

TANGGAPAN PELAJAR PERGIGIAN TAHUN AKHIR TERHADAP KESEDIAAN MENGHADAPI KERJAYA

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ABSTRAK

Satu soalselidik telah dijalankan di kalangan pelajar pergigian tahun akhir sesi akademik 2007/2008 di Universiti Kebangsaan Malaysia (UKM) untuk mengkaji tanggapan mereka mengenai kesediaan untuk kerjaya sebagai Doktor Pergigian. Soalselidik ini dirangka berdasarkan 25 kompetensi teras Program Ijazah Doktor Pergigian (DDS) yang merangkumi pengetahuan saintifik, kemahiran klinikal dan kemahiran insaniah. Maklumbalas dari 92 orang pelajar ini mendapati bahawa kebanyakan mereka yakin sudah bersedia dengan kemahiran asas bagi melengkapkan mereka ke dalam dunia kerjaya pergigian. Walaubagaimanapun, mereka menganggap mereka kurang mahir dalam beberapa aspek klinikal seperti rawatan kecemasan dan pembedahan maksilofasial; menggunakan sumber teknologi maklumat dan berfikir secara kritis. Hasil dari soalselidik ini akan digunakan untuk menambahbaik kualiti kurikulum dan memantapkan hasil pembelajaran bagi program DDS di UKM.

FINAL YEAR DENTAL STUDENTS' PERCEPTION OF READINESS TO PRACTICE

ABSTRACT

A questionnaire survey was conducted involving the final year dental students of 2007/2008 academic session in Universiti Kebangsaan Malaysia (UKM) to investigate their perceived readiness to face their career as Dental Surgeons. This survey was constructed based on the 25 core competencies in the Doctor in Dental Surgery (DDS) programme, which encompasses scientific knowledge, clinical skills and generic skills. Feedback from 92 students found that majority of them were confident and ready with the basic competencies to begin their career. However, the students felt less confident in some aspects including clinical emergency management and maxillofacial surgery; using information technology resources and critical thinking. Findings from this survey will be used to improve the quality of curriculum and strengthen the learning outcomes of DDS programme in UKM.

Keywords: dental students, perceived competencies, readiness

INTRODUCTION

Clinical experiences in dental training institutions encompass a variety of learning opportunities. With the current move from the traditional teaching of delivering knowledge from teacher-to-students to a more student-centred outcome-based curriculum, the standards

and criteria of undergraduate dental programmes in the country have recently been reviewed to be in tandem with the requirements of the Malaysian Qualification Framework.

In Universiti Kebangsaan Malaysia (UKM) Dental Faculty, efforts to evaluate and improve teaching-learning approaches have been initiated through a curriculum review in 2005; eight years after the Doctor in Dental Surgery (DDS) programme was introduced. One of the items that was reviewed and refined was expected core competencies of the graduating dentist (Table 1) and how they fit in with the DDS programme learning outcomes.

This study is a part of a larger effort by the faculty to develop an effective and comprehensive model for continuous quality improvement (CQI) in dental education. Evaluation process thus far had included course evaluations for all academic years, teacher evaluation, patient satisfaction, alumni and employer perceptions. One outcome that can also be used to assess effectiveness of curricular changes is to measure the perceptions of graduating students regarding their competencies and readiness for independent practice. This study was done to investigate the Universiti Kebangsaan Malaysia (UKM) final year dental students' perception on their competencies and readiness to become Dental Surgeons. The findings from this study will be used to pave the way for quality improvement to the DDS programme in UKM.

METHODOLOGY

A questionnaire survey was carried out involving all the final year dental students for 2007/2008 academic session. The questionnaire items were constructed based on the 25 core competencies for UKM DDS programme. These competencies may be classified into 3 main domains: scientific knowledge, clinical skills and generic skills (Figure 1).

