



Dental students' choice of specialties and programs for post graduate education: Data from nine dental schools

Pattapon Asavanund¹, Kemthong Mitrakul², Jira Chindasombatjaroen³

¹ Department of Prosthodontics Faculty of Dentistry, Mahidol University

² Department of Pediatric Dentistry, Faculty of Dentistry, Mahidol University

³ Department of Oral and Maxillofacial Radiology Faculty of Dentistry, Mahidol University

Abstract

Objectives: The goals of this study were to study dental students' choice of postgraduate dental specialties, and identify factors associated with their decision in selecting a university and specialty training.

Materials and methods: This is a cross-sectional study obtaining data by means of questionnaires. All participants were from the Faculty of Dentistry, 1) Mahidol University, 2) Chulalongkorn University, 3) Srinakharinwirot University, 4) Rangsit University, 5) Thammasart University, 6) Chiang Mai University, 7) Khon Khan University, 8) Naresuan University, and 9) Prince of Songkla University. Subjects also included were postgraduate applicants for the academic year 2015, Mahidol University. Data were analyzed using descriptive statistics.

Results: From 917 respondents, results showed that most of the respondents chosen to continue post graduate education in both Thailand and abroad. Mahidol University was their first choice followed by Chulalongkorn University and Chiang Mai University, respectively. The most preferred program was residency training and international master degree programs followed by higher graduate in clinical science programs. The most preferred specialty was Oral and Maxillofacial Surgery, Prosthodontics, Orthodontics, Pediatric dentistry and Endodontics. The factors for choosing which university to continue post graduate education was significant wide varieties of programs and the university reputation. Majority of the respondents prefer to gain more clinical skills from the program. They learned the application period from their seniors or friends, the website of the university of interest and Thai dental council website. Respondents indicated no financial problem to attend the foreign exchange program.

Conclusion: Mahidol University was the first choice for pursuing postgraduate dental education. Reasons for choosing a university was a wide variety of post graduate programs and its reputation. Oral and Maxillofacial Surgery, Prosthodontics, Pediatric dentistry, Endodontic, and Orthodontics were among the most preferred specialized programs.

Keywords: postgraduate dental education, dental students, dental specialties selection

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Corresponding author:

Kemthong Mitrakul
Department of Pediatric Dentistry,
Faculty of Dentistry, Mahidol University
6 Yothee Street, Rajthevee, Payathai,
Bangkok, Thailand, 10400
Phone: (02)200-7821-3,
Fax: (02)200-7820
e-mail: mkemthong@yahoo.com

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Introduction

The number of dentists in Thailand has increased rapidly since 2000 along with an increased number of dental schools¹. With high productivity from ten dental schools, new graduates in D.D.S. (Doctor of Dental Surgery degree) will increase from 700 to 1,000 in the next year¹. Twenty years from now, there will be 33,000 dentists in Thailand. A survey in April, 2014 reported that there are 13,138 dentists in Thailand, with the ratio of dentists to population being 1:5,000^{2, 3}. It was reported that 1,313 out of 13,138 dentists continued their postgraduate dental education in Master or Doctoral degrees and 2,626 out of 13,138 dentists pursued their specialties training. The number of applicants to postgraduate programs is also increasing significantly^{1, 2}.

Various studies on the desire to continue a post graduate education have been done in other countries such as the United States of America, Iran, Japan, Sweden, Brazil and India. Accessing students preferred specialty training or a future plan in their career path⁴⁻¹⁰. In a previous study done at the Harvard School of Dental Medicine (HSDM) from 2004 to 2007, results showed that 87.6% of graduates continue their training in postdoctoral programs, with 72.9% specializing and 14.7% pursuing advanced training in general dentistry⁴. Another study that was done in Japan and Sweden reported that for future career options, 64% of Japanese and 47% of Swedish students planned to work as general dentists. More Swedish students (37%) preferred specialization than Japanese students (17%). This figure can be explained by the findings detailing that about half of the students had plans to work at public dental health centers, while the other half was planning to set up their own practice. Additionally, 37% of the Swedish students were planning to become specialists. This was probably because specialists earn more money

than general dentists, and they mostly deal with referrals. Additionally 19% of the Swedish students wanted to become educators. In Japan, only 17% of Japanese students wished to become specialists⁹.

The dental curriculum in Thailand is constantly changing with steady development facilitated through appropriate feedback. General needs assessment of targeted learners, feedback from all stakeholders, and planned evaluation of the curriculum are some ways in which the curriculum is developed¹¹. In the present day international collaboration has expanded and popular for applicants in selecting the post graduate programs^{11, 12}.

