Original Research Article

Interns induction training program – An analysis

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Abstract

Background: Internship is a phase of training where in a graduate is expected to practice skills under supervision so that he/she may be capable of functioning independently. The learning methods have to be, hands on session including practice on simulators. This phase of learning is different from earlier phases in MBBS as it needs performance on patients. The learner - intern need to be prepared to this different and new phase of learning at work place, which demands application and finally performance of the skill on real patients. There are different training programs run by different colleges. There is no significant in depth analysis of these programs. Program evaluation will lead to modifications and develop a more effective and standardised training module for interns. This article is aimed at administration and analysing a training program for interns. **Aim:** To conduct and evaluate an Induction Training Program designed specifically for interns so as to prepare them for a new phase of learning by initiating the cognitive and integrative phases of skill acquisition. **Objective:** To conduct interactive orientation classes required for effective performance of the entrusted task during internship. To provide training with skill stations to initiate the cognitive and integrative phases of skill acquisition (acquire initial basic skills training) required before actual performance on patients under supervision. To evaluate the internship induction training program by a Qualitative and Quantitative feedback. **Materials and Methods:** An induction training program was conducted for 120 interns at the starting of internship for two days. Interactive lecture classes of 40 mints each were organized in the morning followed by training at skill stations in the afternoon. Interns were asked to complete the feedback questionnaire after finishing the training on second day. The feedback is evaluated and analyzed both quantitatively for the grades on likert scale and qualitatively for the open ended questions. Data was analyzed on SPSS version 23. **Observations and Results:** The cumulative data consisting of the perception of Interns in the form of perception graded on the 5 point likert scale is analysed. The result shows frequency and percentage of the respondents for various levels of agreement along with mean, median, mode and standard deviation for each item. Difference among frequencies of interns responding for various levels of agreement was statistically significant ($p < 0.001$). The results also show different levels of agreement to various research questions. 71.67% interns strongly agreed and 25% agreed that using skills stations will help in skill development, 59.16% interns strongly agreed and 35.83% agreed that the program will motivate for learning. 62.5% interns strongly agreed and 30.83% agreed that the Interactive lecture sessions gave orientation of skills to be acquired by an Intern. 57.5% Interns strongly agreed and 25.83% agreed that the use of manikins for skill training has removed anxiety and increased the confidence. 76.67% interns strongly agreed and 20%. Interns agreed that the hands-on skill training using manikins must be made part of Internship curriculum. The response for the open ended question Write your reflection on the training program the responses indicate that it was helpful by increased confidence, removing hesitation and fear, awareness and orientation of work in hospital, increased interest to learn. They suggested that more time should be allotted to practice skills, training must be conducted regularly; continue the training in next academic year, skill stations training should be made part of internship curriculum. **Conclusions:** The intern's reflections on the training program indicate that it was helpful not only to improve clinical procedural skills and knowledge but also the attitude towards the patient care by increasing their confidence, removing hesitation and fear and increasing the interest to learn. The program resulted in increasing the awareness and orientation of work in hospital. Over all 92% interns strongly agreed and suggested the skill stations must be made part of Internship curriculum, indicating that the skill stations were most useful in learning the skills. To take forward the research on training at skill stations, further study is required to assess the transfer of these skills to the wards at application level.

Key Words: Interns, Training program, Skill stations, Analysis.

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INTRODUCTION

Internship is a phase of training where in a graduate is expected to practice skills under supervision so that he/she may be capable of functioning independently.[1] This phase of learning is different from earlier phases in MBBS as it needs performance on patients. The learner - intern need to be prepared to this different and new phase of learning at work place, which demands application and finally performance of the skill on real patients. The learning methods have to be hands-on session including practice on simulators.[1] With increasing focus on patient safety, there is a need to have opportunities for repeated practice of skills in a controlled environment and also available on-demand at the learner's convenient time.[2] There are different training programs run by different colleges. There is no significant in-depth analysis of these programs. Program evaluation will lead to modifications and develop a more effective and standardised training module for interns. An induction training program is designed specifically to meet the intern's training needs within the context of their day to day work to effectively perform the entrusted task during internship. This article is aimed at conducting the induction training program and analysing the program.

