To Assess the Effectiveness of Self-learning Module on Knowledge Regarding Normal Labour for Obstetrics and Gynecology Internship

Anjali Kanhere[1]

ABSTRACT

Introduction: In India Compulsory Rotatory Residential Internship (CRRI) refers to one-year compulsory work in the hospital attached to the medical college or in any other approved hospital. This gives MBBS doctor the basic clinical experience in all the disciplines of medicine and enables them to work as a General Physician. As Primary Health care providers they should be able to manage normal labour. Early and timely diagnosis and reference of abnormal cases can reduce maternal and infant mortality and morbidity rates. Study aimed to assess the effectiveness of self-learning module on knowledge and learner satisfaction regarding normal labour for Obstetrics and Gynecology internship.

Material and methods: 48 interns attending Obstetrics and Gynecology internship were enrolled voluntarily and were randomized into two groups, 24 each control and study group. A questionnaire pretest was done and the interns were graded. The study group interns were then trained with the help of the module and a posttest questionnaire was conducted. Additional six questions on satisfaction with the learning experience were answered as a part of posttest**.** Student t test was employed for statistical analysis, setting significance at p<0.05. An association analysis by Pearson's Chi square test was conducted

Results: Data analysis of level of knowledge revealed that, no significant association was seen between the gender, future working plans, and family background with the knowledge of the subject.12 Interns who had a desire to do post-graduation in Obstetrics and Gynecology showed a significant association with the knowledge of the subject, with a mean score of 25.46.(P value < 0.001).

Conclusion: There was evident increase in the knowledge scores in all the areas included in the study after administration of self-learning module. Interns desirable to do post-graduation in O and G showed increased association with the knowledge of the subject.

Keywords: Interns, Self-learning Module, Normal Labour, Knowledge

INTRODUCTION

In India Compulsory Rotatory Residential Internship (CRRI) refers to one-year compulsory work in the hospital attached to the medical college or in any other approved hospital.[1]

This gives MBBS doctor the basic clinical experience in all the disciplines of medicine and enables them to work as a General Physician. As Primary Health care providers they should be able to manage normal labour. Early and timely diagnosis and reference of abnormal cases can reduce maternal and infant mortality and morbidity rates.

Most intern at hospitals while studying intensively for their postgraduate admission exams **s**pend less time in wards and hospitals.[2] This gives them less exposure to emergency situations in the hospital. The days of learning ''by trial and error'' or ''see

one, do one, teach one' 'are passing as the learning approaches to the acquisition of health care–related knowledge, skills, and abilities. As a result increased focus on training of practical skills has introduced the need for use of new methodologies of teaching. Satisfaction of learner is important aspect of the learning process. Despite the complexity of evaluating this issue, student's satisfaction, such as perception of learning or self-confidence, is important when introducing and evaluating a new educational tool.

Simulation is a practical and safe approach to the acquisition of behavioral skills across the spectrum of medical specialties. Success with the widespread implementation of simulation in medical schools has been reported in selected settings[3], and its use for training students and residents in Obstetrics and Gynecology has been recommended.[4] In low resource setting like ours a self-learning module was developed with step by step description and diagrams of mechanism and management of normal labour for training interns.

Assessment of use of self-learning module in training on normal labour for Obstetrics and Gynecology interns was conducted as an educational research project for award of fellowship in Medical Education at GSMC-FAIMER regional institute.

MATERIAL AND METHODS

A self-learning module on conducting the management of normal labour was developed, with step by step description, diagrams and illustrations. A questionnaire was formed to collect the response of the interns before and after exposure to the module. Module and questionnaire pre validation was done from subject experts and statistician. RAC and IEC clearance was obtained along with sensitization of the HOD and faculty members.

48 interns attending Obstetrics and Gynecology internship were enrolled voluntarily. The overall objectives and study design was explained. All interns gave their informed consent to participate.

Knowledge was assessed using a 30-question multiple-choice test, taken before the module (pre-test), and after the self-study module session (post-test).Satisfaction was evaluated by adding six questions to the post-test. A five-point Likert scale was used (1- totally disagree, 2- disagree, 3- no opinion, 4- agree,

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5- totally agree). Four questions centered on their' perception of learning: "It consolidated knowledge acquired in the theoretical class"; "I learnt something new"; "my perception of labour and delivery mechanisms improved"; "I was satisfied with the knowledge acquired". Question 5 centered on learners' feelings towards the prospect of facing real situations: "it diminished my anxiety and increased my confidence towards future attendance of childbirth". Question 6 was View about incorporation of this module in undergraduate medical teaching.

STATISTICAL ANALYSIS

Student t test was employed for statistical analysis, setting significance at $p < 0.05$. An association analysis by Pearson's Chi square test was conducted. Likert scores evaluating satisfaction were grouped into negative (totally disagree + disagree), no opinion, and positive (agree + totally agree).

RESULTS

48 interns attending Obstetrics and Gynecology internship attended the study. The 'Self Learning Module on Normal Labour' was acclaimed as a very practical and must have document for the labour room by the faculty.