From our previous study, we accessed a total of 567 respondents from the Faculty of Dentistry from three universities which were Mahidol University, Thammasart University and Srinakharinwirot University. Results showed that more than 70% of students would like to continue their postgraduate education and most of them were interested in dual degree programs in collaboration with other international universities¹². These results implied the international collaboration programs, such as joint or dual-degree programs are becoming more popular.

In this study, we obtained more data from nine universities as well as adding more information needed in the questionnaires such as factors in choosing the university to continue post graduate education. The goals of this study were to: 1) evaluate groups of dental students' choice of postgraduate dental specialties selection, and 2) identify factors affecting their decision in selecting a university and specialty training.

Materials and methods

Subject selection

This is a cross-sectional study using a questionnaire. Exemption for ethical approval

was obtained from the Ethical Committee (MU-DT/PY-IRB 2013/037.0708) Faculty of Dentistry and Faculty of Pharmacy, Mahidol University. The questionnaires contained multiple choice questions and it was composed of gender, where to continue the postgraduate education, current or future workplace, the most desired university for postgraduate program, the most desired specialty program, reasons for choosing specialty training, and how did they know when it was the application period. This report received permission to publish from the Deputy Dean of Post Graduate Education, Faculty of Dentistry, Mahidol University.

The questionnaires were in Thai and hand-distributed during the academic year 2015 to sixth-year dental students, class of 2015 from the Faculty of Dentistry, 1) Mahidol University, 2) Chulalongkorn University, 3) Khon Kaen University, 4) Chiang Mai University, 5) Thammasart University, 6) Naresuan University, 7) Srinakharinwirot University, 8) Prince of Songkla University, and 9) Rangsit University and the fifth-year dental students, class of 2016 from Rangsit University. In addition, postgraduate applicants for post graduate programs in the academic year 2015 at Mahidol University were included and they were informed that this survey would not affect their postgraduate programs acceptance results.

Statistical Analysis

The data were entered and stored in electronic format as a Microsoft Excel 2012 file. The data were analyzed using descriptive statistics with statistical software (Statistical Package; SPSS Version 18, Microsoft, USA).

Results

A total of 917 respondents completed questionnaires. Table 1 shows the results from sixth-year dental students, class of 2015 from the Faculty of Dentistry, Mahidol University.

Thirty percent of respondents would like to continue their post graduate education in Thailand followed by abroad (12.8%). The most desired university to continue postgraduate education was Mahidol University (68.8%). The highest considering factor in choosing to continue a postgraduate education was well-known faculty staff (38.5%). Forty-five percent of respondents preferred residency training programs while 29.4% and 17.4% chose a higher graduate in clinical science, and master degree programs, respectively. The highest preferred specialty training was Prosthodontics (22.9%), followed by Oral and Maxillofacial Surgery (21.1%), Endodontics (10.1%) and Orthodontics and General Dentistry (9.2%), respectively.

Table 2 shows results from the sixth-year dental students, class of 2015 from the Faculty of Dentistry, Chulalongkorn University. Half of the respondents would like to continue their post graduate education in Thailand (54.5%). The most desired university to continue their postgraduate education was Chulalongkorn University (85.4%). The most considered factor in choosing to continue a postgraduate education was respondent attended as an undergraduate at the chosen university (68.3%), followed by the chosen university offered a wide variety of post graduate programs (13.8%), and the university reputation (11.4%). Forty percent of respondents preferred residency training and master degree programs, while 16.3% chose a higher graduate in clinical science programs. The most preferred specialty training program was Prosthodontics (24.4%), Oral and Maxillofacial Surgery (20.3%), Orthodontics (15.4%), Endodontics (8.9%), and Implant and Pediatric dentistry (6.5%), respectively.

For Table 3 and 4, the responding groups were from the Faculty of Dental Medicine, Rangsit University. Most of the respondents would be working at private hospitals followed by government hospitals. Mahidol University

was ranked number one for the most desired university to continue a post graduate study, followed by Chulalongkorn University and Chiang Mai University, respectively. The highest preferred program was international master programs followed by regular master degree

programs. For the preferred specialty, there was different result between the sixth-year and the fifth-year students as showed in the tables.