MATERIAL AND METHODS

An induction training program is designed specifically to meet the intern's needs for effective performance of the entrusted tasks during internship. The induction training program was conducted for 120 interns at the starting of internship for two days. Interactive lecture classes of 40 minutes each were organized in the morning followed by training at skill stations in the afternoon. The program was conducted by the Medical Education Unit, at Bhaskar Medical College, Moinabad. The topics which are essential in performing the entrusted task during internship are chosen. The topics were: Expectations from a house surgeon, Attitude and Communication skills, Conduct in the hospital –Responsibilities and Duties, Prognosis explanation and breaking of bad news, Do's and Don'ts in casualty, CAB Management, MLC case recording and Death, Certificate TRF writing, Sample collection and Transportation, Case sheet writing, Discharge summary, Biomedical Waste Management, Universal Precautions, Do's and Don'ts in OBG, Control of Hospital acquired infections, Writing a Prescription. Afternoon interns are trained at 10 skill stations: How to wear gloves, Draping a surgical site, Simple Suturing, Mattress Suturing, Suture removal, Ryle's tube insertion, Insertion of Foley urinary catheter in Male. Insertion of urinary catheter in Female. Administering Injections (IM,SC), Bag Mask Ventilation, Endotracheal intubation, IV Catheter insertion, Writing a Death Certificate.

Skill Station: Skill stations are present in clinical skill laboratory designed for teaching and assessing learners at different level of skill, experience and expertise using simulators and manikins. Each skill station is a procedural station where student learn to do the procedure under the supervision of subject experts using a standardized structured checklist. Each station has all the required instruments and manikins with a checklist of steps to be followed for the procedure. At initial plenary, interns are briefed about the Peyton's "Four-Step-Approach" of skills learning.Interns were divided into two equal groups, Group A and Group B of 60 interns in each group. Group A and B were again divided in 6 small groups comprising of 10 members. They spend 20 mints at each station where they are given the task specific check list. The expert will demonstrate, deconstruct and perform to the directions of intern (comprehension). Five interns will be performing the skill and five will observe and give feedback one-to-one with check list in hand. They will exchange the roles and perform the task. At the end of 20 minutes, the interns shifted to the next station and followed the instructions. Thus every intern will be performing the task and get one to one feedback. Activity at each station is facilitated by a faculty member. They are rotated in groups of 10 to 6 stations on day one and next 6 stations on day 2. A feedback proforma on intern's perception was prepared containing questions graded using 5 point likert scale and an open ended question. A feedback proforma on intern's perception was prepared containing questions graded using 5 point likert scale and an open ended question. Interns were asked to complete the feedback questionnaire after finishing the training on second day. The feedback is evaluated and analyzed both quantitatively for the grades on likert scale and qualitatively for the open ended questions. Data was analyzed on SPSS version 23.

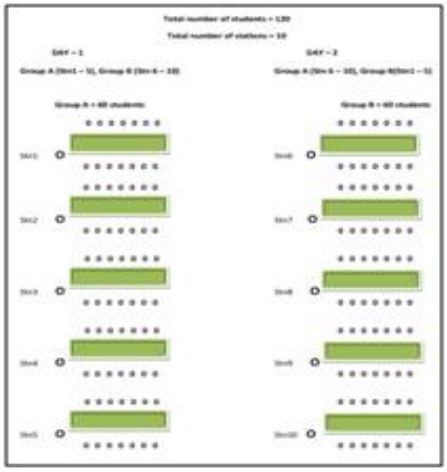

Figure 1:

In this study the feedback questions were

1. The program will help in skill development
2. The program will motivate for learning
3. The interactive lectures gave knowledge required for day to day work of Interns.
4. The use of manikins for skill training has removed anxiety and increased the confidence
5. The on-hand skill training using manikins must be made part of Internship curriculum

The open ended questions asked were

1. Write your reflection on the training program.

Interns were asked to complete the feedback questionnaire directly after finishing the training on second day. This questionnaire also has an acceptable internal consistency reliability (Cronbach's alpha =. 73). Data Analysis: The feedback proforma were collected from all the participants. It was evaluated and analyzed both quantitatively for the grades on likert scale and qualitatively for the open ended question to know the outcomes of Interns training program by using skills station. Data was analyzed by using IBM SPSS Statistics version 23. Descriptive statistics were used to calculate mean, median, mode and standard deviation for continuous variables and percentage for categorical variables. Single sample t test was done to know the significance. A value of $p < 0.05$ is significant and < 0.001 is highly significant.

