

Learning, education and satisfaction after compulsory rotating internship in Kathmandu University Medical School: A qualitative study of interns' response

Shrestha D¹, Mishra B²

¹Lecturer, Department of Orthopaedics, Kathmandu University Medical School, Dhulikhel, Nepal, ²Relevant Institute for Supplementary Medical Education, Kathmandu, Nepal

Abstract

Background: Internship is an integral part of MBBS training programme and mandatory to all students. Kathmandu University Medical School has adopted a programme of compulsory one year rotating internship including 6 weeks community exposure in out reach clinics for the first batch of students. The purpose of the study is to evaluate interns' feedback concerning learning, education and satisfaction.

Materials and methods: A questionnaire with 47 items was administered to 30 interns who had finished one year rotating internship in Kathmandu University Medical School. Forty-two responses were graded according in Likert scale and 5 open ended questions were analyzed for common themes.

Results: The mean age of the interns was 24.77±0.67 yrs with female: male ratio of 1.5:1. Confidence level of communication of interns with faculties was lesser than with junior doctors and patients. Junior doctors and colleagues contributed more in interns' learning than faculties. Community exposure for 6 weeks was considered lengthy and lacking of clear objectives. However, 53.3% interns agreed that achievement of objectives of community posting was high or very high. Of the interns, 50% perceived certain degree of physical or mental or sexual harassments during internship. Interns raised the issue of not involving them as a part of team during clinical posting. Clinical competencies for most of the skills were high or very high.

Conclusion: Interns have learned clinical skills and patient care in one year internship programme but contribution of junior doctors and colleague are more than teachers. Clear objectives are needed before clinical and community postings. Process of providing regular feedback from interns and vice versa should be implemented to improve interns' learning, education and satisfaction

Key words: Clinical skills; Communication; Community postings; Education; Internship; Harassments

Internship is as an integral part of MBBS programme. Before registration in medical council, it is mandatory for all students to complete one year internship programme adopted by respective colleges or universities or as recommended by Nepal Medical Council. After four and half years of extensive learning with lectures, tutorials, focused group discussion, seminars in the class room and number of bedside case presentations and frequent visit to community, internship is a period of learning the art and method of applying theoretical knowledge acquired during his/her training. After completing one year of internship, interns are expected to be competent not only in clinical skills and procedures but also expected to learn to play a role of caretaker, decision maker, communicator, community leader and manager, the five expertise of the doctor identified by Charler Boelen¹. When internship starts, acute transition occurs in role of student as a learner to

as a doctor who has to work as a team in the hospital with senior colleagues. So, there are possibilities of confusion and conflicts in perception of internship as a working versus learning, the attitude of the supervisor as a evaluator versus coach, the culture of the training setting as a work-orientated versus training-orientated, the intern's learning attitude as a passive versus proactive and the nature of the learning process as informal versus formal².

Correspondence

Dr. Dipak Shrestha, MS (Ortho)
Lecturer, Department of Orthopaedics
Kathmandu University Medical School,
Dhulikhel, Nepal
E-mail: dmsortho@yahoo.com

Constant and constructive feedbacks from interns to supervisor and from supervisor to interns are needed to improve the internship programme because improvement in internship programme is a dynamic process which needs to be updated according to need of the country and institutional philosophy. We present a qualitative study which critically analyze the feedback provided by the interns regarding learning, education and satisfaction after completion of compulsory rotating one year internship in Kathmandu University Medical School (KUMS) and review the literature regarding effectiveness of internship programme in learning process of the interns.

Materials and methods

Study design:

A qualitative cross sectional study.

Participants and background

Thirty interns who had completed one year rotating internship programme in KUMS were enrolled in the study. Confidentiality of participants was maintained by using no personal identifier except gender, age and schooling background. Kathmandu University, School of Medical Sciences which runs MBBS programme in three different hospitals namely Dhulikhel Hospital in Dhulikhel, B and B Hospital in Kathmandu and Scheer Memorial Hospital in Banepa, has adopted student centered, problem based, integrated and community based learning method³. For the first batch of students (2001-2006), one year rotating internship programme was designed in above mentioned three hospitals for different clinical specialties and outreach centres with different level of facilities for community exposure. Out reach centres were under direct supervision of Dhulikhel Hospital and each intern was posted for 6 weeks in such centre.

