



## Current Short-Term Career Aspirations of Dental Students in Malaysia: Post New Employment Policy

### Malezyadaki Diş hekimliği Öğrencilerinin Kısa Dönem Kariyer Hedefleri: Yeni İstihdam Politikası Sonrası

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#### Abstract

Aim	It is important to revisit the career aspirations of emerging dental graduates following the dynamic changes in employment policies in Malaysia for workforce stability. The aims of this study were to explore current students' short career aspirations and their perceived influences, and whether their aspirations vary according to students' characteristics.
Material ve Method	All final year dental students who registered in the 2017/2018 academic year (n=64) in the International Islamic University of Malaysia (IIUM) were invited to participate in a self-administered questionnaire. The instrument explored the students' motivation, short and long-term career aspirations, and influences using a mixture of open and close-ended questions. Data were analyzed using SPSS program, including a Chi-Squared test for linear association.
Results	The response rate was very high (n=62; 97%). The majority were aged 25 years (63%), female (71%), and come from high-income families (38%). All of the participants were Malaysian. In regard to their short-term aspiration, the participants mostly chose 'gain knowledge/skill/experience' (39%); followed by 'undertaking specialist training' (27%) and 'getting a permanent job' (20%). 'Achieving financial stability' (80.6%), 'gaining professional experience' (80.6%), and 'balance of work-life' (73%) were their greatest influences. Notably, there were significant differences between 'having a break from the study' (p=0.030) and choosing area of practice (p=0.017) by family income. Furthermore, male students were anticipated to work in the private sector more than their female counterparts (p=0.030).
Conclusion	There is a transient with the most significant short-term career aspirations post new employment policy among Malaysian dental students to study dentistry. Enhancement of knowledge, skills, and experiences was observed the greatest amongst all respondents; in securing financial and professional stability; as well as work-life balance. The students' short-term career aspirations varied based on the students' family income and gender.
Keywords	career aspirations, dental education, dental students, influences, Malaysian

#### Öz

Amaç	İşgücü istikrarı için Malezyadaki istihdam politikalarındaki dinamik değişimlerin ardından gelişmekte olan dişhekimliği mezunlarının kariyer isteklerini yeniden gözden geçirmek önemlidir. Bu çalışmanın amacı mevcut öğrencilerin kısa kariyer beklentilerini ve algılanan etkilerini ve isteklerinin öğrencilerin özelliklerine göre değişip değişmediğini araştırmaktır.
Yöntem	Malezya Uluslararası İslam Üniversitesi'nde (IIUM) 2017/2018 akademik yılında (n = 64) kayıt yaptırmış olan tüm son sınıf dişhekimliği öğrencileri, kendi kendilerine yönetilen bir ankete katılmaya davet edildi. Araç, öğrencilerin motivasyonlarını, kısa ve uzun vadeli kariyer isteklerini ve açık ve kapalı uçlu soruların bir karışımını kullanarak etkilerini araştırdı. Veriler SPSS programı kullanılarak analiz edildi (Chi-Squared testi ile).
Bulgular	Yanıt oranı çok yüksekti (n = 62; % 97). Çoğunluğu 25 yaş (% 63), kadın (% 71) ve yüksek geliri ailelerden (% 38) geliyordu. Tüm katılımcılar Malezya'dandı. Katılımcıların kısa vadeli istekleri çoğunlukla 'bilgi / beceri / deneyim kazanma' (% 39); ardından 'uzman eğitimi alma' (% 27) ve 'kalıcı bir iş bulma' (% 20) şeklinde sıralanmıştır. "Finansal istikrarın sağlanması" (% 80,6), "mesleki deneyim kazanma" (% 80,6) ve "iş-yaşam dengesi" (% 73) en büyük beklentileri idi. Özellikle, esnek çalışma modeli" (p = 0.030) ile aile geliri göre uygulama alanına seçmek arasında anlamlı farklar vardı (p = 0.017). Ayrıca erkek öğrencilerin özel sektörde kadın meslektaşlarına göre daha fazla çalışması beklenmiştir (p = 0,030).
Sonuç	Malezya dişhekimliği öğrencileri arasında dişhekimliği eğitimi almak için yeni istihdam politikası sonrası en önemli kısa vadeli kariyer beklentileri olan geçici bir durum söz konusudur. Tüm katılımcılar arasında, finansal ve mesleki istikrar ve iş-yaşam dengesi sağlama yanı sıra bilgi, beceri ve deneyimlerin artması istemi en önemlisidir. Öğrencilerin kısa vadeli kariyer istekleri, öğrencilerin aile gelirleri ve cinsiyetlerine göre değişmektedir.
Anahtar Kelimeler	kariyer istekleri, diş eğitimi, diş hekimliği öğrencileri, etkiler, Malezya dili

