

Clinical teachers and intern doctors' perception about the effectiveness of ongoing internship programme in undergraduate dental education in Bangladesh

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Abstract

Background: For the first 20 years or so after formal education in dentistry commenced at Glasgow in 1879, the manner of learning technical and clinical procedures was little different from what it had been since immemorial. In other words dental students learned by watching others until it was felt that they could be trusted to perform the procedure themselves.

Rationale: The intern year is the first level of hands-on training in dentistry and is an essential step in every dental surgeon's career. Opportunity to apply, consolidate and expand one's clinical knowledge, skills and also progressively increase one's responsibility for providing safe, high-quality patient care. Opportunity to develop overall patient management skill especially for the general dental practitioner. The intern year should provide a balance between education, training and clinical responsibility, enabling interns to develop the professional and personal competencies that result in good patient care and provide a foundation for lifelong learning.

Objectives: The present study was undertaken to identify the clinical teachers and intern doctors' perception about the effectiveness of ongoing internship programme in undergraduate dental education in Bangladesh.

Methods: This descriptive type of cross sectional study was conducted in six public and private dental colleges of Bangladesh. A semi-structured questionnaire based on 5-point Likert scale was used to collect the clinical teachers and intern doctors perceptions. The semi-structured questionnaire was prepared on the basis of logbook based internship training programme. Before administering the questionnaires to the respondents the investigator gave them an introductory idea about the purpose of the research.

Results: The study revealed that the majority of the clinical teachers 97.4% mentioned that the duration of internship training programme (one year) is not adequate and according to 94.9% teachers' opinion the duration of internship training programme should be 2 years. On the other hand 87.4% intern doctors mentioned that the duration of internship training programme (one year) is not adequate 94.6% intern doctors mentioned that the duration of internship training programme should be two. Majority 55 % of the teachers mentioned that the training environment was almost supportive. Majority of the intern doctors mentioned that the environment was supportive to ensure adequate patients service.

Conclusion: To ensure excellence in all aspects of internship training programme, it can be concluded that intern doctors must need to acquire sufficient competencies in most of the clinical areas for their daily practice. There are many areas for further improvement through evaluating and developing the internship training programme as well as the logbook and strengthening the clinical environment in the institutes.

Key Words: Clinical teachers, Internship training, logbook, intern doctors perception, Competencies.

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Introduction

Dental internship is a temporary position for the newly passed dental graduates with an emphasis on on-the job training rather than merely employment before they are qualified for actual job. The Interns' Training Programme is designed to improve and enhance the Interns' knowledge and skills in their practice of general dentistry, thereby facilitating reduced dependency upon specialists. It prepares the Interns to plan and deliver various dental treatment modalities with the required guidance from their mentors. Additionally, it prepares them to assess patients' general health status in relation to the anticipated dental treatment¹. Providing basic life support is dentist's most important contribution until definitive treatment for a medical

emergency can be given. It is important to assess the dental interns' knowledge, skills and competency regarding Dentistry-medical emergency interface². Knowledge of medical emergencies by dental interns is important since they go for practice without supervision. This study was conducted to assess the awareness and knowledge of medical emergencies among dental interns in the southern part of India. Based on the results, dental curricula need to include more rigorous training in emergency management³. A significantly high level of satisfaction was found by the patients' responses, and they showed their trust and level of comfort toward the interns. Several questions were asked from the patients to evaluate their satisfaction towards treatment, doctor's behavior, and clinical environment. Although, we did not observe significant events among all the variables, we found a high level of patients' satisfaction toward the interns and clinics⁴. Measuring attitudes and awareness of practitioners toward infection control in prosthodontic clinic is very important to be conducted in the early years of practice. Enhancing and motivating dental students are essential for them to adopt attitudes and behaviors learned on infection control when they become professional dentists⁵. Isolation of teeth is an important factor for multiple procedures in dentistry. The value of isolation relates to reducing potential risk of cross infection between dental staff and patient. The rubber dam is the most widely used and considered to be the best method of infection control, in particular during root canal treatment⁶. The revolution of information technology and the great advances in computer capacity can effectively be utilized to enhance and improve dental practice and education. Computer usage in medical and dental education has grown as well to enhance traditional teaching strategies, and to provide new methods of learning⁷. Professional ethics in dentistry is one of the basic components for achieving success in dental practice because it ensures patients' confidence in adroitness of the practitioners as well as in the dental procedures to which they are subjected. The American Dental Association (ADA) defines dental ethics under five fundamental principles of the ADA Code that focuses patients' autonomy, non-maleficence, beneficence, justice and veracity⁸. A "competency" is a complex behavior or ability essential for the general dentist to begin independent, unsupervised dental practice. Competence includes knowledge, experience, critical thinking and problem-solving skills, professionalism, ethical values, and technical and procedural skills. These components become an integrated whole during the delivery of patient care by the competent general dentist⁹. Assessment of interns' standard of care requires careful monitoring of their clinical performance and productivity. This is done as an integral part of dental education at King Saud University, College of Dentistry (KSU-CD), where the freshly graduate is required to undertake a twelve-month period as an intern before being fully registered as a licensed dentist¹⁰.