Results from the sixth-year students, class of 2015 from the Faculty of Dentistry, Srinakarinwirot University. From all respondents

Table 1 Data from the sixth-year students, class of 2015, Faculty of Dentistry, Mahidol University expressed as number and percentage

Topics		N	n	Percent
Gender	Male	109	38	34.9
	Female		71	65.1
Future workplace	Government hospital	107	82	75.2
	Private hospital		19	17.4
	Faculty staff		5	4.6
	NA		1	0.9
Where continuing PG education?	Not sure	107	57	52.3
	Thailand		34	31.2
	Abroad		14	12.8
	NA		2	1.8
Most desired university	Mahidol University	106	75	68.8
	Chulalongkorn University		19	17.4
	Chiang Mai University		11	10.1
	Prince of Songkla University		1	0.9
Reasons for choosing university	Well-known faculty staff	95	42	38.5
	Offers wide variety of programs		18	16.5
	Attended as undergraduate here		15	13.8
	Society merit		6	5.5
	Offers international programs		5	4.6
	Well-known university		5	4.6
	Good location		3	2.8
Most preferred program	Residency training	107	49	45
	Higher graduate in clinical science		32	29.4
	Master degree		19	17.4
	NA		7	6.4
Most preferred specialty	Prosthodontics	106	25	22.9
	OMFS*		23	21.1
	Endodontics		11	10.1
	Orthodontics		10	9.2
	General dentistry		10	9.2
	Periodontology		9	8.3
	Pediatric dentistry		6	5.5
	Implant		5	4.6
	Operative dentistry		3	2.8
	Oral medicine		2	1.8

(N=109)

For table 1-8: (NA=Not answerd), *Oral and maxillofacial surgery

(N=55), twenty-two did not want to pursue a postgraduate study. Male and female students were divided at 37.3% and 60.8%, respectively. The most desired university was Mahidol (42.1%), followed by Chulalongkorn University (28.9%), Srinakharinvirot University along with studying abroad (10.5%). The most preferred programs were residency training (54.1%) followed by master degree and higher graduate in clinical science programs (18.9%) and doctoral degree program (8.1%), respectively. The most considered factors in choosing to continue a postgraduate education were reputation of the university (48.6%), followed by the chosen

university offering student-centered education (32.4%) and international collaboration or offering international programs (5.4%). The most preferred specialty training programs were Oral and Maxillofacial surgery (34.2%), followed by Orthodontics (28.9%), Oral medicine and Operative dentistry (7.9%), Pediatric dentistry, Prosthodontics, Endodontics and Maxillofacial Prosthodontics (5.3%), respectively.

Results from the sixth-year students, class of 2015 from the Faculty of Dentistry, Thammasart University. There were 54 respondents. Male and female students were 17.9% and 78.6%, respectively. Thirty-nine

Table 2 Data from the sixth-year students, class of 2015, Faculty of Dentistry, Chulalongkorn University expressed as number and percentage

Topics		N	n	Percent
Gender	Male	123	88	71.5
	Female		35	28.5
Future workplace	Government hospital	121	106	86.2
	Private hospital		10	8.1
	Faculty staff		5	4.1
Where continuing PG education?	Thailand	122	67	54.5
	Not sure		44	35.8
	Abroad		11	8.9
Most desired university	Chulalongkorn University	122	105	85.4
	Mahidol University		9	7.3
	Chiang Mai University		6	4.9
	Prince of Songkla University		1	0.8
	Others		1	0.8
Reasons for choosing university	Attended as undergraduate here	121	84	68.3
	Offers wide variety of programs		17	13.8
	Well-known university		14	11.4
	Good location		4	3.3
	Well-known faculty staff		2	1.6
Most preferred program	Residency training	120	50	40.7
	Master degree		50	40.7
	Higher graduate in clinical science		20	16.3
Most preferred specialty	Prosthodontics	120	30	24.4
	OMFS*		25	20.3
	Orthodontics		19	15.4
	Endodontics		11	8.9
	Implant		8	6.5
	Pediatric dentistry		8	6.5

(N=123)

percent and 16.1% of respondents would like to continue postgraduate study in Thailand and abroad, respectively. Most of the respondents would be working at government hospitals (80.4%) followed by faculty staff (10.7%) and private hospitals (3.6%), respectively. The most

Table 3 Data from the sixth-year students, class of 2016, Faculty of Dentistry, Rangsit University expressed as number and percentage