Assessment tool

The assessment tool was a questionnaire containing 47 items under 16 headings. Participants had to respond in 42 questions in five point Likert scale and remaining 5 were open ended questions. The questionnaires were designed to evaluate participant's level of communication skills, confidence of handling illness and competence of clinical procedures. The clinical procedures were selected from the log book of KUMS internship programme and decided after discussing among authors. Similarly interaction with colleagues, contribution of different learning materials and awareness of universal precaution, educational material and monitory support, logistic facilities, maintenance of patient's confidentiality and interest developed towards research were also graded. Participants were asked to respond regarding achievement of objectives and effectiveness of community exposure in learning

process. Participants had to respond regarding any physical or sexual or mental harassment if experienced. Finally they were asked to answer about role of problem based learning in their learning, overall rating of internship strategies and fulfillment of their expectation after completion of internship. In open ended questions, participants were free to comment upon improvement of community exposure, logistic facilities and internship programme as a whole. Two questions were about their interest of specialty in future and possible place of working.

Data collection

Fourteen participants returned filled up questionnaire personally and 16 participants answered by e-mail which took 4 to 22 days for responding.

Statistical analysis

Responses were collated into a single "master document" for analysis and interpretation. Interns' responses were organized into sections corresponding to the questions. Response to open ended questions were collected according to "editing analysis style" to identify meaningful segments of the text and grouped into common theme. We selected representative quotations to illustrate the various themes and edited them for grammar, spelling and readability without any substantive changes to the texts. SPSS version 11.5 software was used to calculate mean or median whichever is appropriate and Man-Whitney test was used to calculate level of significance.

Results

All 30 interns filled up the questionnaire. Fig.1 shows sex and age distribution of the interns. The mean age of the interns was 24.77 ± 0.67 yrs with female: male ratio of 1.5:1. Twenty nine interns had school education in private school and only one had in public school. Similarly 28 (93.3%) interns had school education in urban area and 2 had in rural area. Twenty (66.67%) interns preferred to work within country, 4 (13.2%) preferred USA and remaining 6 (19.8%) were uncertain. No statistically significant co-relation found between their future choice of working within country or abroad and schooling background ($p=0.46$) and gender ($p=0.91$). Nine interns wanted internal medicine or its sub-specialty as a possible future carrier. Similarly, 9 interns wanted to have surgical carrier; 3 interns wanted gynecology and obstetrics; 3 interns wanted paediatric; 1 intern wanted anaesthesia and 5 were undecided. Their future interest of specialization was influenced by interest in subject (7 interns), better impression during posting (4 interns) and unavailability of such specialist in the country or hospital (2 interns) and remaining did not specify reason.

The findings of questionnaire with 42 items under 11 headings are summarized in Table 1. Majority of interns had acquired high degree of communication skills with patient and colleagues but communication skill with faculty was either moderate or very low in 36.7% and 93.3% responded good or very good interaction level with medical officers or junior doctors as compare to 63.3% with faculties, 56.6% with nurses and 50% other paramedical staffs. Medical officers and junior residents, colleagues and patients were major source of learning during internship. 73.4% agreed that medical officers, junior residents and colleagues contributed high or very high in learning process as compared to 50% contribution by faculties and 43.4% by books. A high degree of confidence of handling the cases independently was seen in 56.7% but only 60% had moderate, low or very low confidence in communication or breaking bad news like death or diagnosis of tumor. 89.7% interns graded universal precaution awareness high or very high. As many as 56.7% interns felt that the contribution of problem based learning process during his/her MBBS training was high or very high. Certain level of harassment was perceived by interns. Two interns mentioned about sexual harassment; five interns had physical harassment and eight had mental harassment. Many responded that their expectation after internship was fulfilled moderately or less and 51.6% rated overall internship programme as moderate, poor or very poor.