Methodology

This descriptive type of cross sectional study was conducted in six public and private dental colleges of Bangladesh after getting written permission from the principal of the

respective dental colleges. Voluntary participation of the intern doctors was ensured and the names of the intern doctors as well as clinical teachers were kept confidential. The clinical teachers and intern doctors from the different dental colleges were the study population; among them two hundred (200) intern doctors and forty clinical teachers (40) were taken as sample by convenient sampling. Data collection instrument was a semi-structured questionnaire with 5-point Likert scale with maximum score 5 and minimum score 1. The instruments were pretested in Rajshahi medical college dental unit. The researcher himself visited selected dental colleges. He was introduced himself to the principal of the dental colleges and the teachers of all the clinical departments to conduct the study. Specific time was taken from the clinical teachers and to brief the intern doctors about the purpose and benefit of the study. The intern doctors were briefed about the questionnaire. The investigator himself collected all the data with prior permission of the principles and heads of the concerned departments. The semi-structured questionnaire was prepared on the basis of logbook based internship training programme. Before administering the questionnaires to the respondents the investigator gave them an introductory idea about the purpose of the research. All the collected data were checked manually. Data entry, editing, processing and analysis have been done by using 19 version of SPSS compute software programme. Interpretations were done subsequently. Data were presented by tables and graphs with necessary description where necessary for easy understanding and interpretation. Name of the colleges, teachers, students were not being disclosed. Findings of the study were used only for research purpose.

Results

Table 1 shows out of 36 teachers 6(16.67) mentioned that duration of training for the interns in prosthodontics should be 12 weeks, 10(27.78) mentioned that duration of training for the interns in oral and maxillofacial surgery should be 13 weeks, 5(13.89) mentioned that duration of training for the interns in periodontology should be 10 weeks and 12(33.33) mentioned that duration of training for the interns in Conservative Dentistry should be 14 weeks.

Table 1: Distribution of the teachers by their opinion regarding the duration of training for the intern doctors in individual subject

Duration of training for the intern doctors in individual subject	Frequency	Percent (%)	Mean
Prosthodontics	6	16.67	12 Weeks
Children dentistry	2	5.56	11 Weeks
Oral & Maxillofacial Surgery	10	27.78	13 Weeks
Periodontology	5	13.89	10 Weeks
Orthodontics	1	2.78	12 Weeks
Conservative dentistry	12	33.33	14 Weeks
Total	36	100.0	

aTable 2 shows different level of core competencies, out of 200 intern doctors majority 164(82) mentioned satisfied, 36(18) were very satisfied in scope of proper history taking and recording, 190(95) mentioned very satisfied in scope of proposing investigation to the patients. 181(90.5) mentioned that they were satisfied in scope of making diagnosis. 111(55.5) mentioned satisfied and 59(29.5) were

dissatisfied in dealing with dental emergencies e.g. (faint, syncope, acute hypoglycemia etc. 162(81) mentioned that they were satisfied and 22(11) mentioned dissatisfied in scope of performing local anaesthesia. 130(66) mentioned satisfied, 19(9.6) were neither satisfied nor dissatisfied, 45(22.8) were dissatisfied in satisfaction about the competencies acquiring.