Topics		N	n	Percent
Gender	Male	71	19	26.8
	Female		52	73.2
Future workplace	Private hospital	71	43	60.6
	Government hospital		24	33.8
	Faculty staff		4	5.6
Where continuing PG education?	Thailand	71	24	33.8
	Abroad		23	32.4
	NA		22	31
Most desired university	Mahidol University	71	34	47.9
	Chulalongkorn University		21	29.6
	Chiang Mai University		5	7
	NA		5	7
	Khon Kaen University		3	4.2
	Prince of Songkla University		1	1.4
	Srinakharinwirot University		1	1.4
	Rangsit University		1	1.4
Reasons for choosing university	Wide variety of programs	71	15	21.1
	Good location		15	21.1
	University reputation		12	16.9
	Society merit		10	14.1
	Well-known faculty staff		9	12.7
	Offers international programs		5	7
	Attended as undergraduate here		4	5.6
Most preferred program	Master degree International	71	19	26.8
	Master program (regular)		17	23.9
	Higher graduate		17	23.9
	Residency training		4	5.6
	Higher graduate international		4	5.6
	Grad diploma international		2	2.8
	Doctoral international		1	1.4
Most preferred specialty	Pediatric dentistry	64	10	15.6
	Endodontics		8	11.3
	OMFS*		8	11.3
	Operative dentistry		7	9.9
	Orthodontics		6	8.5
	General dentistry		6	8.5
	Prosthodontics/implant		6	8.5
	Prosthodontics		4	5.6
	Oral medicine		2	2.8
	Oral radiology		2	2.8

(N=71)

desired university was Mahidol (53.6%), followed by Chulalongkorn University (25%), Chiang Mai University (10.7%), Khon Khan University (3.6%) and Srinakarinwirot University (1.8%), respectively. The factors most considered in choosing to continue a postgraduate education were the chosen university offered a wide variety of post graduate programs (35.7%) followed

Table 4 Data from the fifth-year students, class of 2016, Faculty of Dentistry, Rangsit University expressed as number and percentage

Topics		N	n	Percent
Gender	Male	74	24	32.4
	Female		49	66.2
Future workplace	Private hospital	74	53	71.6
	Government hospital		14	18.9
	Faculty staff		1	1.4
	NA		2	2.7
Where continuing PG education?	Thailand	74	25	33.8
	Abroad		20	27
	Not sure		27	36.5
	NA		2	2.7
Most desired university	Mahidol University	74	30	40.5
	Chulalongkorn University		16	21.6
	Abroad		9	12.2
	Chiang Mai University		8	10.8
	NA		8	10.8
	Khon Kaen University		2	2.7
	Rangsit University		1	1.4
Reasons for choosing university	Wide variety of programs	74	24	32.4
	University reputation		19	25.7
	Good location		11	14.9
	Society merit		4	5.4
	Well-known faculty staff		4	5.4
Most preferred program	Master International	74	24	32.4
	Master program (regular)		17	23
	Higher graduate International		12	16.2
	Higher graduate in clinical science		11	14.9
	Not in order		5	6.8
	Residency training		2	2.7
Most preferred specialty	Orthodontics	74	10	13.5
	Endodontics		8	10.8
	Operative dentistry		8	10.8
	General dentistry		7	9.5
	Prosthodontics		7	9.5
	Pediatric dentistry		7	9.5
	OMFS*		3	4.1
	Oral medicine		3	4.1
	Implant		2	2.7
	Oral rehabilitation		2	2.7

(N=74)

by well-known faculty staff (21.4%), location (16.1%), the university reputation (12.5%), and the chosen university program is part of the society merit program (5.4%), respectively. Forty-eight percent of respondents preferred residency training programs while 25% and 17.9% preferred higher graduate in clinical science programs and master degree programs, respectively. The most preferred specialty training programs were Oral and Maxillofacial surgery (23.2%), followed by Prosthodontics (16.1%), Orthodontics (12.5%), Periodontology and Endodontics (10.7%), and Operative dentistry (8.9%), respectively. Most respondents (80.4%) would like to gain more

knowledge in clinical training. Fifty percent of respondents were able to pay for the exchange program abroad for 40,000-60,000 baht during the study followed by 60,001-80,000 (23.2%), more than 100,000 (12.5%) and 80,001-100,000 (10.7%), respectively. Most of the respondents (33.9%) knew the enrollment period via seniors or friends, followed by the Thai dental council (16.1%), the website of the preferred university, education guidance section and graduate study website (10.7%), and Royal Thai dental website (7.1%), respectively.