## GİRİŞ

The health workforce is an important asset in the delivery of health care<sup>1,2</sup>, including dentistry.<sup>3</sup> In this era, dental graduates have to acknowledge choosing a profession that is constantly affected by various drivers for change<sup>4,5</sup>; and the impacts of globalisation.<sup>6</sup> Thus, it is vital to revisit career aspirations of graduating students to understand their post-graduation plans<sup>7-9</sup>, in an effort to retain a motivated and highly skilled dental workforce to fulfil the healthcare demand of the population.<sup>10</sup>

The present literature on dentistry has largely explored career aspirations of the emerging workforce<sup>7,8,11-14</sup>, in the context of high income countries.<sup>7,9,11,12,15</sup> These studies have focused on specific dimensions of career aspirations such as the anticipated future roles of dental graduates, either as a generalist or specialist<sup>12,16</sup>; special interest in dentistry<sup>7,8,11,13,14</sup>; work sectors<sup>7,8,11</sup>, working pattern<sup>7,8,11,14</sup>, short<sup>11</sup> and long-term career aspirations<sup>7</sup>, as well as different factors that influence graduates' career aspiration<sup>7-9, 11</sup>. Past studies on graduates' short-term career aspirations shown that they have a wide range of goals: that can be divided into three domains; professional goals, personal goals and financial goals<sup>7,8,11</sup>. Meanwhile, in regard to their long-term career aspirations, graduates responded that they anticipate professional development<sup>7,8</sup>; work-life balance<sup>7,8</sup>; and financial stability<sup>7,8</sup>. In this regard, it is important to note that these aspirations often vary with the graduates' sex<sup>7</sup> and ethnicity<sup>8</sup>. Furthermore, age<sup>17</sup>, sex<sup>7</sup>, and ethnicity<sup>8</sup> have also been found to affect their influential factors. Regional studies have also found that graduates' aspirations differ according to their region, and also countries. For instance, compared to Thai students, Japanese and Canadian students are more likely to set the sight on being a general practitioner rather than becoming specialists<sup>12</sup>. Meanwhile, there are still limited studies, particularly on regular reviews, that focused on graduates from middle/low income countries<sup>18</sup>.

Ideally, dental workforce's aspirations should be aligned

with the needs and demands of the population, as the country's policy and priorities<sup>19</sup>. In the context of Malaysia, it has been burdened with significant oral health problems which can be reflected through the high prevalence of caries, despite there were slight decrease in dental caries cases amongst young people aged 12 (41.5%) and 16 (59.6%) in 2007<sup>20,21</sup>, as well as the adult population (88.9%) in 2010<sup>22</sup>. The prevalence of caries amongst 6-year-olds, however remains high in 2007 with 74.5%<sup>23</sup>, which has exceeded the WHO goal<sup>24</sup>. It was also reported that approximately 31% of children aged 12 and 35% of teenagers aged 16 require orthodontic treatment. A recent survey has reported that periodontal health in the country is also poor and about 98.3% of adults in Malaysia need oral healthcare<sup>22</sup>.

The operating clinicians in the Malaysian dental workforce consist of general practitioners, specialists and dental therapists who are supported by dental technicians and dental surgery assistants (DSAs). In past 15 years, Malaysia has experienced a surge in dental education with the opening of 10 new dental schools both public and private. Along with the existing dental schools, these schools graduate approximately 1000 dentists each year, and the number has been increasing every year<sup>25</sup>.

Despite its rapid growth, there is a limited number of studies that focused on the dental workforce in Malaysia<sup>18</sup>, specifically on reviewing career motivation and aspirations of the dental workforce in the rapidly growing dental industry in accordance to the increasing number of local and international dental schools graduates<sup>26,27</sup>; influenced by unprecedented changes in dental policies. In recent years, Malaysia has underwent several policies changes which could influence the outcome of present studies. One notable change is the abolishment of time-based promotion as well as the implementation of contract recruitment for dental professionals in 2016<sup>28,29</sup>. Furthermore, the years of compulsory services for new graduates were reduced from two years to one year in 2015<sup>30</sup>. On other aspect, remuneration scheme specifically for dental specialists was revised

and upgraded in 2016<sup>31</sup>.

