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ORIGINAL ARTICLE

Orientation program for first year undergraduate medical students: knowledge, attitudes and perceptions

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Abstract

Introduction: During a week-long orientation program at KIST Medical College newly joined first year undergraduate medical (MBBS) students are introduced to the institution, to teaching-learning activities, to the MBBS curriculum and to faculty members. The program has been conducted previously for three batches of students but feedback has not been obtained. Hence the study was conducted to study knowledge and attitude scores of students before and after the orientation program among the newly joined fourth batch of students, and note student perception about the effectiveness of different sessions. **Method:** A questionnaire administered at the end of the program measured knowledge and attitudes of students about selected subject areas before and after the program. Students were asked to indicate their present level of knowledge and attitude and also indicate their levels at the beginning of the program. The median knowledge and attitudes scores were calculated and compared among male and female respondents. The median scores before and after the module was compared using appropriate nonparametric tests ($p < 0.05$). The effectiveness of different lecture sessions was also studied. **Result:** Sixty-three of the 72 students (87.5%) participated in the study. Forty students (63.5%) were male, 21 (33.3%) were female and two did not mention their gender. The median knowledge and attitudes scores significantly increased after the program. The effectiveness score was 3 for most sessions expect a few where the score was 4. **Conclusion:** The knowledge and attitude scores in different subject areas improved after the module. The program was perceived by students to be effective.

Keywords
developing countries, students, medical, Nepal, orientation program.

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Introduction

KIST Medical College (KISTMC) is a new medical school in Lalitpur district of the Kathmandu valley committed to excellence in education, healthcare and research. The college is affiliated to the Institute of Medicine, Tribhuvan University for the undergraduate medical (MBBS) course. The MBBS course is of four and half years duration followed by a year of compulsory rotating internship. During the first two years of the course the basic science subjects of anatomy, physiology, biochemistry, pathology, pharmacology and microbiology are taught in an integrated organ system-based manner along with community medicine (1). Early clinical exposure is also emphasized. Students learn history taking during the first year and physical examination skills during the second.
Medical school can be a stressful period of the students' life due to a variety of reasons. A study conducted in Malaysia showed students mainly reported academic and financial issues as sources of stress (2). In Saudi Arabia it was seen that the prevalence of stress was higher during the first three years of medical school and among female students (3). One possible reason for student stress could be, not knowing what to expect during the course and lack of information on how to cope with the problems experienced. In South Asia improper behavior (ragging) by senior students could be a possible source of stress.

KISTMC stresses early clinical exposure and students spend four hours in the hospital once a week. During this period a one and half hour Medical Humanities module is conducted for first year students (4). The college stresses community-based learning and a month long community-diagnosis exercise is carried out for first year students. Students stay for a month in semi-rural communities at the outskirts of the Kathmandu valley. The orientation program for first year students uses a mixture of presentations, visits and activities to familiarize students with the MBBS course, teaching-learning activities in KISTMC and with the institution. The orientation program is held over six days and students are familiarized with different departments both in the hospital and the college.

They are also introduced to modern challenges in the medical profession, medical ethics, the health system of Nepal, community-based learning, history of medicine, history of medical education in Nepal and medical humanities among others. The orientation program had been previously conducted for three batches of students. The effectiveness of the program and its possible impact has not been previously studied. Hence the present study was carried out with the following objectives:

a. Measure knowledge and attitudes of students about selected areas before and after the orientation program
b. Compare the knowledge and attitude scores among male and female students
c. Note student perceptions about the effectiveness of different lecture sessions and
d. Obtain suggestions for further improvement.

Method

A week long orientation program was held for newly admitted first year MBBS students of KISTMC in the third week of November 2011. The program used a mixture of interactive lectures, small group sessions and activities to introduce students to the MBBS program and KISTMC. Among the topics covered were basic information about the institution, the present status of the medical profession, the art of medicine, the MBBS curriculum, medical ethics, the health system of Nepal, among

others. The orientation program had been previously conducted for three batches of students. The effectiveness of the program and its possible impact has not been previously studied. Hence the present study was carried out with the following objectives:

e. Measure knowledge and attitudes of students about selected areas before and after the orientation program
f. Compare the knowledge and attitude scores among male and female students
g. Note student perceptions about the effectiveness of different lecture sessions and
h. Obtain suggestions for further improvement.