Achievement of objectives of community posting was graded high or very high by 53.3% interns but only 32% considered it highly or very highly effective. A total of 14(46.2%) interns considered community posting was long and should be shortened and the time saved could be utilized for other clinical posting. Eight interns favored community posting to be started after completion of clinical posting. Few but defined objective, clear instructions and guidelines before going to community and posting along with instructors or seniors were other themes concerning community postings. Interns pointed out need of better transportation, communication and referral system and were concerned about lack of basic medications and uncooperative behavior of health personnel. Few interns were not able to differentiate the learning objectives of during community posting teaching as a student during his/ her MBBS training period and during internship as a care provider. Followings are some examples of interns' comment:

“... should be started after interns have finished major postings and know how to perform minor procedures before going to community, ...posting time can be reduced to make it available for other postings like laboratory, radiology, dental....”

“...more effective objectives should be clearly laid out at the outset of the posting....”

“...should be a part of health projects which will be followed by subsequent interns till completion rather than just going for talk programme....needs referral facilities to the hospital no change in the objectives from community posting as a students having impressions that villages being used for study but not for community benefits....”

“...would have been better if interns are with seniors”

Community postings was perceived as an unique experience of rural setting of health care but there were interns who considered the posting was a just break from busy schedule in hospital.

“...internship in both urban and rural hospitals gave me wide exposure and helped in learning process....”

“I don't think the community posting is good for anything except a break from busy schedule from hospital.”

More than 50% interns graded facilities of accommodation, transportation, learning material and stipend were moderate, poor or very poor. Some 53.4% considered accommodation provided as poor or very poor. Accommodation for interns, especially for night duties was major concern for them. Similarly lack of learning materials like easily accessible internet and books in library and inadequate managerial and administrative guidance were pointed out.

“... proper lodging facilities should be provided especially for night duties....”

“...stipends would have been enough if paid on timelearning materials weren't enough as we didn't have good access to library and internet ...”

“... no managerial or administrative guidance were available...”

Lack of interns' involvement as a team member by seniors in patient's care was the major point raised by the interns. They were either not informed when they were on duty or were involved in clerical work only. They were not clear about learning objectives before starting the posting. Inadequate academic activities, lack of supervision and internship coordinator were other issues of concern. Many interns thought that no necessary change were made in co-ordination, management and other logistic facilities in spite of pointing out those

problems repeatedly. Frequent change in posting schedule had created confusion during internship. Some representative comments on overall improvement for internship programme are listed below.

“.....teachers should teach about approach to the patient rather than just observing in wards or OPDs..... procedures should be done under supervision so that correct methods and dealing with complications if occur can be learned....”

“....medical officers should also share some work so that interns have more time for learning procedures....”

“.... objectives should be clearly elucidated to the interns before each posting....”

“....would have been more effective if it had more academic exercises....”

“....ward rounds should be made more productive to all the interns with more discussions....”

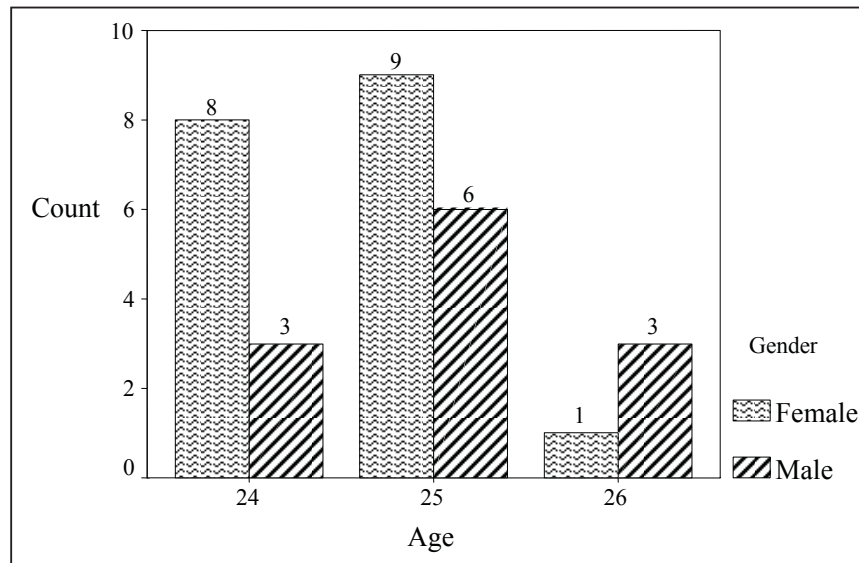


Fig 1: Age and sex distribution of 30 participants

Table 1: Response to various items by interns (% of total response in parentheses)