Table 5 reveals results from the sixth-year students, class of 2015 from the Faculty

Table 5 Data from the sixth-year students, class of 2015, Faculty of Dentistry, Chiang Mai University expressed as number and percentage

Topics		N	n	Percent
Gender	Male	81	32	39.5
	Female		48	60.5
Future workplace	Government hospital	80	68	84
	Private hospital		4	4.9
	Faculty staff		8	9.9
Where continuing PG education?	Thailand	77	47	58
	Not sure		21	25.9
	Abroad		9	11.1
Most desired university	Chiang Mai University	77	53	65.4
	Mahidol University		17	21
	Chulalongkorn University		6	7.4
	Prince of Songkla University		1	1.2
Reasons for choosing university	Attended as undergraduate here	77	46	56.8
	Well-known university		12	14.8
	Offers wide variety of programs		9	11.1
	Good location		8	9.9
	Well-known faculty staff		1	1.2
	Social merit		1	1.2
Most preferred program	Master degree program	75	50	61.7
	Residency training		14	17.3
	Higher graduate in clinical science		11	13.6
Most preferred specialty	Pediatric dentistry	80	15	18.5
	Orthodontics		14	17.3
	Prosthodontics		11	13.6
	OMFS*		10	12.3
	Implant		8	9.9
	General dentistry		8	9.9
	Endodontics		6	7.4

(N=81)

of Dentistry, Chiang Mai University. Fifty-eight percent and 11.1% of respondents would like to continue postgraduate study in Thailand and abroad, respectively. The most desired university was Chiang Mai (65.4%). The factors considered most in choosing to continue a postgraduate education were respondent attended undergraduate study at the chosen university (56.8%), followed by university reputation (14.8%), the chosen university offered a wide variety of post graduate programs (11.1%), location (9.9%), and well-known faculty staff along with the chosen university program is part of the society merit program (1.2%),

respectively. Sixty-one percent of respondents preferred master degree programs while 17.3% and 13.6% preferred residency training programs and higher graduate in clinical science programs, respectively. The most preferred specialty training programs were Pediatric dentistry (18.5%), followed by Orthodontics (17.3%), Prosthodontics (13.6%), Oral and Maxillofacial surgery (12.3%), Implant and general dentistry (9.9%), and Endodontics (7.4%), respectively.

Table 6 reveals results from the sixth-year students, class of 2015 from the Faculty of Dentistry, Khon Kaen University. Fifty-four percent and 13.3% of respondents would like

Table 6 Data from the sixth-year students, class of 2015, Faculty of Dentistry, Khon Kaen University expressed as number and percentage

Topics		N	n	Percent
Gender	Male	78	50	60.2
	Female		31	37.3
Future workplace	Government hospital	77	70	85.5
	Faculty staff		6	8.4
	Private hospital		1	2.4
Where continuing PG education?	Thailand	77	45	54.2
	Not sure		21	25.3
	Abroad		11	13.3
Most desired university	Chiang Mai University	78	30	36.1
	Mahidol University		26	31.3
	Chulalongkorn University		12	14.5
	Khon Khan University		9	13.3
Reasons for choosing university	Attended as undergraduate here	78	33	39.8
	Offers wide variety of programs		18	21.7
	Well-known university		17	20.5
	Good location		8	9.6
	Well-known faculty staff		2	2.4
Most preferred program	Master degree	69	37	44.6
	Residency training		23	27.7
	Higher graduate in clinical science		9	10.8
Most preferred specialty	Orthodontics	78	16	19.3
	Prosthodontics		15	18.1
	Pediatric dentistry		10	12
	General dentistry		8	9.6
	Endodontics		8	9.6
	OMFS*		6	7.2
	Implant		6	7.2

(N=78)

to continue postgraduate study in Thailand and abroad, respectively. The most desired university was Chiang Mai (36.1%). The factors most considered in choosing to continue a postgraduate education were student attended undergraduate study at the chosen university (39.8%), followed by the chosen university offered a wide variety of post graduate programs (21.7%), university reputation (20.5%), location (9.6%), and well-known faculty staff (2.4%), respectively. Forty-four percent of respondents preferred master degree programs while 27.7% and 10.8% preferred residency training programs and higher graduate in clinical science programs, respectively. The most preferred specialty training programs were Orthodontics (19.3%), followed by Prosthodontics (18.1%), Pediatric dentistry (12%), general dentistry and Endodontics (9.6%), Oral and Maxillofacial surgery and Implant (7.2%), respectively.