Community-oriented medical education, early clinical exposure, history of medicine, early clinical exposure, what it means to be a medical student, self-directed learning and team-based learning. On the last afternoon a small cultural program was organized by students.

A retrospective-pre questionnaire was used to measure knowledge and attitudes of students about selected subject areas before and after the orientation program. For each subject area participants were asked whether they had no idea, have a vague idea or had a clear idea. 'No idea' was given the score 1, 'Have a vague idea' the score 2 and 'Clear idea' the score 3. Attitudes were measured by noting the respondents' agreement with a set of statements using a Likert type scale. The scoring system adopted was: 5 – strongly agree with the statement, 4 – agree, 3 – neutral, 2 – disagree and 1 – strongly disagree with the statement. The median knowledge and attitudes scores were calculated and compared among male and female respondents both before and after the program. The median scores before and after the orientation program was compared using appropriate nonparametric tests. A p value less than 0.05 was taken as statistically significant. The study was approved by the Institutional Review Board of KIST Medical College.

The effectiveness of particular lecture sessions was also noted. The effectiveness was noted according to the following scale: not effective was scored 1, somewhat effective as 2, effective as 3 and very effective as 4. The median effectiveness score for different topics and the total effectiveness scores were calculated. Participants were also asked two strengths of the orientation program and two suggestions for further improvement. The suggestions were noted and common ones enumerated.

Result

Sixty-three of the 72 students (87.5%) participated in the study. Forty students (63.5%) were male, 21 (33.3%) were female and 2 did not mention their gender. Cronbach's alpha for calculating reliability was 0.803 for knowledge, attitudes and effectiveness scores which indicated good reliability.

On testing for normality of distribution of variables using the one sample Kolmogorov-Smirnoff test it was found most variables were not normally distributed. Table 1 shows the median knowledge and attitudes scores both before and after the program and the median effectiveness scores. The median knowledge and attitudes scores significantly increased after the program. Table 2 shows the median knowledge and attitude scores of individual scores before and after the orientation program. The knowledge scores in certain areas like the art of medicine, medical ethics, history of medicine, early clinical exposure, the MBBS curriculum and

community-oriented medical education were low at the beginning of the program.

Table 3 shows the effectiveness scores for different lecture sessions as perceived by the students. The effectiveness score was 3 for most sessions expect a few where the score was 4. The strengths of the orientation program as perceived by the students were obtained knowledge about the MBBS course (17 respondents), became familiar with the teachers (15 respondents), will help us in preparing for self-directed learning and team-based learning (14 respondents), got to know all basic science and hospital departments (12 respondents), got to know new friends (12 respondents) and knew about challenges of the medical profession (8 respondents). These are paraphrased comments of respondents. Among common suggestions for further improvement were improving brightness of the LCD projector in the classroom (8 respondents), the published routine of the orientation program should be followed more closely (5 respondents), there should be more small breaks between sessions (4 respondents), some teachers should be more student friendly (3 respondents), punctuality of facilitators (3 respondents) and some teachers should improve their presentation skills (3 respondents). Among other comments were 'I am looking forward to my study here', 'Thanks for the opportunity to briefly survey our future as doctors' and 'Module allowed us to interact with friends and faculty'. These are the exact comments of the respondents.

Discussion

Most students participated in the study. Median knowledge and attitudes scores significantly increased after the orientation program. At the beginning of the program students' knowledge in selected areas was low. Students rated the lecture sessions as effective. The perceived strengths of the program were students were introduced to the institution, to the teachers and to the course. Suggestions for improvement were also obtained.

An article states the commencement ceremony is one of the most meaningful and symbolic events in a student's career (5). Students reflect on the sacrifices and accomplishments of the past and are inspired by the hope, excitement and responsibility of the future. In professions like medicine students are introduced to the past history of the profession, its present status and possible challenges in the future. Parents and friends visit the campus and interact with classmates and faculty members. It may be a crucial moment shaping graduates' perception of their *alma mater* (5).