Item	Very low	Low	Moderate	Good	Very good
Communication skill with					
patients			2(6.7)	22(73.3)	6(20)
colleagues			3(10)	16(53.3)	11(36.7)
teachers	1(3.3)		10(33.3)	15(50)	4(13.3)
Confidence of					
handling medico-legal cases		3(10)	12(40)	13(43.3)	2(6.7)
talking death or breaking bad news	1(3.3)	3(10)	14(46.7)	9(30)	3(10)
handling cases independently			10(33.3)	17(56.7)	3(10)
Interaction with					
consultant/ faculty/teacher		2(6.7)	9(30)	10(33.3)	9(30.3)
junior doctors		1(3.3)	1(3.3)	6(20)	22(73.3)
nurses	2(6.7)	3(10)	8(26.7)	10(33.3)	7(23.3)
allied health personals		1(3.3)	14(46.7)	12(40)	3(10)
patients			1(3.3)	19(63.3)	10(33.3)
Contribution in your learning					
Patients				15 (50)	15(50)
Teachers	2(6.7)	3(10)	10(33.3)	13(43.3)	2(6.7)
Colleagues		1(3.3)	7(23.3)	20(66.7)	2(6.7)
Books	1(3.3)	5(16.7)	11(36.7)	8(26.7)	5(16.7)

Table 1 continued

Interest towards medical research (N=28)		2(7.4)	9(32.1)	13(47.4)	4(14.28)
Awareness of universal precautions (N=29)		1(3.4)	2(6.8)	14(47.6)	12(40.8)
Did u maintain patient confidentiality?	1(3.3)		1(3.3)	16(53.3)	12(40)
Community postings Did you achieve objectives? How effective?	<i>Very less</i> 3(10) 3(10)	<i>Less</i> 2(6.7) 4(13.3)	<i>Moderate</i> 9(30) 14(46.7)	<i>High</i> 13(43.3) 7(23.3)	<i>Very High</i> 3(10) 2(6.7)
Facilities during internship of Accommodation Pocket expenses Transportation Learning materials	<i>Very poor</i> 8(26.7) 4(13.3) 5(16.7) 5(16.7)	<i>Poor</i> 8(26.7) 3(10) 5(16.7) 5(16.7)	<i>Moderate</i> 7(23.3) 13(43.3) 13(43.3) 11(36.7)	<i>Good</i> 5(16.7) 9(30) 7(23.3) 5(16.7)	<i>Very good</i> 2(6.7) 1(3.3) 4(13.3) 4(13.3)
Skills developed in ECG interpretation NG insertion Pleural tapping Foley's catheterization Vein cut down Conducting normal deliveries Suturing episiotomy Insertion/Removal of Norplant I.V. access in pediatric patients Emergency resuscitation (ABCDE) Intubation Nasal packing Tooth extraction Syringing for Nasolacrimal duct Cast (PoP) application		2(6.7) 1(3.3) 1(3.3) 6(20) 1(3.3) 3(10) 2(6.7) 1(3.3) 1(3.3) 7(23.3) 6(20) 9(30) 1(3.3)	9(30) 4(13.3) 1(3.3) 4(13.3) 5(16.7) 3(10) 10(33.3) 6(20) 12(40) 14(46.7) 12(40) 6(20) 5(16.7) 4(13.3)	16(53.3) 13(43.3) 15(50) 4(13.3) 2(6.7) 14(46.7) 14(46.7) 7(23.3) 18(60) 15(50) 14(46.7) 9(30.0) 3(10) 7(23.3) 24(80)	3(10) 17(56.7) 9(30) 25(83.3) 4(13.3) 11(36.7) 12(40) 4(13.3) 4(13.3) 2(6.7) 1(3.3) 1(3.3) 2(6.7) 2(6.7)
Harassments Sexual (N=29) Mental (N=29) Physical (N=27)	<i>Not at all</i> 27(93.2) 21(71.4) 22(81.5)	<i>Low</i> 2(6.8) 3(10.2) 1(3.7)	<i>Very low</i> 4(13.6) 4(14.8)	<i>Moderate</i>	<i>Very high</i> 1(3.4)

Discussion

Internship is the crucial event in whole medical training programme for both the students and the institution and can be considered as a foundation of future medical career for students. The impression made by the students during internship remains for long time and influences his/her role in the society because it is a period of intense physical and emotional stresses with lots of information and learning of variable degree of importance⁴. For institution, it is the opportunity to teach not only the clinical skills but also to train students to achieve the vision, mission and goal followed by the institution.