Table 2: Distribution of the intern doctors by their opinion about the statements in relation to competencies (n=200)

Statements in relation to the competencies	Frequency (%)					Total
	VD	D	NSND	S	VS	
Scope of proper history taking and recording	-	-	-	164(82)	36(18)	200
Scope of proposing investigations to the patients	-	-	1(.5)	190(95)	9(4.5)	200
Scope of counselling the patient and or attendants	-	2(1.0)	10(5)	183(91.5)	5(2.5)	200
Scope of making diagnosis	-	4(2)	10(5)	181(90.5)	5(2.5)	200
Scope of writing prescriptions	-	3(1.5)	4(2)	182(91.5)	10(5)	200
Dealing with dental emergencies e.g. (faint, syncope, acute hypoglycemia etc.)	10(5)	59(29.5)	14(7)	111(55.5)	6(3)	200
Scope of interpretation of investigations and records (e.g. X-ray, OPG finding etc.)	2(1)	94(47)	21(10.5)	81(40.5)	2(1)	200
Scope of performing local anaesthesia	-	22(11)	10(5)	162(81)	6(3)	200
Scope of intraoral examination	1(.5)	6(3)	12(6)	178(89)	3(1.5)	200
Scope of relevant discussion with the supervisors	2(1)	36(18.1)	29(14.6)	131(65.8)	1(.5)	199
Satisfaction about the competencies acquiring	2(1)	45(22.8)	19(9.6)	130(66)	1(.5)	197

(VD=Very dissatisfied, D=Dissatisfied, NSND= neither satisfied nor dissatisfied, S=Satisfied, VS=Very satisfied)

Table 3: Distribution of the intern doctors by their opinion regarding the environment to ensure adequate patient service and as well as optimum training of the intern doctors

Environment to ensure adequate patient service and as well as optimum training of the intern doctors	Frequency (%)					Total
	VD	D	NSND	S	VS	
Adequacy of the training facility (e.g. dental units, minor OT, outdoor, diagnostic room etc.)	9(4.5)	116(58)	3(1.5)	59(29.5)	13(6.5)	200
Sterilization facility (all surgical and non-surgical dental instruments etc.)	18(9)	99(49.5)	1(.5)	78(39)	4(2)	200
Availability of training aids (e.g. all necessary dental instruments, restorative materials, and laboratory materials etc.)	24(12)	114(57)	10(5)	49(24.5)	3(1.5)	200
Availability of laboratory facilities	15(7.5)	81(40.5)	21(10.5)	81(40.5)	2(1)	200
Availability of diagnostic facility (e.g. CBC, HBsAg, BT, CT etc.)	68(34)	120(60)	10(5)	1(.5)	1(.5)	200
Safe practices in relation to patients; doctors; and other health care provider (help to prevent cross infection, laboratory hazards, protection from radiation etc.)	1(.5)	85(42.5)	10(5)	101(50.5)	3(1.5)	200
Availability of reference books	-	61(30.5)	15(7.5)	121(60.5)	3(1.5)	200
Availability of internet facility	21(10.5)	91(45.5)	16(8)	71(35.5)	1(.5)	200
Availability of supporting staffs (dental assistants, laboratory technicians etc.)	-	134(67)	31(15.5)	34(17)	1(.5)	200
Intern doctor patient ratio	-	7(3.5)	17(8.5)	174(87)	2(1)	200
Intern doctor trainers ratio	-	31(15.6)	9(4.5)	158(79.4)	1(.5)	199

(VD=Very dissatisfied, D=Dissatisfied, NSND= neither satisfied nor dissatisfied, S=Satisfied, VS=Very satisfied)

Table 3 shows out of 200 intern doctors majority 116(58) mentioned dissatisfied in adequacy of the training facility (e.g. dental units, minor OT, outdoor, diagnostic room etc.) Majority 99(49.5) mentioned dissatisfied, 78(39) were satisfied in sterilization facility (all surgical and non-surgical dental instruments etc.) Majority 114(57) mentioned dissatisfied in availability of training aids (e.g. all necessary dental instruments, restorative materials, and laboratory materials etc.) Majority 120(60) mentioned dissatisfied and 68(34) were very dissatisfied in availability of diagnostic facility (e.g. CBC, HBsAg, BT, CT etc.) Majority 101(50.5) mentioned satisfied in safe practices in relation to patients; doctors; and other health care provider (help to prevent cross infection, laboratory hazards, protection from radiation etc. Majority 134(67) mentioned dissatisfied in availability of supporting staffs (dental assistants, laboratory technicians etc.) Majority 174(87) mentioned satisfied in intern doctor patient ratio.