OBSERVATIONS AND RESULTS

The cumulative data is given in Table-1, consisting of the perception of Interns training program using skill stations in the form of perception graded on the 5 point likert scale which measures the perception. The Table-1 gives frequency and percentage of the respondents for various levels of agreement along with mean, median, mode and standard deviation for each item. Difference among frequencies of interns responding for various levels of agreement was statistically significant ($p < 0.001$).

Table 1:

S.No	Interns perception	Likert scale														
		Srongly Agree 5		Agree 4		Undecided 3		Disagree 2		Strongly Disagree 1		Mean	Median	Mode	SD	P value
		No.	%	No.	%	No.	%	No.	%	No.	%					
A	The program will help in skill development	86	71.67	30	25.00	4	3.33	0	0	0	0	4.68	5	5	0.534	<0.001
B	The program will motivate for learning	71	59.16	43	35.83	5	4.16	1	0.83	0	0	4.52	5	5	0.660	<0.001
C	The interactive lectures gave knowledge required for day to day work of Interns.	75	62.50	37	30.83	8	6.67	0	0	0	0	4.55	5	5	0.618	<0.001
D.	The use of manikins for skill training has removed anxiety and increased the confidence	69	57.5	31	25.83	15	12.5	5	4.16	0	0	4.37	5	5	0.859	<0.001
E	The hands on skills training using manikins must be made part of Internship curriculum	92	76.67	24	20.00	4	3.33	0	0	0	0	4.733	5	5	0.514	<0.001

DISCUSSION

This study evaluated the Interns training program having skill stations through the feedback form that quantitatively analysed the perceptions of interns on 5 point likert scale as percentage numbers and qualitatively analysed the open ended questions. The use of simulation-based teaching units has seen widespread development in medical education over the last 25 years[3].

The program will help in skill development: For the first research question to the interns, weather the Interns training program by using skills stations will help in skill development, 71.67% interns strongly agreed and 25% agreed that the Intern's training program by using skills stations will help in skill development. While the percentage of interns who were undecided was mere 3.33%, there were no interns disagreeing or strongly disagreeing with this research question. Technical innovations in diagnosis and treatment, as well as large-scale patient safety initiatives have changed the demands on physicians' skills over the past years, giving even further justification to skills lab training[3,4].

The program will motivate for learning: For the next research question, weather the program will motivate for learning, 59.16% interns strongly agreed and 35.83% agreed that the Intern's training program by using skills stations will help in skill development. While the percentage of interns who were undecided and disagreeing was mere 4.16% and 0.83% respectively, there were no interns strongly disagreeing with this research question. Our study results are similar with the study by Rizwan Hashim *et al* has shown that majority of the interns opined that skill laboratory training increased motivation for becoming doctor and developed interest in learning clinical skills.[5] Strand *et al*. performed a study to investigate how skill laboratory training enhances interns' learning. They noted that the feeling of security is the main factor that enhances learning along with team work, psychomotor involvement and having a "modern-minded" teacher[6].

The interactive lectures gave knowledge required for day to day work of Interns. For the next research question, the interactive lectures gave knowledge required for day to day work of Interns., 62.5% interns strongly agreed and 30.83% agreed that the interactive lectures gave knowledge required for day to day work of Interns. While the percentage of interns who were undecided was mere 6.67%, there were no interns disagreeing or strongly disagreeing with this research question.

