

Teaching-Learning Status of Emergency Care in Gynecology and Obstetrics in Undergraduate Medical Education of Bangladesh: Stakeholders' Views

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Abstract

Background: Emergency care is the heart of medical care. Medical professionals should learn emergency care properly for the sake of society. Our purpose was to identify stakeholders' views regarding the current teaching-learning status of emergency care in Gynecology and Obstetrics in undergraduate medical education of Bangladesh.

Methods: This cross-sectional study was conducted from July 2022 to June 2023 to identify the emergency care competencies that the medical students, interns and recent graduates were either acquiring or already have acquired. A self-administered semi-structured questionnaire with 6-point scale (0-5) was administered to collect data from conveniently selected 300 fifth year medical students, 321 interns, 308 recent graduates and 114 clinical teachers.

Results: The study revealed that out of the scales, the mean (%) of the respondents' views regarding on different issues of management of emergency care competencies were 2.59 to 3.86 (51.8% to 77.2%). This indicates there is need for tremendous efforts for the improvement of teaching-learning of emergency care in Gynecology and Obstetrics in Bangladesh.

Conclusion: Proper emergency care teaching-learning should be ensured to nurture competencies of graduate doctors in this fields.

Keywords: Emergency care, Teaching-learning, Medical Professional, Gynecology and Obstetrics, Undergraduate medical education of Bangladesh

Introduction

Emergency care is needed for every aspect of medical care. This is the crucial care which plays a great role during disease conditions, injury and acute illness. So, emergency care teaching-learning has a significant role on providing emergency management in critical situations (Kobusingye *et al.*, 2005).

Emergency conditions may occur from any situation. An obstetric complication can threaten both the mother's as well as fetal life. Rapid identification, time bound action and acceptable interventions will help to reduce morbidity, mortality and disability of the mother and new born (Kobusingye *et al.*, 2006). Integrated teaching-learning has already created the evidence-based effect on education. Medical students are now experiencing the real benefits of integration in different subjects and phases (Yadav *et al.*, 2016). It has been reported that among one hundred students, two thirds students assured that due to integrated teaching-learning they

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now have a clearer perception of clinical fields, and side by side through integration gaps are reduced in several subjects (Van der Veken et al., 2009). An expert hand has the impact on patient prognosis and survival. Without proper teaching-learning in emergency care, it is very difficult to be skilled in different emergency fields (Von Vopelius-Feldt et al., 2020). Proper decision making in emergency situation requires the learner to have proper guideline based emergency care education to ensure survival of the patient (Gunnarsson & Stomberg, 2009).

Methods

This cross-sectional study was conducted from July 2022 to June 2023 after getting approval from the Government Institutional Review Board (IRB) of Center for Medical Education (CME) of Bangladesh. Data was collected from conveniently selected respondents of eight medical colleges of Bangladesh, out of which four had government and four had non-government ownership. Of the eight medical colleges, four were located in Dhaka and four were located outside Dhaka. Total sample size was 1048.

Three comparable self-administered semi-structured questionnaires were used to collect data from the respondents: one for 114 clinical teachers, one for 308 recent graduates and another for 300 fifth year students and 321 interns. A 6 point (0-5) semantic differential scale was used to obtain the views of the respondents on different issues of emergency competencies. Competencies of interns and medical students were categories on the mean scores as follows 0= Nil, 1=Very minimum, 2=Minimum, 3=Average, 4=High, 5=Very High. Data were entered, processed and analyzed by using SPSS software program version 25.

Results

Table 1 details that out of 6-point scales (0 to 5) the mean scores of the agreement among clinical teachers, medical students, interns and recent medical graduates regarding competencies on pregnancy related bleeding disorders, ectopic pregnancy and retained placenta that student and interns were acquiring or recent graduates already acquired during their studentship and internship were within 2.91 to 3.42.

Table 1: Distribution of the respondents by their opinion regarding competencies on pregnancy related bleeding disorder (APH, IPH, PPH), ectopic pregnancy, retained placenta that students and interns were acquiring / recent graduates already acquired during the internship to provide initial care to the patients

Health problems	Respondents	Descriptive statistics			Inferential statistics		
		Mean	Std. Dev.		Statistic (t)	df	P value
Pregnancy related bleeding disorder (APH, IPH, PPH)	Teacher ¹	33 [¶]	3.39	1.171	1.337 [§]	331	.182
	Student ¹	390	2.91	1.512	-1.042 [§]	688	.298
	Interns ¹	274	3.37	1.176	2.994 [¥]	559.56	.003
	Recent graduate ²	300	3.03	1.499	Control group		
Ectopic pregnancy	Teacher ¹	33 [¶]	3.21	1.111	-.339 [§]	327	.735
	Student ¹	391	3.04	1.507	-2.288 [§]	685	.022
	Interns ¹	274	3.38	1.174	.815 [¥]	566.57	.416
	Recent graduate ²	296	3.29	1.335	Control group		
Retained placenta	Teacher ¹	32 [¶]	3.34	1.153	-.017 [§]	323	.986
	Student ¹	390	2.93	1.518	-3.715 [§]	681	.000
	Interns ¹	273	3.42	1.167	.641 [¥]	556.88	.522
	Recent graduate ²	293	3.35	1.405	Control group		

1. Clinical teachers, medical students and Interns viewed the competencies the student and interns were acquiring within their training.