Active involvement of interns enhances the formation of powerful conceptual structures and constructive

feedbacks from clinical staff in a positive atmosphere enhance learning⁵. This needs good communication and interaction among interns, teachers, junior staffs, nurses and paramedical staffs. The present study revealed good communication and interaction of interns with patients, colleagues and junior staffs as compared to faculties which may be the concerning point for the teachers. As many as 93.3% interns had good or very good interaction level with junior doctors whereas only 63.6% interns found interaction with teachers good or very good. This indicates unseen barriers between teachers and the interns. One of the reasons may be the hierarchy of communication that can occur if there are too many people in the team which in turn may exclude learners as reported by Sheehan D et al⁶.

The learning resources for interns are variable and depending upon the nature of learner as a passive or active, s/he might use various resources. Senior faculties are usually not involved in teaching clinical skills but students would like more contact with them because they feel they could learn a lot and correct method from them⁷. Though the role of junior doctors for teaching skills have been questioned by various authors because of level of expertise, competency in their own skills and making frequent mistakes themselves, junior doctor as the main teacher in the clinical setting has been established by many studies^{8,9,10}. The similar findings was revealed in the present study which showed that only 50% interns considered teachers as a contributor in their learning whereas their own colleagues and junior doctors contributed in 73.4% interns. The various reasons are postulated for this observation. A good doctor does not always automatically mean a good teacher or provider of feedback. In busy hospital schedule, teachers find limited time to teach interns in OPDs, ward rounds and operation theatre and think that his junior doctor or residents will teach necessary clinical skills to interns. Some of teachers may feel practical difficulties to involve interns with their private patients. On the other hand, interns may find learning with junior doctors easy because they do not feel hesitation to ask questions or discuss the problems or don't feel humiliation even when they make stupid mistakes and they consider junior doctor as a peer as there is not much age difference⁷. The role of the books as a learning material during internship period was found very low - 56.7% interns rated them as moderate or low or very low. The reason behind this finding may be interns do not get enough time to study the books or they do not think books can help in learning clinical skills but sound theoretical background knowledge is needed to consolidate clinical skill and this point should be emphasized to interns.

It has been observed in various studies that traditional setting of teaching interns in the hospital has many disadvantages because they are most often considered as a passive member in the team creating a confusion in the role they have to fulfill and in bigger hospital, they have to compete with residents in trainings and paramedical students for learning clinical skills^{7, 11}. Clinical teaching in community hospitals and properly structured residential posting in such hospital as a part of internship programme can be the solution of the problem and hence the policy has been adopted in KUMS. The managerial and leadership skills can be taught in the community more effectively than in hospital set up in cities and also enhance intern's confidence to handle patients independently¹². But intern's feedback regarding community posting after completion of internship in KUMS was not

encouraging for 68% interns rated community posting as moderate or less or very less effective. Interns could not appreciate difference between preventive medicine subject teaching in the out reach health centre and residential posting during internship. They were not clear about the objective they have to accomplish in the community in the given time period and hence many considered community posting as lengthy and not effective. There was confusion whether they have to act as a learner as designated by the institute, or as health care provider as expected by the community members. Interns who had not been adequately exposed to clinical departments in hospital before going to community, considered community posting as waste of time. Lack of supervisor and resources constraints made dealing with patients more difficult for interns. This finding clearly indicates the gap between intended objectives of the programme and outcome. The solution for this problem may be a session for the interns to explain the objectives and interns' role as a learner as a part of health care providing team, as a manager to listen carefully about health related problem and as a planner to formulate appropriate solution. These objectives can be achieved if they are made responsible for a part of project for specified duration for each group of interns posted in community and subsequent group can continue or start another programme. At the same time members in the community and the clinical staffs should also be given explanation about the objectives of posting interns in their health centre. This will help to reduce the possible conflict between interns and community members. So, clear objectives with well planned management are necessary for exposure to interns in the community for expected results.