These changes have created a mix-feeling and concern amongst future graduates on their post-graduation plan; and how it might affect the recruitment and retention model of future dental workforce in Malaysia. Therefore, there is a need to re-examine the emerging dental graduates on their career aspirations to inform workforce policy and governance in Malaysia. This study involved final year dental students and aimed to gauge their current short-term career aspirations and influences, as well as to determine whether these aspirations differ across students characteristics.

### METHODS

The study has received ethical approval from the International Islamic University Malaysia (IIUM) Research Ethics Committee (Reference IREC 2018-050). This study was conducted in accordance with the World Medical Association Declaration of Helsinki. A cross-sectional survey was conducted with all final year dental students who were studying in one public university in the East of Peninsular Malaysia. Prior to the survey, approach letters were sent to the dean of dental school to request for permission to conduct the survey. The study's data were collected using a self-administered questionnaire which was administered in the beginning of 2018.

The original questionnaire was adopted from the Gallagher Motivation Instrument-GMI<sup>32</sup>. The instrument has been used in notable qualitative studies involving final year dental students and vocational dental practitioners (new graduates) within the UK<sup>33,34</sup>, specifically in London<sup>32,35</sup>, as well as abroad<sup>36</sup>, including Malaysia<sup>18</sup>. The questionnaire consists of twenty eight questions which are divided into six sections, which are students' perception of dentistry as a professional career (three questions), short-term career aspirations (six questions), long-term career aspirations (six questions), influences (four questions), views on state health care (one question) and the students' demography (sex, age, ethnicity, family income and social background)

(eight questions). The questionnaire was adopted and revised to improve its cross-cultural and face validity, for instance, the questions on socio-demographic characteristics and health services were amended to make them suitable for the Malaysian context.

The questionnaire was attached with an information sheet and the completion and return of questionnaire was considered as the respondents' consent to participate in the study. A list of final year dental students for the 2017/2018 academic year was obtained from the Kulliyah of Dentistry administration office. The potential participants were briefed about the study and given sufficient verbal explanation. They were instructed to complete the survey within 1 day and to submit the completed questionnaires to the researchers. The questionnaire was written in English which is the language used for teaching in all dental schools in Malaysia.

The participants were probed on their short-term career aspirations for the next five years immediately after graduating from dental schools. They were instructed to answer multi-choice questions on their preference on the time to start working and where they should start practising. The participants were also asked to rate their perceptions towards the nine factors that influence which location they prefer to start practicing based on a 5-point ordinal scales ranging from '1' for very important to '5' for not important. The participants were asked to answer an open-ended question about their short-term goals.

The participants were also probed on their perceptions on the factors that influence working pattern (seven items), overall career decisions (twelve items) and working for the Ministry of Health (MOH) (fifteen items) using 5-point ordinal scale ranging from 1 for very important (or strongly agree) to 5 for not important (or strongly disagree). They were also required to answer an open-ended question on their preference to work in the private sector and its reasons. The participants were also required to provide their

socio-demographic information. A pilot study was conducted with different final year dental students (n=10) and they were not included in the main study. The questionnaire was revised based on the students' recommendations, such as using others options as the final question in each section.

The data obtained were analysed using the SPSS 20.0 for Windows (IBM Corporation, Armonk, NY, USA).<sup>37</sup> Descriptive analysis was conducted to summarise respondents' demographic (sex, age, ethnicity and family income). In regard to the factors influencing short term career aspirations (i.e. items measured using 5-point Likert scales), the response options were arranged to include strongly agree and agree on one end of the scale and disagree and strongly disagree on the other.

The Chi-squared test was used to measure the distribution of responses across students with different socio-cultural backgrounds. The comparisons were made between the responses that show the most significant differences according to respondents' demographic characteristics.

## RESULTS

Out of 64 students who registered for their final year, 62 (97%) agreed to participate in the study and their responses were included in this analysis. Most participants were female (71%); aged 25 (63%); from high-income families (38%) and all Malays. The participants' age range were between 23 and 27 years old.

