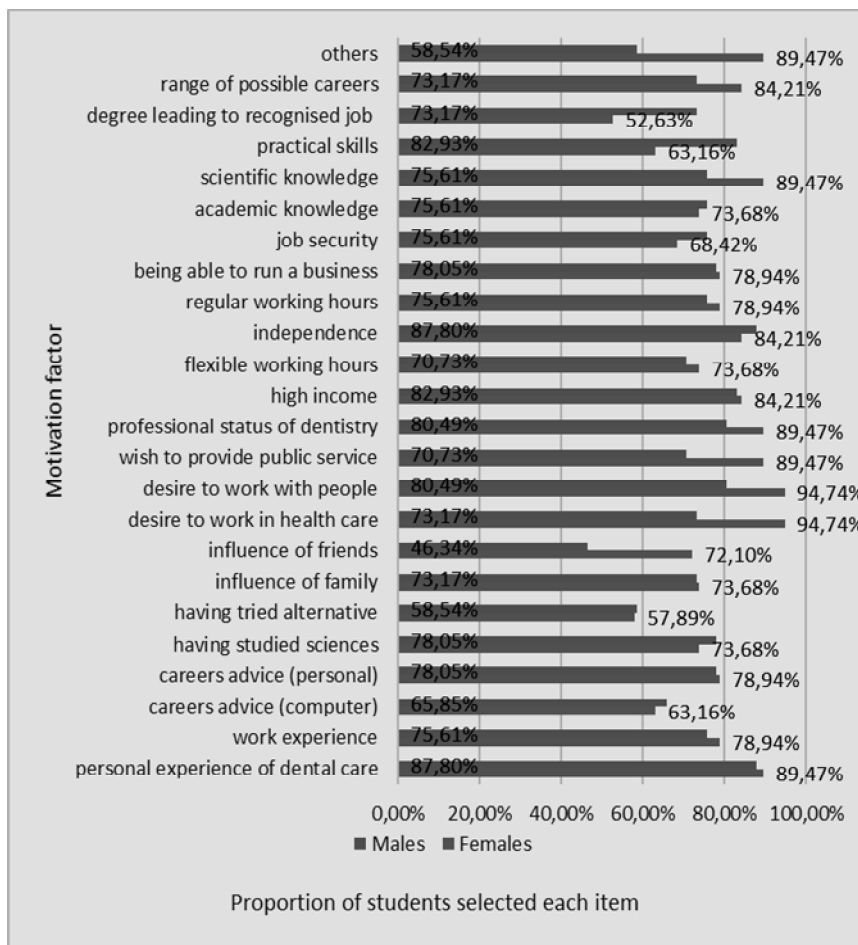


Figure 3. Importance of different motivations of the international students by sex.

Discussion

Most respondents in this study were females, which was in concordance with the findings in the studies conducted in other countries [3,14]. The low rate of females among international students reflected their sex ratio at Ukrainian universities. Most respondents were below 25 years old, which was typical for such motivation studies [5,15]. In general, most Ukrainians start to study in higher education institutions at 18 years and have no work experience before university. Therefore, the international students were older than their counterparts.

Most of the research has used different instruments for motivation studies, meaning the findings are not directly comparable. Therefore, a universal Gallagher's survey was used in the current study.

Students' view on the professional status of dentistry is mainly related to the better social position in society, making it a more desirable job. Nikolovska et al. [14] associated a high rate of financial incentive for choosing dentistry with the low socioeconomic situation in the countries of Southeast Europe. So, the considerable high income rate for choosing dentistry underlies its importance in everyday decision-making. However, Gallagher et al. [1] claimed a lower priority of high income compared to independence and regular working hours for UK dental students, which was explained by their families' financial security.

In line with the reflections of Mohebbi et al. [8], Rashid et al. [5], and Al-Homaidhi [15], students in the current study highly evaluated the importance of professional status, a high income of dentistry, and the desire to offer help to people. Moreover, the studied students perceived a high level of desire to work with people and in healthcare, similar to the data from across Australia [16], the UAE [5], and Pakistan [17]. Therefore, Poltava public medical university students considered not only their social and financial position but chose dentistry as a patient-oriented profession.

In line with the study of Waylen et al. [8], the local and international students highly evaluated the importance of practical skills for choosing dentistry, confirming their understanding that well-qualified specialists have more chances to get a coveted job.

The rate of family influence in this study was not different between the local and international students, which was in agreement with data from across Pakistan [12], but higher than in the UAE [16] and Iran [8]. A review of Akosah-Twumasi et al. [18] revealed that family expectations mainly influenced youth from collectivist cultures. In the Arab world, African countries, and Ukraine, families not only sponsor students' educational expenses but also play a significant role in shaping their future career lives by influencing their choices for pursuing a dental profession. On the contrary, family pressure had a low preference for motivation to study among UK students from individualist culture [10]. However, increasing parental awareness and stu-

dent career options may mitigate ill-informed decisions regarding choosing dentistry as a future career [14].

The international students started to study later at Ukrainian universities than local students. They could have a full-time job before learning, so work experience was the item with a higher agreement for them. In concordance with the current research, a career in dentistry was predicted by the older age of the UAE students [5].

Low rates of influence of friends and personal advice in most local students might reflect their tolerance to friends' views in terms of career. Although the rate of parents who work in education, medicine, and the financial sector was higher among international students, they highly evaluated the importance of computer advice in their choice of dentistry than local students. Arhoma et al. [9] claimed that students whose parents had less than a university education were more likely to be motivated by Internet sites. In this study, personal experience of dental care was found to be higher in the international students than the local students. A possible explanation for our results might be that the studied international students used different resources, including their own experience, to get information about their future job.