Results from the sixth-year students, class of 2015 from the Faculty of Dentistry, Naresuan University. Thirty-seven percent and 17.9% of respondents would like to continue postgraduate study in Thailand and abroad, respectively. The most desired university was Mahidol (40%). The factors most considered in choosing to continue a postgraduate education were the chosen university offered a wide variety of programs (37.9%), followed by university reputation (23.2%), location (20%), student attended undergraduate study at the chosen university (6.3%), and well-known faculty staff (3.2%), respectively. Forty-four percent of respondents preferred master degree programs while 27.7% and 10.8% preferred residency training and higher graduate in clinical science programs, respectively. The most preferred specialty training programs were General dentistry (17.9%), followed by Oral and Maxillofacial surgery (16.8%), Prosthodontics (15.8%), Endodontics (10.5%), Orthodontics (7.4%), Operative dentistry and Pediatric dentistry

(6.3%), respectively.

Table 7 reveals results from the sixth-year students, class of 2015 from the Faculty of Dentistry, Prince of Songkla University. Forty-three percent and 18.2% of respondents would like to continue postgraduate study in Thailand and abroad, respectively. The most desired university was Mahidol (36.4%). The factors most considered in choosing to continue a postgraduate education were the chosen university offered a wide variety of programs (29.1%), followed by the student attended undergraduate study at the chosen university (25.5%), university reputation (21.8%), well-known faculty staff (7.3%), and location (5.5%), respectively. Fifty-two percent of respondents preferred master degree programs while 27.3% and 10.9% preferred higher graduate in clinical science programs and residency training programs, respectively. The most preferred specialty training programs were Oral and Maxillofacial surgery (30.9%), followed by Pediatric dentistry (12.7%), Prosthodontics (9.1%), Orthodontics, Periodontology, General dentistry and implant (7.3%), and Endodontics and Operative dentistry (5.5%), respectively.

The last respondents' group was the applicants for postgraduate programs for the academic year 2015 at the Faculty of Dentistry, Mahidol University (Table 8). Thirty percent of respondents graduated from Mahidol University, 16.8% from Srinakharinwirot University, 15.2% from Thammasart University, 11.2% from Chulalongkorn University, 8.8% from Chiang Mai University, 5.6% from Khon Kaen University, and Prince of Songkla University, and 3.2% from Rangsit University and Naresuan University, respectively. The highest considered factor in choosing to continue a postgraduate education were the chosen university offered a wide variety of programs (28%), followed by well-known faculty staff (24.8%), university reputation (22.4%), student attended undergraduate study

at the chosen university (12%), and location (7.2%), respectively. Seventy-six percent of respondents preferred residency training programs, and 9.6% were interested in a master degree programs and 8.8% chose higher graduate in clinical science programs. The highest preferred specialty training was Endodontics (25.6%) followed by Prosthodontics (22.4%), Periodontology (19.2%), Pediatric dentistry (15.2%), Oral and Maxillofacial surgery (7.2%), and Orthodontics (1.8%), respectively. Most respondents (41.6%) knew the application period via the royal Thai dental website followed by seniors or friends (16.8%), the website of the preferred dental school and Thai dental council

website (11.2%), the graduate study website and (8%), and education guidance section (0.8%), respectively.

Taken together from all respondents, Mahidol University was in a high rank to continue post graduate education, even though most graduates from Chulalongkorn University, Chiang Mai University and Prince of Songkla University tend to choose where they graduated to continue their post graduate education (Table 9). The highest resource for providing respondents the application period was seniors or friends, followed by the website of preferred university, respectively (Figure 1).

Table 7 Data from the sixth-year students, class of 2015, Faculty of Dentistry, Prince of Songkla University expressed as number and percentage

Topics		N	n	Percent
Gender	Male	55	13	23.6
	Female		42	76.4
Future workplace	Government hospital	55	52	94.5
	Faculty staff		3	5.5
Where continuing PG education?	Thailand	55	24	43.6
	Not sure		21	38.2
	Abroad		10	18.2
Most desired university	Mahidol University	55	20	36.4
	Prince of Songkla University		19	34.5
	Chulalongkorn University		10	18.2
	Chiang Mai University		5	9.1
Reasons for choosing university	Offers wide variety of programs	54	16	29.1
	Attended as undergraduate here		14	25.5
	Well-known university		12	21.8
	Well-known faculty staff		4	7.3
	Good location		3	5.5
Most preferred program	Master degree	52	29	52.7
	Higher graduate in clinical science		15	27.3
	Residency training		6	10.9
Most preferred specialty	OMFS*	52	17	30.9
	Pediatric dentistry		7	12.7
	Prosthodontics		5	9.1
	Orthodontics		4	7.3
	Periodontology		4	7.3
	General dentistry		4	7.3
	Implant		4	7.3
	Endodontics		3	5.5
	Operative dentistry		3	5.5