### Short-term Career Aspirations and Influences

Majority of participants responded (97%) that they will start their compulsory dental services straightaway after graduation. Meanwhile, there was a significant difference between participants who responded to 'having a break from study' by economic background (p=0.03). The participants' preferred locations to undertake their compulsory dental service were Selangor (21%), Kuala Lumpur (11%), and Pahang (11%), while proximity to family (90%), and

career opportunities (90%) were the most important factors influencing their choice. On the other hand, 'rural area' (20%), 'near where trained' (28.3%) and 'proximity to friends' (48.3%) were the most insignificant determining chosen by these students. In this regard, family income has a statistically significant influence on students' preference of practicing in rural areas (p=0.017). As shown in Figure (1), the most common short-term goal for the dental students were to 'gain knowledge, skill and experience' (39%), followed by undertaking specialist training (27.1%). These short-term goals were largely fuelled by the desire for financial stability (79%), work and life balance (73%) and gaining professional experience (68%) (Figure 2). Lastly, 66% of the participants mentioned that they intend to work in the private sector and this response was more prominent among male participants (male (83%)>female (59%) (p=0.03).

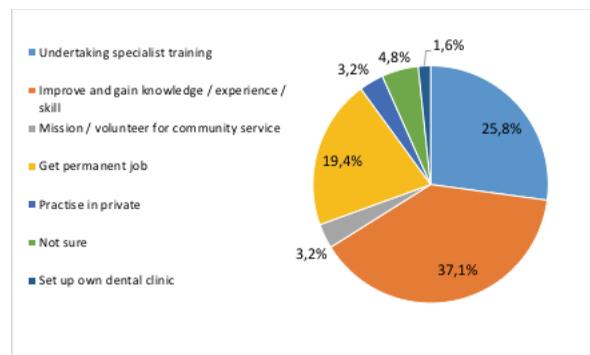


Figure 1: Short term career aspirations of Malaysian final year dental students 2017/18 (n= 62)

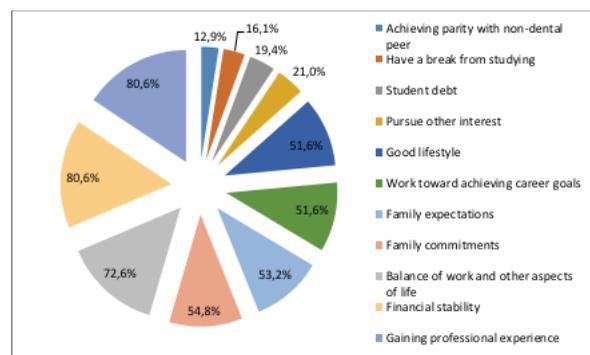


Figure 2: Influences on short term career aspirations among Malaysian final year dental students 2017/18 (n= 62)

## DISCUSSION

This study suggests that the aspirations of future dentists in Malaysia are remain focused on achieving financial stability and work-life balance despite the new employment policy being enforced in Malaysia. However, it was found that the most significant short-term career goals for these students is enhancing knowledge, skill and experiences in their early years, rather than training for specialisation as main aspirations reported in previous national study<sup>3, 18</sup>. Another notable finding is that participants' decision on when to start working and area of practice were varied by socio-economic backgrounds; whereas the preference to work in the private sector was varied by gender.

### Short-term Career Aspirations

The main short-term career aspirations of these students that will join the service under the newly employment policies are now shift to primarily focus in improving skills/being competent and gaining knowledge/experience within their first few years of service. This could be further explained that following the shortening of compulsory services among newly graduates<sup>30</sup>, periodical exposure towards clinical attachment under various dental specialities at the public sector are now limited. Therefore, they seemed to first equip themselves with pertinent knowledge and experience as much as they can prior completing the compulsory service or joining other services/sectors. It is well acknowledged that the national service has significantly helped new graduates to become an independent dental practitioner<sup>30,38,39</sup>. They also expected to undertake extra courses to complement insufficiency during attachment for them to become more competent and independent dentist. Nonetheless, this view necessitates qualitative investigation post-attachment among this study population.

On the other hand, there are some participants' perceived greatest interest to undertake specialist training in the future; confirming findings from those low and middle income countries that have similar intention with the purpose

to improve their quality of life<sup>12,13,18</sup>. However, there are limited places for dental postgraduate training, mostly at local public universities<sup>40</sup>. The place offered for studying is quite limited to cater the large pool of applicants, given the rapid growth of dental graduates<sup>41</sup>; with significant career aspiration<sup>18</sup>. Moreover, following the revision of employment policy such as contract recruitment for local dentists in 2016<sup>28</sup>, is seemed to further tamper their motivation to specializing among public dentists given they were not yet a permanent-based officer. Consequently, many dentists will probably choose to pursue specialisation at different sector or abroad using their own expenses; or attending intensive and short courses elsewhere. The high interest and constant demand towards continuous learning and specialisation among this study population correlates with its national findings on career motivation in which academic factor was reported as the main driver that encouraged Malaysian students to take dentistry as their professional career<sup>42</sup>.