Most of the interns responded that skills developed for life saving measures were good or very good except for venous cut down which was good or very good in only 20% interns. Similarly skill of extraction of tooth which can be considered as an essential skill to learn for interns posted at out reach health centre also was not satisfactory.

The reasons behind lower rating of internship strategies in the present study may be multiple, ranging from inadequate logistic supports, inadequate supervision and learning materials, lower level of interaction with teachers, unclear objectives of community postings and insufficient coordination from management side

Some kind of physical or mental harassments to new comers in medical education system is unfortunately common in Indian subcontinent but there are few studies reporting harassments perceived during internship also¹³. The present study revealed 8 (26.6%) interns had perceived mental harassments and 2 interns had

experienced sexual harassments but we had not asked to specify the type of mistreatment or the source of the harassment. Though perceived mistreatments may be just a misunderstanding or wrong perception, the reporting should be considered very seriously to avoid unexpected consequences in future.

In conclusion, professional competencies learned by interns during one year compulsory rotatory internship programme in KUMS are satisfactory but there are substantial space to improve in learning and teaching environment and the method. Setting the objectives for both clinical and community posting should be taken with priority and should be clearly explained to the students, teachers and the community in a session before the posting starts. Logistic and managerial support plays a vital role in intern's performance and hence an internship coordinator should be designated. Teachers having different background of medical education system need training and workshops to understand changing system of medical education. Recognition of interns as a responsible team member will not only enhance the learning but also strengthen interaction level with teachers. Interns should also realize that there are plenty of learning opportunities in all formal or informal activities. It may be just critical observation of doctor patient relationship to active participation in surgical procedures. Regular feedback from students to teachers and vice versa with intention to improve helps in improving each other performance both as a learner and a teacher.

References

1. Boelen C. Medical education reforms: The need for global action. *Acad Med.* 1992;67(11):745–49.
2. Deketelaere A, Kelchtermans G, Struyf E, Leyn PD. Disentangling clinical learning experiences: an exploratory study on the dynamic tensions in internship. *Med Educ.* 2006;40 (9):908–15.
3. MBBS Curriculum, Clinical Sciences, Kathmandu University, School of Medical Sciences. 2006:1.
4. Levine RB, Haidet P, Kern DE, Beasley BW et al. Personal Growth During Internship: A Qualitative Analysis of Interns' Responses to Key Questions. *J Gen Intern Med.* 2006;21:564–9.
5. Irby D.M. Three exemplary models of case based teaching. *Acad Med.* 1994;69: 947–53.
6. Sheehan D, Wilkinson TJ, MCLinEd, Billett S. Interns' Participation and Learning in Clinical Environments in a New Zealand Hospital. *Acad Med.* 2005;80:302–8.
7. Remmen R, Denekens J, Scherpbier AJJA, van der Vleuten CPM, Hermann I, van Puymbroeck H, Bossaert L. Evaluation of skills training during clerkships using student focus groups. *Med Teacher.* 1998;20:428–32.
8. Jolly BC, Macdonald MM. Education for practice: the role of practical experience in undergraduate and general clinical training. *Med Educ.* 1989;23:189-95.
9. ST Clair EW. Assessing house staff diagnostic skills using a cardiology patient simulator. *Annals of Int Med.* 1992;117:751- 6.
10. Remmen R, Denekens J, Scherpbier AJJA, Hermann I, van der Vleuten C, van Royen P, Bossaert L. An evaluation study of the didactic quality of clerkships. *Med Educ.* 2000;34:460–4.
11. O'Sullivan M, Martin J, Murray E. Students' perceptions of the relative advantages and disadvantages of community-based and hospital-based teaching: a qualitative study. *Med Educ.* 2000;34:648-55.
12. Sen Gupta TK, Muray RB, McDonell A, Murphy B, Underhill AD. Rural internships for final year students: clinical experience, education and workforce. *Rural and Remote Health Journal (online)*, 2008: 827. <http://www.rrh.org.au>
13. Daugherty SR, Baldwin Dc, Rowely BD. Learning, Satisfaction and mistreatment during medical internship: A national survey on working conditions. *JAMA.* 1196;279:1194-9.