(N=55)

Table 8 Data from all postgraduate applicants for the academic year 2014 at the Faculty of Dentistry, Mahidol University expressed as number and percentage (N=125)

Topics		N	n	Percent
Gender	Male	125	27	21.6
	Female		97	77.6
	NA		1	0.8
DDS graduated university	Mahidol University	125	38	30.4
	Srinakharinvirot University		21	16.8
	Thammasart University		19	15.2
	Chulalongkorn University		14	11.2
	Chiang Mai University		11	8.8
	Khon Kaen University		7	5.6
	Prince of Songkla University		7	5.6
	Rangsit University		4	3.2
	Nerasuan University		4	3.2
Future workplace	Government hospital	125	109	87.2
	Private hospital		5	4
	Faculty staff		10	8
	NA		1	0.8
Where continuing PG education?	Thailand	125	119	95.2
	Abroad		2	1.6
	Not sure		4	3.2
Most desired university	Mahidol University	125	98	78.4
	Chulalongkorn University		22	17.6
	Chiang Mai University		3	2.4
	Prince of Songkla University		2	1.6
Reasons for choosing university	Offers wide variety of programs	125	35	28
	Well-known faculty staff		31	24.8
	University reputation		28	22.4
	Attended as undergraduate here		15	12
	Location		9	7.2
	NA		4	3.2
Most preferred program	Residency training	125	96	76.8
	Master degree		12	9.6
	Higher grad		11	8.8
	Higher grad International		1	0.8
	NA		2	1.6
Most preferred speciality	Endodontics	125	32	25.6
	Prosthodontics		28	22.4
	Periodontology		24	19.2
	Pediatric dentistry		19	15.2
	OMFS*		9	7.2
	Orthodontics		2	1.8
	NA		5	4

Table 9 Showing the list of universities, which all sixth-year students, class of 2015 from all universities listed in the left column selected.

Sixth-year students, class of 2015 from	Universities					
	MU	CU	CMU	PSU	KKU	NU
Mahidol University (MU)	68.8	17.4	10.1	0.9	-	-
Chulalongkorn University (CU)	7.3	85.4	4.9	0.8	-	-
Chiang Mai University (CMU)	21	7.4	65.4	1.2	-	-
Thammasart University (TU)	53.6	25	10.7	-	-	-
Rangsit University (RSU)	47.9	29.6	7	-	-	-
Sinakharinwirot University (SWU)	47.5	29.7	10.8	-	-	-
Khon Kaen University (KKU)	31.3	14.5	36.1	-	13.3	-
Prince of Songkla University (PSU)	36.4	18.2	9.1	34.5	-	-
Naresuan University (NU)	40	14.7	27.4	-	-	8.4

Green highlight= MU was selected as number one
 Yellow highlight= MU was selected as number two