2. Recent medical graduates viewed the competencies they had acquired.

¶: Only the teachers of the respective department participated in giving the views.

§: Regular independent t tests were done to compare means due to presence of insignificant difference between variances.

¥: Robust tests (Welch independent t tests) were done to compare means due to presence of significant difference between variance.

From table 02 it is observed that the out of 6-point scales (0 to 5) the mean scores of the agreement of the clinical teachers, medical students, interns and recent medical graduates regarding the competencies in eclampsia, pre-

eclampsia and emergency delivery that the students and interns were acquiring or recent graduates already acquired during their studentship and internship were within 2.64 to 3.62.

Table 2: Distribution of the respondents by their opinion regarding competencies on eclampsia, pre-eclampsia, emergency delivery that students and interns were acquiring / recent graduates already acquired during the internship to provide basic care to the patients

Health problems	Respondents	Descriptive statistics			Inferential statistics		
		Mean	Std. Dev.	Statistic (t)	df	P value	
Eclampsia	Teacher ¹	32 [¶]	3.41	1.073	-.042 [§]	325	.966
	Student ¹	393	3.01	1.514	-3.660 [§]	686	.000
	Interns ¹	274	3.62	1.070	1.932 [¥]	548.95	.054
	Recent graduate ²	295	3.42	1.387	Control group		
Pre-eclampsia	Teacher ¹	32 [¶]	3.28	1.114	-.909 [§]	324	.364
	Student ¹	393	3.01	1.539	-4.421 [§]	685	.000
	Interns ¹	271	3.57	1.106	.632 [¥]	557.115	.528
	Recent graduate ²	294	3.50	1.332	Control group		
Emergency Delivery	Teacher ¹	31 [¶]	3.13	1.310	-.810 [§]	325	.419
	Student ¹	392	2.64	1.656	-6.036 [¥]	675.003	.000
	Interns ¹	274	3.30	1.194	-.447 [¥]	562.97	.655
	Recent graduate ²	296	3.34	1.420	Control group		

1. Clinical teachers, medical students and Interns viewed competencies the student and interns were acquiring within their training.

2. Recent medical graduates viewed the competencies they had acquired.

¶: Only the teachers of the respective department participated in giving the views.

§: Regular independent t tests were done to compare means due to presence of insignificant difference between variances.

¥: Robust tests (Welch independent t tests) were done to compare means due to presence of significant difference between variance.

From table 03 it is observed that the out of 6-point scales (0 to 5) the mean scores of the agreement of the clinical teachers, medical students, interns and recent medical graduates regarding competencies on acute pelvic pain

and uterine sepsis that students and interns were acquiring or recent graduates already acquired during their studentship and internship were within 2.59 to 3.17.

Table 3: Distribution of the respondents by their opinion regarding competencies on acute pelvic pain and uterine sepsis that students and interns were acquiring / recent graduates already acquired during the internship to provide early diagnosis and referral to the patients

Health problems	Respondents	Descriptive statistics			Inferential statistics		
		N	Mean	Std. Dev.	Statistic (t)	df	p value
Acute pelvic pain	Teacher ¹	32 [¶]	2.97	1.177	-.793 [§]	324	.428
	Student ¹	389	2.63	1.530	-4.80 [¥]	663.903	.000
	Interns ¹	273	3.17	1.088	.018 [¥]	553.565	.986
	Recent graduate ²	294	3.17	1.356	Control group		
Uterine sepsis	Teacher ¹	31 [¶]	2.71	1.270	.045 [§]	322	.964
	Student ¹	392	2.59	1.699	-.833 [§]	683	.405
	Interns ¹	272	2.99	1.455	2.297 [¥]	562.585	.022
	Recent graduate ²	293	2.70	1.611	Control group		

1. Clinical teachers, medical students and Interns viewed the competencies the student and interns were acquiring within their training

2. Recent medical graduates viewed the competencies they had acquired.

¶: Only the teachers of the respective department participated in giving the views.

§: Regular independent t tests were done to compare means due to presence of insignificant difference between variances.

¥: Robust tests (Welch independent t tests) were done to compare means due to presence of significant difference between variance.

From table 04 it is observed that the out of 6-point scales (0 to 5), the mean scores of agreement among clinical teachers, interns and recent medical graduates regarding competencies on ECG interpretations,

common laboratory & radiological investigation interpretations that interns were acquiring or recent graduates already acquired during their internship were within 3.01 to 3.86.