The increase in knowledge and attitudes scores may provide indirect evidence about the effectiveness of the orientation program. Also students perceived most lecture sessions as effective. The program served as a forum for new students to get introduced to the MBBS course, the institution, their teachers and friends. This was perceived by students as its major strength. Self-directed learning (SDL) and lifelong learning is becoming increasingly important in medical education. In KISTMC, SDL and team-based learning mainly occurs during the correlation seminars (6) and pharmacology small group sessions (7). The students were informed about how to prepare for small group learning and team-based learning during the orientation program.

Commencement address by an eminent person is common in medical schools (8). At KISTMC we have not had a commencement address till now. We were considering the possibility this year but it did not materialize due to many reasons. We are planning to

definitely include a commencement address from next year's session.

In Nepal orientation programs usually use only didactic lectures as the teaching-learning modality. At KISTMC in addition visits to different departments under the guidance of faculty, student presentations and small group sessions were used. The suggestions of students for further improvement will be considered for implementation in future sessions.

The study had limitations. Student opinion was obtained only using a questionnaire developed by the authors. Reliability was tested using Cronbach's alpha but validity of the questionnaire was not tested. The questionnaire was not pre-tested. The information obtained was not triangulated with that obtained from other sources. The questionnaire used has provided information about the orientation program. The study can be used as a pilot to conduct a more extensive study in future. During next year's orientation program information can also be collected using a focus group discussion or in-depth interviews with students.
The authors have shown that it is possible to conduct an orientation program using both didactic lectures and other learning modalities for a new batch of students in a medical school in a developing country. Perception of teachers about the orientation program can be studied in future.

Conclusion

The orientation program was effective in significantly improving knowledge and attitude of students about different subject areas. Improvements are required in certain areas. There were no significant differences in scores among male and female students. All lecture sessions were perceived as effective by students. The suggestions obtained will be considered for future sessions. The schedule had often to be changed to suit requirements of individual faculty. Agreeing faculty members to stick to an agreed schedule may be a challenge. The audiovisual problems noted have been already addressed.

Other medical educators in South Asia can consider developing an orientation program for students using a mixture of teaching-learning methods and concentrating on important 'must know' areas.

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Table 1: Median knowledge and attitudes scores before and after the orientation program and the median effectiveness scores

Parameter	**Median score**	***p-value***
Knowledge (maximum score 36)		
Before the program	18	< 0.001
After the program	30	
Attitude (maximum score 60)		
Before the program	42	
After the program	48	< 0.001
Effectiveness score (maximum score 48)	38	

Table 2: Median knowledge and attitudes scores before and after the module

Parameter	**Median scores**	
	Before the program	**After the program**
Knowledge (maximum score for each item 3)		
Basic information about the college	2	3
Present status of medical profession	2	3
The art of medicine	1	2
Medical ethics	1	2
Nepal's health system	2	2
Self-directed learning	2	3
Team-based learning	2	3
History of medicine	1	2
Community-oriented medical education	1	3
Early clinical exposure	1	2
MBBS curriculum	1	3
Being a MBBS student	2	3

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Attitudes (maximum score for each item 5)		
I feel proud to be a student of KIST Medical College.	4	4
The status of medical profession has declined recently	4	4
Medical humanities are important for doctors.	4	5
Doctors should not be bothered about ethical practice.	3	3
Nepal's health's system ensures healthcare for majority.	3	3
SDL is important for medical students	3	5
Team-based learning seems interesting.	4	5
I am not clear why doctors should learn about history of medicine (scores are reversed for this statement)	3	4
Community-oriented medical education is important	4	5
Early clinical exposure will improve my clinical skills.	4	5
The MBBS curriculum is integrated & community based.	3	5
A MBBS student should maintain dignity of the profession.	5	5

Table 3: Effectiveness scores for different sessions as perceived by the respondents

Session	Median score
Basic information about KIST Medical College	3
Present status of the medical profession	3
The art of medicine	3
Medical ethics	3
Nepal's health system	3
Self-directed learning	4
Team-based learning	4
History of medicine	3
Community-oriented medical education	4
Early clinical exposure	3
MBBS curriculum	3
Being a MBBS student	4

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