As presented earlier, their short-term career aspirations were mainly influenced by seeking professional and financial stability given they assumed will later gain a better salary within this profession in the longer term either working at public or private sector; similarly reported to previous studies<sup>7,8,11,18</sup>. All of these expectations may still be considered as a realistic for new dental graduates at Malaysia even with the abolishment of time-based promotion at public sector<sup>29</sup>. Should they have not been offered a permanent post at public sector, they might leave and practice at private sector to get better remuneration.

Most participants anticipated working immediately after their graduation. This could be explained that an approximately about two thirds of students coming from low-middle income families and being self-funded to support their education. Consequently, these students are burdened with student loans and other financial commitments which drives them to work immediately to settle their outstanding debt. On other hand, participants also prefer to

work near to their family member which is a common in the Asian culture<sup>43</sup>, where family bond is stronger and filial piety is expected from both men and women.

Nevertheless, some participants plan to take a break before starting working, specifically those from middle to high-income families. It was reported that dentistry student face tremendous stress which has a negative impact on their personal and quality of life<sup>44</sup>. Year gap could be considered as a coping mechanism to prepare themselves as dental professional to face various challenges they may encounter in the future. In addition, participants from these income groups also have higher preference to work in large cities and close to the amenities they wanted; which have a lot of advantages and well-equipped facilities compared to those in rural area<sup>45</sup>.

Moreover, a majority of students, especially male participants, expressed their desire to work in the private sector. Such preference among male participants is similar to what being reported in the national study<sup>3,18</sup>. In the Asian culture, men are considered as the leader of the family and obligated to contribute financially to their family<sup>46</sup>, while women are expected to take a more active role in childcare and take on a more domestic role<sup>43,46</sup>; although it could be argued as the trend and pattern of life is changing over time. This justifies the tradition desire for male to find and get more working opportunities and higher career projection<sup>47</sup>, especially at private sector given there is a limited prospect at the public sector. Moreover, the private sector offers a more lucrative pay compared to the public sector which drives them to go for higher pay opportunities<sup>18</sup>.

There are several limitations that need to be considered when interpreting this study's findings. The first limitation is that as a cross sectional study<sup>48</sup>, this study only involved one school at one single of observation; and where the students come from the same racial and religious background. As the study have shown that the short-term career aspirations might be influenced by the participants'

demographic background, this study's findings cannot be generalised to the entire population of future dental graduates in Malaysia. Furthermore, as the items are based on perceptions, the views of the participants might vary with changing demographic characteristics over time.

Another limitation is that the study only involved final year students. In this light, other studies however generally have shown no different in regards to career aspirations amongst new graduates<sup>34</sup>, and final year students<sup>15</sup> in the UK.

## CONCLUSION

Most final year dental students have set several common short-term aspirations, including improving their skills, competency and gain knowledge/experience as reported in previous national study. It was found that Malaysian dental students are constantly interested to undertake specialist training in the near future. Nevertheless, there is a shift with the most significant short-term career goals for these students to enhance knowledge, skill and experiences in their early years, rather than training for specialisation. In the meantime, it is important to note that these aspirations are influenced by factors like their gender and family's socio-economic backgrounds. Furthermore, these students highly anticipated to work in the private sector due to the limited opportunities at public sector, authorised by the newly recruitment and retention policies that hinder them from achieving their professional and personal aspirations, thus accomplishing financial stability and maintaining work-life balance.

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## Conflict of Interest

All authors whose names are listed have NO affiliations

with or involvement in any organization or entity with any financial interest or non-financial interest.

#### **Authors' contributions**

All authors conceived and designed the overall research programme. MFCM and AZM directed the revisions to the questionnaire. AR and AAK conducted the fieldwork, entered the data into SPSS, analysed the data. MFCM drafted the first version of the manuscript. MFCM and AZM advised on and supervised data analysis. All authors contributed to and approved the final manuscript. Two of the authors (MFCM and AZM) are academic staff at Kulliyah of Dentistry, International Islamic University Malaysia, Pahang, Malaysia. AR and AAK are former undergraduate students at Kulliyah of Dentistry, International Islamic University Malaysia, Pahang, Malaysia. Dr Yang Rafidah Hassan proofreaded the whole manuscript.

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