Discussion

Table 1 shows out of 36 teachers 6 (16.67) mentioned that duration of training for the interns in prosthodontics should be 12 weeks, 10(27.78) mentioned that duration of training for the interns in oral and maxillofacial surgery should be 13 weeks, 5(13.89) mentioned that duration of training for the interns in periodontology should be 10 weeks and 12(33.33) mentioned that duration of training for the interns in Conservative Dentistry should be 14 weeks. A study conducted by Lalloo et al.(2009)¹ showed that out of 445 students responded there were slightly more female respondents (56.2%), more than two-thirds (70.8%) were younger than 24 years of age, and half (51.0%) were from years 1 and 2 of their degree program. Less than half (40.2%) of the respondents were supportive of an internship period. More females (43.6%) were supportive of the scheme compared to males (25.5%). Almost a half (46.7%) of students younger than 22 years of age were supportive compared to a third (33.6%) of students older than 24 years. Almost all students equally preferred a 6-month or 1-year internship period. Table 2 shows different level of core competencies, out of 200 intern doctors majority 164(82) mentioned satisfied, 36(18) were very satisfied in scope of proper history taking and recording. 190 (95) mentioned very satisfied in scope of proposing investigation to the patients. 181(90.5) mentioned that they were satisfied in scope of making diagnosis. 111(55.5) mentioned satisfied and 59(29.5) were dissatisfied in dealing with dental emergencies e.g. (faint, syncope, acute hypoglycemia etc. 162(81) mentioned that they were satisfied and 22(11) mentioned dissatisfied in scope of performing local anaesthesia. 130(66) mentioned satisfied, 19(9.6) were neither satisfied nor dissatisfied, 45(22.8) were dissatisfied in satisfaction about the competencies acquiring. A study conducted by Anjum et al.(2014)¹¹ showed that 227 interns participated, of which 25.1% were males and 74.9% females. 52.4% followed the six steps involved in rational prescription process, whenever they prescribed medicines. A study conducted by Fazel, et al (2008)¹³ in which that out

of 300 questionnaires distributed in the 30 provinces of the country, 250 questionnaires (83%) were returned. While most of the participants considered the competencies as necessary for an Iranian dentist, less than 40% of the respondents believed that the graduates acquire the most required competencies of the profession during the current educational program. A study conducted by Licari et. al. (2008)¹⁴ in which Fewer than half (46 percent) of the respondents were able to identify the conventional definition of competency that was stated as “a set of skills, knowledge, and values that characterize beginning dentists.” Almost a quarter each identified “competency” as a type of clinical examination format (26 percent) or roughly the same as a clinical discipline (25 percent). Nine percent associated the primary meaning of “competency” as an accreditation requirement. A study conducted by Gerrow et. al. (2006)¹⁵. The survey asked participants to supply demographic information and rate each of the forty-six competencies on a 5-point Likert scale. The response rate was 43.1 percent (315 total usable responses). Self-reported demographic data was used to create respondent subgroups. The participants rated all of the competencies quite high with thirty-six of the forty-six receiving rankings averaging 4.0 or higher on the 5-point scale. No competency received a ranking averaging lower than 3.0. A study conducted by Willis et. al. (2009)¹⁶. The ADEA Competencies for the New General Dentist contain a significant number of practice management-related competencies. To date, these have been taught primarily in a lecture format in the third and fourth years of the dental curriculum. Presenting information in this way only satisfies the lower level learning skills, not the skills needed to become a competent general dentist.

Conclusion

In the present study, the intern doctors reported that they have acquired greater clinical experiences in few areas during their internship training in the hospital. The majority of the interns were not satisfied on their acquired competencies in most of the areas during their training programme. According to their opinion, lack of supervision and feedback in the clinical settings, inadequacy of assessment of the interns in all level are the key factors so that the intern doctors were not satisfied with the overall internship training programme. Lastly it can be concluded that intern doctors must need to acquire sufficient competencies in most of the clinical areas for their daily practice. There are many areas for further improvement through evaluating and developing the internship training programme as well as the logbook and strengthening the clinical environment in the institutes.

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