Original Article

STUDENT'S PERCEPTION OF LABOR ROOM LEARNING ENVIRONMENT

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ABSTRACT

Objective: To assess the quality of the labor room educational environment as perceived by the final year medical students and to explore students' justifications for rating the environment in a certain way.

Study Design: Mixed method sequential.

Place and Duration of Study: Sir Ganga Ram hospital Lahore, Pakistan from Nov 2011 to Oct 2012.

Participants and Methods: During stage 1, one hundred and fifty two final year students completed the modified post graduate environment measure (PHEEM) survey after completion of their maternity duty from November 2011 till October 2012 and Institutional Ethical Review Board's approval. Stage 2 involved semi-structured focus group discussions (FGD) for in depth enquiry to explore students' reasons for rating their learning environment in a certain way after ensuring confidentiality and anonymity to study participants.

Results: The mean overall score for labor room educational environment, as rated by students was 65.98, implying 47.8% satisfaction, indicating plenty of problems in learning environment. Mean total scores for autonomy, teaching and social support was 20.5, 28.9 and 16.5. Satisfaction with regard to autonomy, teaching and social support was 20.5/48 (42.7%), 28.9/56 (51.6%) and 16.5/32 (51.5%) respectively. The patterns that emerged from FGD were lack of teaching protocol, inappropriate supervision and feedback, enormous workload and unenthusiastic teachers. Skill learning, authentic real life experience and team work were motivating factors while poor accommodation, sanitation, catering facilities and humiliating attitude of paramedic staff were demotivating factors for learning.

Conclusion: Labor room rotation provides an excellent real time practical skill learning opportunity in an environment with plenty of problems. In order to make labor room duty a worthwhile learning experience, all detrimental aspects, as pointed out in this study, can be addressed to enhance students' learning.

Keywords: Labor room, Learning environment, PHEEM inventory, Supervision, Students' perceptions.

INTRODUCTION

Students' perception of their learning environment provides a useful basis for modification and improvement of its quality[1]. It is described as the "soul and spirit" predicting students' achievement, satisfaction and success[2].

Learning environment encompasses many important aspects, such as the quality of supervision, characteristic of teachers, facilities and atmosphere[3,4].

Researchers, over the years have tried to identify and quantify factors that constitute overall environment. The purpose is to measure the influence of each factor, compare it with the product and then improve the product with improving the climate[2,5].

Various techniques have been used to define and measure the learning environment like questionnaires, interviews and focus group discussions, exclusively designed for medical school environment[3,6]. Dundee Ready Education Environment Measure (DREEM) was developed by Roff et al as a 'culture-free' inventory to measure educational environment for the health professions[7].

One important component of educational experience is the clinical learning environment. Several Education Environment Measure (EEM) instruments and additional educational climate surveys such as PHEEM (Post Graduate Hospital Environment Measure) have been used by numerous investigators to specifically measure

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clinical learning environment[7,8]. Consensus on clear definition of learning climate is yet to be finalized and much remains to be explored about the clinical learning environment.

So far, Junaid et al[9] used DREEM to determine the perception of learning environment by medical students in Pakistan. Nevertheless, dearth of published evidence, in the local context, particularly related to clinical environment, urges more research in this area. Most importantly, students' in-depth perspective about labor ward learning environment is much needed yet least explored subject.

Labor room posting at Sir Ganga Ram Hospital Lahore provides a unique opportunity to final year students to work in clinical setting. Labor room caters to all high risk obstetrical emergencies, providing 24 hour services. The average number of patient admissions are 100 - 150 with 30 to 35 caesarian sections and similar number of vaginal deliveries round the clock. Labor room posting is very hectic and challenging for the students. They interact with clinicians, paramedics, patients and community.

Until now, systematic collection of data to evaluate this crucial learning environment, in order to identify factors promoting or hampering students' learning, has not been done in the local context. Hence, the aim of this study was to explore all such factors which affect the labor room learning environment and to look into possible ways of improving this environment on the basis of evidence generated.

PARTICIPANTS AND METHODS

This two stage mixed method sequential study was carried out at Sir Ganga Ram Hospital Lahore. It involved final year students undergoing obstetrics and gynaecology (OBGYN) training following approval from institutional ethical review board. Medical students' clinical rotation starts in 3rd year. The OBGYN ward posting in final year includes a 21-day compulsory maternity duty in labor room. A batch of 14 students is posted in labor room for three weeks. They are divided into two groups. Each group works for 12 hours per day as per duty roster either for day or night. They learn labor monitoring, immediate management of obstetrical emergencies, syntocinon regulations, conduction of normal deliveries and neonatal resuscitation.

Stage 1: The PHEEM questionnaire

Postgraduate Hospital Educational Environment Measure (PHEEM) is a validated 40-item questionnaire that measures perceptions of the clinical learning environment[8]. It contains items (using a 5-point scale) about feedback, facilities, and atmosphere. In this study PHEEM modified by Sri Lankan authors containing 34 items was used. It is customized and has demonstrated high internal consistency with Cronbach's alpha value of 0.84[10]. The survey consisted of 34 statements exploring 3 categories of the clinical learning environment namely autonomy (12 statements), teaching (14 statements) and social support (8 statements). Each of the 34 statements was rated on a 5 point agreement Likert scale (0 – Strongly disagree, 1 – Disagree, 2– Uncertain, 3 - Agree, 4 – Strongly agree). Inversion of rating was done for the negative statements as per PHEEM protocol. Maximum possible scores according to Sri-Lankan PHEEM are autonomy 48, teaching 56, social support 32 and overall 136. One hundred and fifty two final year students completed the modified PHEEM survey after completion of their maternity duty from November 2011 till October 2012. The context and process of filling the survey form was explained to the participants and a verbal informed consent was obtained. Anonymity was ensured, as students were not supposed to mention their names and they were instead given IDs (identification).