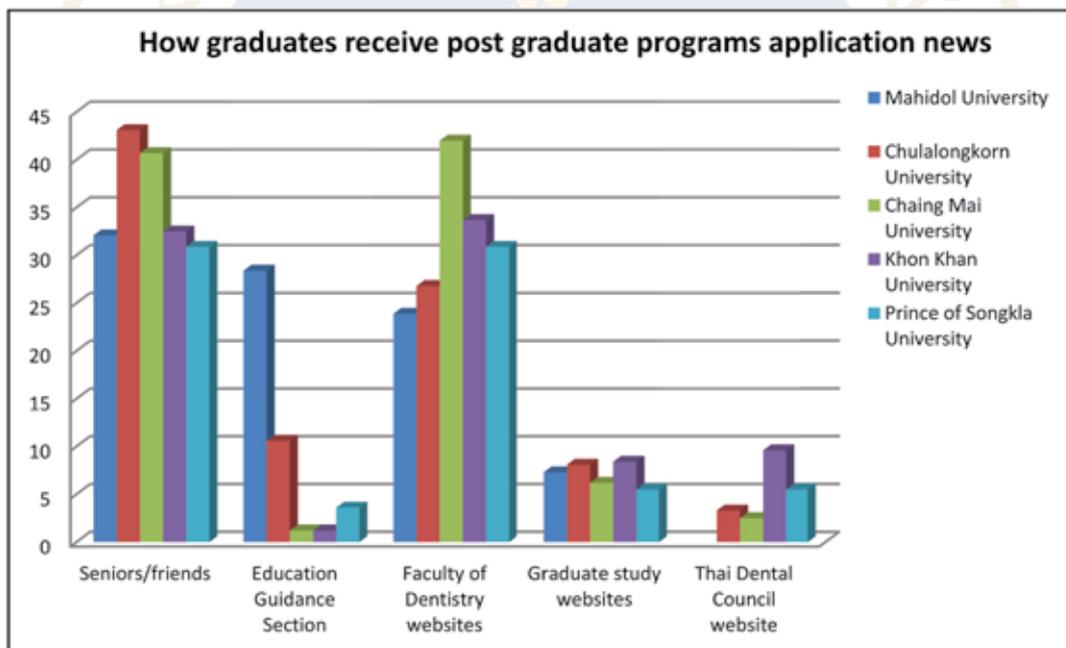


Figure 1 Graph showing results accessed using questionnaires from all respondents from five universities how they receive the application news.

Discussion

From the results, most of the respondents reported that they would like to pursue a postgraduate education which is similar to our previous study last year¹². Interestingly, in this study we found that graduates from Thammasart University, Khon Kaen University, and Naresuan University would be working as faculty staff.

These data was higher than the previous study^{5, 8, 12}. In our study, the vast majority of students who graduated from public dental schools are obligated to work for government hospitals, which is the goal in producing dentists in Thailand with attention being given to roles and responsibilities in addressing issues of access to oral health care for underserved populations.

A point of difference between the Thai public dental schools and overseas dental schools is the compulsory public service required of new graduates. This system has been in place since 1989, and has produced dentists to serve in the public hospitals, especially in rural areas, for over 17 years. In addition, the government has developed special incentives to supplement the fixed salary to encourage and maintain dentists in the public sector. This strategy has been very successful in retaining some dentists to work in rural areas¹³. This is unlike previous studies in the United States of America and Iran that found most graduates would prefer to work in private hospitals¹⁵. Interestingly, most of the graduates from Rangsit University will be working in private hospitals more than government hospitals. The reason is that at Rangsit University, dental students are not mandated to work at a government hospital in rural areas because they are fully responsible for their tuition fees without any subsidy from the government.

According to the American Dental Education Association (ADEA) 38.6% of dental school graduates pursue a residency in advanced general dentistry or one of the nine recognized dental specialties: Orthodontics and Dentofacial Orthopedics, Pediatric Dentistry, Periodontics, Prosthodontics, Oral and Maxillofacial Surgery, Oral and Maxillofacial Pathology, Oral and Maxillofacial Radiology, Endodontics, and Dental Public Health¹⁴. Orthodontics, most significantly, continues to be the dental specialty most pursued by graduating seniors, with 28.9 percent of the senior applicants to specialty programs in 2003. However, there was a decline from that of 2002 (31.5 percent). Pediatric dentistry also has seen a decline, after two years of increases, falling from 23.5 to 19.9 percent. However, a recent survey in the United States of America reported that the most desired specialty was

General practice residency (37.4%) followed by advanced education in general dentistry (22.6%), Pediatric dentistry (11.8%), Orthodontics (10%), and Oral and Maxillofacial surgery (8.7%), respectively¹⁵. The decline in orthodontics and pediatric dentistry were offset by slight increases in the other specialty areas which are not similar to this study.

There are limitations to our study which are the data obtained from mixed respondents and it is difficult to statistically compare all data. A modified questionnaire containing more in-depth questions such as: clinical training, philosophy of training, diversity of training experience, general impression at interview, impression of program director, high volume of patients, prestige of program, social and recreational activities in the area, influence of spouse or significant other, advice from mentor, prestige of department and faculty, benefits, availability of electives etc. should be added.

An overwhelming majority of the respondents in our study expressed a wish to pursue postgraduate study. The programs such as an orientation program for postgraduate courses or education guidance would be recommended during undergraduate study. This is an area of priority for the institutional authorities to offer such courses and design them based on the needs of the students and society.

In conclusion, results reveal that Mahidol University was in the high rank for pursuing postgraduate dental programs. The most considered reason in choosing a university was that it offered a wide variety of post graduate programs and the reputation of the university. Also, applicants were interested in master degree international programs in greater numbers than before. Oral and Maxillofacial Surgery, Prosthodontics, Pediatric dentistry, Endodontics, Orthodontics and General dentistry were the most desired specialized programs.

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Competing interests: None

Ethical approval: This is a cross-sectional study using a questionnaire. Exemption for ethical approval was obtained from the Ethical committee (MU-DT/PY-IRB 2013/037.0708) Faculty of Dentistry and Faculty of Pharmacy, Mahidol University.

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