No significant association was seen between the gender, future plans, and family background with the knowledge of the subject.12 Interns who had a desire to do post-graduation in

Figure-1: Graph distribution showing inclination of doing PG in Obstetrics and Gynecology.
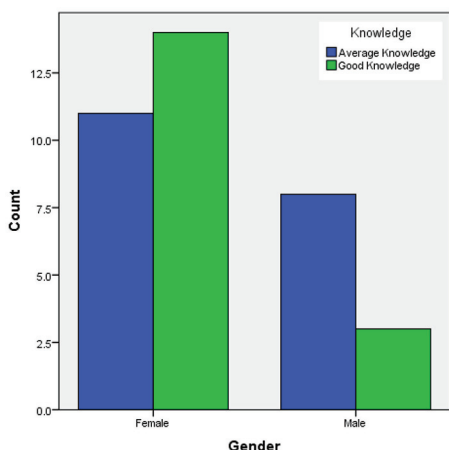
Figure-2: Gender distribution graph in participating interns

Obstetrics and Gynecology showed a significant association with the knowledge of the subject, with a mean score of 25.46. (P value < 0.001). Pre-test median scores were not significantly different in both groups (p=0.048).

A significant difference ($p < 0.001$) was seen in the Post intervention test score (mean 24.67± 1.75) when compared to the Pre intervention test score (mean20.78±2.620). Students' self-perception of the learning experience and feelings towards the prospect of facing real situations are listed in Table 2. Overall satisfaction was significantly higher in the group (p<0.0001)

DISCUSSION

In this study, reinforcement of knowledge by use of self-learning module showed a significant increase in knowledge. A significant difference was seen in the Post intervention test score (mean 24.67±1.75) when compared to the Pre intervention test score (mean 20.78±0.620), with statically significant p value < 0.001. No significant association was seen between the gender, future plans, and family background with the knowledge of the subject[6]

Similar evaluations have been published by the use of simulation training. As per the study of Jude D.C.[5] Fifteen students (88%) who received simulator experience felt that they were ready to attempt a vaginal delivery independently or with minimal supervision compared with 2 students (12.5%) who received a lecture only (P < 0.001).

Dayal AK[7] et al showed the overall delivery performance score was significantly higher in SIM (simulation), when compared with CON (control) group. They concluded Students who receive
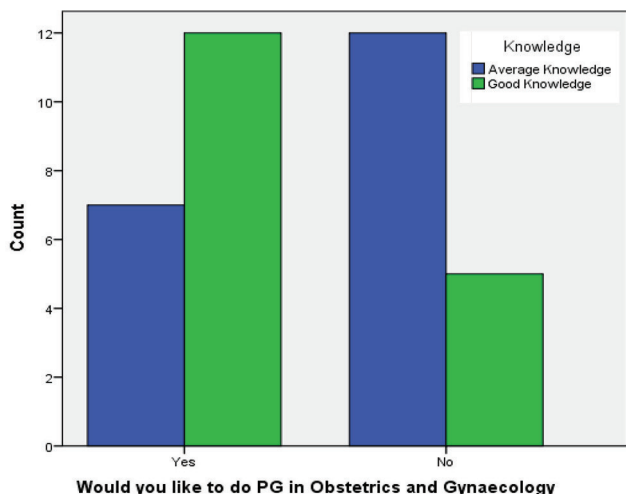
	Pretest	Posttest	
Control n =24	18.72(3.33)		
Study group n=24	20.77(2.62)	24.66(1.7)	P =0.001
Difference between groups	p =0.048		

Table-1: Control and Study group test median scores and inter-group and intragroup statistical analysis

Question	Simplified Likert score	control (24)	Test (24)	P value
1	Negative	20%	0	0.01
	No opinion	0	0	
	Positive	80%	100%	0.01
2	Negative	25%	0	0.004
	No opinion	0	0	
	Positive	75%	100%	0.004
3	Negative	46%	6%	0.001
	No opinion	6%	0	0.001
	Positive	48%	94%	0.001
4	Negative	65%	4%	0.001
	No opinion	8%	0	0.14
	Positive	27%	96%	0.001
5	Negative	38%	0	0.001
	No opinion	8%	0	0.14
	Positive	54%	100%	0.001
6	Negative	23%	0	0.008
	No opinion	0	0	
	Positive	77%	100%	0.008

Table-2: Satisfaction evaluation through proportion of a simplified Likerts score

simulation training participate more actively in the clinical environment during the course of the clerkship. Holmström SW[8] et al study compared with lecture-only students, simulation students scored significantly higher on their oral (P<0.004) and written examinations (P<0.009) 4 weeks after the intervention. As per Reynolds A[6] adding a simulator-based training session for medical students in management of labour and delivery to the theoretical class led to a higher short-term increase in knowledge and student satisfaction than attending a self-study session. Effectiveness of how to perform a spontaneous vaginal delivery (SVD) was studied by Christopher C. DeStephano[9] with high-fidelity birth simulator (Noelle; Gaumard Scientific, Coral Gables, FL) compared with a lower-cost, low-tech, birth simulator (Mama Natalie; Laerdal Medical, Stavanger, Norway) in teaching medical students showed equal effectiveness in results.

Simulation training is used as a new method for improving the management of acute obstetric emergencies.[10,11] like severe preeclampsia and shoulder dystocia,

In a low resource setting like ours where simulators are not available a self-learning module may work as an alternative teaching modality. Self-learning modules are in use in nursing education techniques. In a study by Simar Preet Kaur[12] it was concluded that written material provided in form of self-learning module helped the students to improve their knowledge.

Limitation

The limitation was the short duration of follow-up. Learning is a multi-step process involving acquisition, retention and retrieval and only the short-term implications of this process were evaluated on a small group of Interns.

CONCLUSION

There was evident increase in the knowledge scores in all the areas included in the study after administration of self-learning module. Interns desirable to do post-graduation in O and G showed increased association with the knowledge of the subject.

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