Forms were distributed and collected in a classroom setting by an administrative staff. For each competency statement, students were required to choose either 1=*Highly Incompetent*, 2=*Incompetent*, 3=*Somewhat Competent*, 4=*Competent* and 5=*Highly Competent* as their response. Students were also asked to score their perceived level of readiness to practice as independent dental practitioner using similar scores. Data were entered into SPSS version 14 and scores of at least 4 (score 4 and 5) were accepted as perceived competency, while the others were regarded as perceived incompetency.

RESULTS

All 92 final year students, aged between 24 – 27 years old, completed the questionnaire forms. Female students (n=83, 90.2%) were more than the males, which is seen as a normal scenario in dental schools in Malaysia. With regard to number of years spent in the dental programme, eight students (8.7%) reported to have spent more than 5-years due to academic performance.

a) Perceived competencies (Table 2):

Scientific knowledge

Most of the students were confident in applying knowledge to *formulate treatment plans* for their patients (C3) but perceived that they are incompetent in *evaluating outcomes of treatment* (C17).

Clinical skills

Students were confident in clinical skills involving *assessment of oral cavity for treatment* (C2), *treating teeth* (C9), *managing periodontal* (C11) and *endodontal*

diseases (C12) and *assessing teeth for orthodontics* (C15). However, they reported less confidence in *clinical skills related to craniofacial examination and management* (C1, C8, C10, C13), *prescribing drugs* (C7), *prosthodontics* (C14) and *emergency dental management* (C16, C18).

Generic skills

Students perceived more confidence in *communicating to patients* (C4, C5), *practising ethically and professionally* (C19) and *manage cases efficiently and effectively* (C20). Lesser confidence were perceived in *applying critical thinking, behavioural sciences and information technology resources* (C6, C21, C22, C23, C24, C25) in their practice.

b) Perceived readiness to begin career:

Almost three-quarters of the students (71.8%) perceived that they were ready to practice independently as dental practitioners (Table 3).

DISCUSSION

The UKM DDS programme was structured to produce future dental graduates with excellent work culture and leadership qualities, responsible and competent in performing their functions ethically, practice safe and effective dentistry in providing oral health care to the local community, with continual updating through research and continuing dental education. Although the country has yet to set specific competency standards for graduating dentists or beginning dental practitioners, dental academicians and professionals in general agree that students are expected to present at least satisfactory knowledge in basic medical and dental sciences, safe clinical skills and good generic skills as key domains by the end of graduating year (General Dental Council, 2002, American Association of Dental Schools, 1997, American Dental Association, 2007, Spielman et al, 2005, Hand, 2006, Gerrow et al, 2006).

In general our study showed that the graduating dental students were confident and ready to carry their role as dental surgeons. This may be due to the fact that dental students spent more than half of their time during three clinical years actually managing and carrying out 'real' treatment on 'real' patients; albeit this is done under close faculty supervision. In spite of this intensive exposure to patient contact, students still lacked confidence in some clinical work namely when dealing with craniofacial examination and management, drugs prescribing, prosthodontic and emergency dental management.

This finding indicates that increase in students' experience in the undergraduate years might not guarantee their confidence in clinical practice, as suggested by Lai et al (2007). The authors suggested that negative effect from the number of unsuccessful attempts, pressure from working environment and people may determine the level of confidence. Within limited time and constraint to complete work requirement in undergraduate clinical years, it is not realistic to expect students to reach true proficiencies in all areas of clinical dental practice. Nevertheless, this study is able to indicate teaching-learning areas where considerable changes may be made to improve students' competencies and confidence in those identified areas. These findings will serve as baseline information that may used as a basis for comparison when assessing future cohorts. Findings can also be used as baseline to see if perceived competencies of the same cohort group improve after graduation.

It is interesting to note that when compared with studies of perceived competencies among dental graduates (Rafeek et al, 2004, Arena et al, 2007), there does not seem to be much difference in the areas that both students and graduates have lower perceptions of

competencies. These areas include prescribing drugs, basic life support, diagnosis of oral medicine cases and emergency care.