Table 4: Distribution of the respondents by their opinion regarding competencies on ECG interpretations, common laboratory and radiological investigations interpretations that interns were acquiring / recent graduates already acquired during the internship to provide optimum care to the patients

Health problems	Respondents	Descriptive statistics			Inferential statistics		
		N	Mean	Std. Dev.	Statistic (t)	df	p value
ECG interpretation	Teacher ¹	100	3.01	1.133	-3.315 [¥]	214.413	.001
	Interns ¹	262	3.13	1.122	-3.160 [¥]	547.85	.002
	Recent graduate ²	296	3.48	1.435	Control group		
Common laboratory investigation ^Ω interpretation	Teacher ¹	103	3.56	1.016	-2.396 [§]	396	.017
	Interns ¹	261	3.49	1.058	-4.021 [§]	554	.000
	Recent graduate ²	295	3.86	1.126	Control group		
Common radiological investigation interpretation (X-ray, USG)	Teacher ¹	96	3.34	1.122	-2.251 [§]	381	.025
	Interns ¹	255	3.41	1.157	-2.423 [§]	540	.016
	Recent graduate ²	287	3.66	1.207	Control group		

1. Clinical teachers, Interns viewed the competencies interns were acquiring within their training

2. Recent medical graduates viewed the competencies they had acquired.

§: Regular independent t tests were done to compare means due to presence of insignificant difference between variances.

¥: Robust tests (Welch independent t tests) were done to compare means due to presence of significant difference between variance.

Ω: Common laboratory investigation = CBC, RBS, Serum electrolytes, LFT, RFT, Urine R/E, Blood and urine C/S

Discussion

From the present study out of 6- point scales (0-5) the mean scores of agreements of the respondents related to pregnancy related bleeding disorder (APH, IPH, PPH), ectopic pregnancy and retained placenta (Table 1) that the students and interns were acquiring and recent graduates already acquired by training during studentship and internship to provide initial care to the patients were within 2.91 to 3.42 (58.2% to 68.4%). A study in Australia found comparable results on medical student self-reported confidence in Obstetrics and Gynecology reported that during managing and history taking events of third trimester bleeding, post-partum hemorrhage, vaginal bleeding in late pregnancy and vaginal bleeding in early pregnancy were 73.3%, 81.9%, 84% and 88.3% respectively (Pieides *et al.*, 2013). Ericson *et al.*, (2008) conducted a study on medical students in Gynecology and Obstetrics Clerkship to establish priority

learning objectives found that students will be master after the end of clerkship if they achieved priority 1 objectives and it's obvious that the competency level of priority 1 was in advanced level. In priority 1 objectives they prioritize Ectopic pregnancy, spontaneous abortion and third trimester bleeding were remained in serial 14 and 16 respectively among 28 objectives.

In the study using same scales the mean scores of agreements of the respondents related to eclampsia, pre-eclampsia, emergency delivery (Table 2) that the students and interns were acquiring and recent graduates already acquired by training during studentship and internship to provide basic care to the patients were within 2.64 to 3.62 (52.8% to 72.4%). Pieides *et al.*, (2013) found almost similar results on their level of agreements on their confidence level during managing severe pre-eclampsia was 79.4%. Here, the researchers also used color code for

respondent's statement on agreed or strongly agreed. On the other hand considering the importance of pre- eclampsia and eclampsia management skills, Ericson *et al.*, (2008) priotize the clerkship skills on pre- eclampsia and eclampsia in serial 15 among 28 objectives.

In this study revealed that the mean scores of agreements of the respondents related to acute pelvic pain and uterine sepsis (Table 3) that the students and interns were acquiring and recent graduates already acquired by training during studentship and internship to provide early diagnosis and referral to the patients were within 2.59 to 3.17 (51.8% to 63.4%). Pieides *et al.*, (2013) report the result on their level of agreement that on history taking of acute abdominal/ pelvic pain in a young woman was 3.3%. Elzubeir and Rizk (2001) conducted a study on senior medical students to assess confidence and competence in Obstetrics and gynecology clerkship using an OSCE assessment tool, where it was found that after giving the OSCE, when they were asked to examine pelvis, confidence level was remarkably higher in females than males.

From the present study the mean scores of agreements of the respondents related to ECG interpretation, common laboratory investigation interpretation (CBC,RBS, Serum electrolytes , LFT,RFT, Urine R/E, Blood and urine C/S), common radiological investigation interpretation (X-ray, USG) (Table 4) that the interns were acquiring and recent graduates already acquired by training during internship to provide optimum care to the patients were within 3.01to 3.86 (60.2% to 77.2%). Schluter *et al.*, (2002) found that mean emergency skills competencies of GPs' on ECG rhythm recognition and diagnosis was 3.2 (80%) out of 4-point scale.

Conclusion

The study revealed that there is scope for improvement of emergency care teaching-learning in Gynecology and Obstetrics in undergraduate medical education of Bangladesh.

Conflicts of interest

None

Ethics approval

All authors hereby declare that data was collected after obtaining the ethical approval from government Institutional Review Board (IRB) of center for Medical Education (CME) of Bangladesh.

Acknowledgement

Authors are thankful to all the respondents who had given data considering their valuable time. Authors are also thankful to the administrator who had supported cordially to collect data from different teaching institutions of the country.

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