Scientific knowledge had higher importance for the local students. The international students in this study were more practically orientated and considered scientific knowledge unimportant for a dentist's job. Contrary to our results, the highest interest in scientific knowledge motivated Libyan dental students to choose dentistry [9].

In this study, parents' occupation and sex of the international students could not predict their children's choice of dentistry, which was in concordance with the study of Kabil et al. [19]. However, in the study of Rashid et al. [5], sex was a predictor of business and financial with independence.

In this study, it was observed that the desire to work with people or in healthcare, along with other unmentioned factors, held greater importance for female students compared to male students. This aligns with findings from the UAE, where female students placed a higher emphasis on the treatment of people and oral health care. Additionally, local female students valued personal experience in dental care, flexible working hours, practical skills, and degrees leading to recognized jobs more than their male counterparts. Therefore, recruiters should highlight these potential benefits of the dental profession, as they contribute to achieving a better work-life balance for female dentists.

Finally, analyzing the obtained results, we should keep in mind that some motivation factors were associated with the nationalities of students related to cultural and socioeconomic conditions in their home countries, mainly if the international students in our study represented different Arabian and African countries.

This study has some limitations. The cross-

sectional type of our study was the first limitation; students' perception of motivation to choose dentistry could be changed over some time. Future studies could address this issue by investigating students' motivation in the final year of the study. The second limitation was that the study was only conducted at one medical university, and the results cannot be generalized to Ukraine. However, Poltava state medical university has students from different parts of the country, increasing the sample representativeness. The third limitation was that the question about other factors motivated students should have been open-ended to specify the details. In addition, this study was conducted before the war in Ukraine, which encouraged many international students to drop out of learning here. Still, the war will end, and further studies looking at multiple institutions will assist in establishing the generalizability of our survey and estimating other psychological aspects influencing the choice of dentistry.

Conclusions

Obtained results are an addition to similar data collected worldwide to compare reasons to study dentistry between countries with different social, economic, and cultural backgrounds.

In order to promote education at our university, it is necessary to emphasize the high professional status of dentist, high income, the opportunity to launch business, practical skills during education, as well as a useful role of the social work profession. To attract applicants from other countries, the messages about the importance of personal experience of dental care and work should be promoted; also the graduates could recommend the university on social networks.

Authors' contribution statements

Kaskova L.F. - Critical revision of the article, Final approval of the article;

Yanko N.V. - Research concept and design, Collection and assembly of data, Data analysis and interpretation, Writing the article, Critical revision of the article, Final approval of the article;

Vashchenko I.Y. - Collection and assembly of data, Critical revision of the article, Final approval of the article;

Amosova L.I. - Critical revision of the article, Final approval of the article;

Morhun N.A. - Critical revision of the article, Final approval of the article.

Conflict of interest

There are no conflicts of interest to disclosure.

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Реферат

МОТИВАЦІЙНІ ФАКТОРИ ВИБОРУ СТОМАТОЛОГІЇ В ЯКОСТІ МАЙБУТНЬОЇ ПРОФЕСІЇ У СТУДЕНТІВ УКРАЇНСЬКОГО УНІВЕРСИТЕТУ

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Ключові слова: вітчизняні студенти, іноземні студенти, мотивація, стоматологія, сприйняття.

Розуміння мотивації студентів у виборі професії допомагає залучити здобувачів освіти до університету та мотивувати їх під час навчання. Мета статті - порівняти фактори мотивації обрати стоматологію як кар'єру у вітчизняних та іноземних студентів українського університету. Використовувалась анкета з 24 пунктів із закритими запитаннями для опитування здобувачів освіти ступеня магістра стоматології. Сприйняття студентами факторів мотивації досліджували за п'ятибальною шкалою Лайкерта. χ^2 -тест і регресійний аналіз використовувались для встановлення статистичних відмінностей. 121 вітчизняний та 59 іноземних студентів погодились відповісти на запитання анкети щодо мотивації вибору стоматології для навчання. Серед вітчизняних студентів жінки склали 69,42%, а чоловіки – 30,58%. Вибірка іноземних студентів була представлена 32,2% жінок та 67,8% чоловіків. Як вітчизняні, так і іноземні студенти високо оцінили роль професійного статусу, високого доходу, здатності вести бізнес, практичних навичок, бажання працювати в галузі охорони здоров'я, бажання працювати з людьми та бажання служити суспільству у виборі кар'єри. Іноземні студенти оцінювали вище роль особистого досвіду стоматологічної допомоги та досвіду роботи у виборі професії. У вітчизняних студентів вплив друзів та особиста порада грали меншу роль, особливо порівняно з іноземними. Комп'ютерні поради та альтернативний курс (робота) мали меншу важливість для вітчизняних студентів, ніж для іноземних студентів. Наукові знання були менш важливими для іноземних студентів порівняно з вітчизняними студентами.

Отже, для просування навчання в нашому університеті слід наголошувати про високий професійний статус стоматолога, високий дохід, можливість займатися бізнесом, а також про відпрацювання практичних навичок під час навчання та суспільно-корисну роль цієї професії. Для залучення здобувачів освіти з інших країн слід просувати меседжі про важливість особистого досвіду стоматологічної допомоги та роботи у виборі професії, а також залучати випускників нашого університету в соціальних мережах рекомендувати його для вивчення стоматології.