The use of manikins for skill training has removed anxiety and increased the confidence: For the next research question, 57.5% interns strongly agreed and 25.83% agreed that the use of manikins for skill training has removed anxiety and increased the confidence. The percentage of interns who were undecided and disagreeing was 12.5% and 4.16 respectively, there were no interns strongly disagreeing with this research question. Accordingly, in a study from 2006, Takayasu and colleagues were able to show that interns particularly appreciated the aspect of experiential "practice without risk" of harming real patients in simulation-based training.[7] The skills lab setting allows interns to make mistakes and correct these without having to fear adverse consequences for themselves or patients. Our study results are is similar with that of the study done by Rizwan Hashim et, majority of interns responded that skill laboratory training enhanced their confidence and majorities were of the view that confidence plays a major role in learning clinical skills.[5]

The on-hand skill training using manikins must be made part of Internship curriculum: For the next research question, the on-hand skill training using manikins must be made part of Internship curriculum, 92% interns strongly agreed and 24% agreed that the Intern's training program by using skills stations will help in skill development. While the percentage of interns who were undecided was mere 3.33%, there were no interns disagreeing or strongly disagreeing with this research question.

Analysis of few open ended question: We performed an analysis of the content of intern's responses to our open ended question, "Write your reflection on the training program". Two medical education research scholars independently read the feedback proforma and identified meaningful segments of text and analyzed the text qualitatively. We were specifically interested in identifying the intern's perception and their suggestions that reflects the outcome of Interns training program by using skills station. The interns felt that the training program was helpful.

- It helped to improve clinical skills,
- Increased knowledge,
- Awareness and orientation of work in hospital,
- Increased interest to learn,
- Increased confidence and
- Removed anxiety, hesitation and fear.

The use of manikins at the skill stations was helpful in learning basic procedures using instruments and the mistakes committed were corrected which made learning to happen. Interns suggestions to improve the training process were:

- More time should be allotted to practice skills,
- Training must be conducted regularly
- Continue the training in next academic year.
- The skill station training should be started early in third semester,
- Skill station training should be made part of internship curriculum,
- Improving clinical skill lab with more manikins and instruments.

CONCLUSION

The study was done to evaluate the internship induction training program by a Qualitative and Quantitative

feedback. The Induction Training Program was designed specifically for interns so as to prepare them for a new phase of learning by initiating the cognitive and integrative phases of skill acquisition. The program consisted of interactive lectures and skill stations. The intern's reflections on the training program indicate that it was helpful not only to improve clinical procedural skills and knowledge but also the attitude towards the patient care by increasing their confidence, removing hesitation and fear and increasing the interest to learn. The program resulted in increasing the awareness and orientation of work in hospital. Over all 92% interns strongly agreed and suggested the skill stations must be made part of Internship curriculum, indicating that the skill stations were most useful in learning the skills. This is in line with the previous studies which has shown that skills lab training provides medical interns with the necessary basic skills for later clinical activity by the means of models, phantoms, and fellow interns or with the help of standardized patients (SP)[8,9] The use of manikins at the skill stations was helpful in learning basic procedures and the mistakes committed were corrected which made learning to happen. It has been suggested to further develop the clinical skill laboratory incorporating modern technology. Procedural skills can be trained, repeatedly practiced, and evaluated until the required minimum standard for patient treatment is ensured[10,11] The use of checklists has been shown to be conducive for the quality assurance of interns' skills lab education also including internal faculty standards. Ultimately, the process of standardization provides the basis upon which competence-based assessment of student skills is made possible.[7,12,13,14]. Other studies that have shown similar results with this study shows that simulation has the potential to revolutionize health care and address the patient safety issues if appropriately utilized and integrated into the educational and organizational improvement process[15]. For patient's safety and to prevent ethical concerns, it has become necessary to develop skill laboratories in medical colleges where interns learn and practice various aspects of knowledge and skill imparting positive features that enhance the quality of the learning environment[16,17,18]. To take forward the research on training at skill stations, further study is required to assess the transfer of these skills to the wards at application level. The transfer of the skills acquired during the training program need to be assessed by work place based assessment of the performance while treating the real patients in clinical settings.

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