Among the generic competencies assessed, students perceived they have no problem communicating with patients and working professionally, efficiently and effectively. However, less confidence was perceived in ability to apply critical thinking and behavioural sciences and using information technology resources. This is consistent with their perceptions of being less confident in evaluating outcomes of treatment provided to their patients, which requires a certain level of knowledge application and critical thinking. Graduates in previous studies (Rafeek et al, 2004, Arena et al, 2007) also indicated not being confident with their computer skills.

This questionnaire survey would be have been more meaningful if compared with students' final academic and clinical performance, which will provide a more objective and discriminative measures of competence. Despite its limitations, this study provides the faculty some indication of students' own evaluation on the progress in teaching-learning activities and this is an important step in CQI process in dental education.

CONCLUSION

UKM graduating dental students of 2007/2008 academic session were confident and ready with the basic competencies to begin their career as Dental Surgeons. However, they felt less confident in some aspects including clinical emergency management and maxillofacial surgery; using information technology resources and critical thinking.

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Tables and Figures

TABLE 1: Core competencies for UKM DDS programme

CORE COMPETENCY	
C1	Examine a patient using contemporary diagnostic methods to evaluate the head and neck region and to reach a diagnosis of the patient's oral and craniofacial health status.
C2	Assess the teeth, supporting structures and provide preventive and curative services.
C3	Formulate a comprehensive treatment plan based on diagnostic findings and implement treatment in a safe, properly sequenced and timely manner.
C4	Communicate the risks and benefits of proposed care and alternative treatment strategies, and obtain expressed consent for treatment conveyed by a patient or legal guardian.
C5	Provide patient education in the prevention of oral diseases to promote oral and general health.
C6	Apply the principles of behavioral science pertaining to patient-centered oral health care.
C7	Prescribe and administer pharmacological agents for patient care.
C8	Manage hard and soft tissue lesions and diseases of the orofacial complex.
C9	Manage diseases and conditions of the teeth.
C10	Manage acute and chronic orofacial and dental pain.
C11	Manage periodontal diseases.
C12	Manage pulpal and periradicular disease.
C13	Perform uncomplicated oral surgical procedures
C14	Manage replacement of teeth for the partially or completely edentulous patient.
C15	Assess the dentition to determine need for orthodontic treatment.
C16	Manage dental emergencies.
C17	Evaluate outcomes of treatment.
C18	Manage medical emergencies in dental practice by providing basic life support.
C19	Practice dentistry within the ethical standards of the dental profession and the law.
C20	Utilize critical thinking in assessing technical and scientific information for use in identifying patient needs and treatments.
C21	Manage a diverse patient population and have the interpersonal and communication skills to function successfully in a multicultural work environment.
C22	Recognize the limits of their expertise and seek consultation with other health care providers to facilitate holistic patient care.
C23	Utilize information-technology resources in contemporary dental practice.
C24	Utilize management skills to conduct an efficient and effective clinical practice.
C25	Recognize the role of lifelong learning and self-assessment in maintaining competency.

TABLE 2: Items identified to assess students' perceived competency.

	Items perceived as "competent" (Total responses: cut-off point 75%)	Items perceived as "incompetent" Total responses (%)		
		75 – 56%	55 – 35%	< 35%
Scientific knowledge	C3 (80.4)	C17 (64.2)		
Clinical skills	C2 (93.5), C9 (87.0), C11 (81.5), C12 (85.8), C15 (80.5)	C1 (70.7), C7 (63.1), C10 (59.7), C14 (68.4)	C13 (53.3), C16 (55.4)	C8 (34.8), C18 (28.3)
Generic skills	C4 (77.2), C5 (84.8), C19 (77.2), C20 (78.3)	C6 (67.4), C21 (59.8), C22 (71.8), C23 (66.3), C24 (53.3), C25 (70.7)		
Total items	10	11	2	2

C1 – C25 UKM DDS core competency as stated in Table 1

TABLE 3: Students' perceived preparedness for independent practice.

Responses (N=92)	%
Somewhat prepared	23.9
Prepared	68.5
Highly prepared	3.3
Missing data	4.3

FIGURE 1: Domains of UKM DDS core competency.