Stage II: Focus group discussion (FGD)

Stage 2 involved semi-structured FGD for in depth enquiry to explore students' reasons for rating their learning environment in a certain way.

Participants described their experiences, elaborated on various aspects of environment including learning opportunities, clinical staff behaviors and by using maximal variation sampling technique. Five students were invited to participate in FGD. Two had their maternity duty in the beginning, one in the middle and two at the end of final year training. All the

Table-1: Themes, trends and frequencies of student's perception of labor room learning environment.

Themes	Trends and word frequency	Comments
Perception of role autonomy	1.Learning protocol/(4) Orientation (8)	C1: I didn't know what I am supposed to learn. C2: I agree on having an orientation class before the start of maternity duty so, that we could know what exactly we have to expect from during the rotation and what are we suppose to do, because now the things go haphazardly we don't know what we are supposed to learn and expect. C3: I agree to A.B.C.D. we should have proper orientation in the beginning of maternity duty. C4: I expected there should be a roster what final year is supposed to do.
	2. Over worked (10)	C5: Because we were burdened we could not learn a lot in this short period. C6: I thought that we will be allotted 2 beds per day and we will follow them separately but in maternity duty we were burdened by some units with extra cases, so we could not follow one case. C7: There has to be a time table
Perception of teaching	1.Supervision (15)	C8: What I found was the lack of supervision and guidance C9: Learning was on our own C10: There should be someone to advise and give us the knowledge of what we are doing, we should have some supervisor. C11: In terms of supervision, if we have to manage the patient it's on us however we do. C12: Too much was left on my shoulders; I did not have any supervision. I had problems.
	2. Clinical learning opportunities(19)	C13: There is great learning environment about skills. C14: In terms of practical skill, I think the concept of having maternity duty is really good idea. C15: I can do vaginal delivery on my own now, I can stitch episiotomy, I know how to assist a C section, and I know how to manage most cases we see in emergency.
	3. Poor accessibility of seniors (6)	C16: I say that we had minimal interaction with our professors in maternity duties. I think the most interaction we had was with house officers with SRs C17: Agree with A that I did not see any professor during the maternity duties. We had most of our interaction with senior registrars and house officers. C18: I agree to ABC that we never see our professors during duties. I did not see any professor.
	4. Un enthusiastic teaching (5)	C19: Seniors were not really interested in teaching us. C20: If we want to have class we actually have to search them all over the labor floor in induction room and ICU arrange class then we call our colleagues and it takes half an hour then they take a class for 10 to 15 minutes.
Perception of social support	De motivating factors 1. Physical environment (26)	C21: In terms of duty room, we don't have any duty room/rest room C22: one of the biggest problems for us what happened. We were so exhausted and wanted to sit down for 10 minutes and we had no place to do so. C23: No hygienic conditions were in the toilet and there was also a big hole in the door of toilet so privacy was also an issue regarding washrooms I used to avoid using it until I reach back home. C24: There was no food for us. I used to bring from my home. My colleagues used to have chips or biscuits C25: We used to go to Doctor's cafeteria C26: With regards to duty hours if you are enjoying the work, if you are given appropriate place to sit, appropriate time to have food then these hours are good. But if you do not have any of these you would like to run after half an hour.
	2. Attitude (9)	C27: As far the paramedical staff, they were like hierarchy, and treated us as we were below them and I agree to B' that they bully us. C28: Aapas also used to make fun of us, like I have short hair, so they would call me a boy and sort of that. They had a bullying attitude towards us. C29: The paramedic staff is not cooperative at all.
	3. Inappropriate tasks (6)	C30: I didn't feel like a doctor or a student, more we felt like supportive staff. C31: All they were interested in was making us working like nurses and Appas. C32: I expected that I will cover all obstetric courses but it did not cover much at all. So my expectations went low during duty
	Motivating factors 1.Team work (5)	C33: Registrars were mostly helpful I don't have any complaints there at all C34: The house officer was very supportive some of them might have refused to but mostly they were fine. Senior registrars, they were fine
	2. Real life experience (10)	C35: I think that someone who wants to go in Gynae should have an experience of these duty hours as this is what it's like in practical life. C36: I think it's good to have exposure. I also feel that it is good that we knew that how the things are in real life. C37: And the colleagues who want to continue Gynae, it's a very good opportunity to know what it is like. C38: I will be able to practically experience everything and practically apply my theoretical knowledge.

participants were given pseudonyms for FGD to conceal their identities; and an informed written consent was obtained. FGD was conducted and moderated by a medical educationist with past experience in qualitative data collection. The moderator was unknown to the participants. Following questions were posed to the FGD participants:

What were your expectations in terms of acquiring knowledge, skills and attitude when you joined maternity duty?

Were your expectations fulfilled?

What is your opinion about the physical environment such as: duty room, work place, food and duty hours?

What can be done to motivate students and enhance learning during maternity duty?

Quantitative data analysis:

PHEEM questionnaire data was analyzed using SPSS version 16 and descriptive statistics such as frequencies, mean and standard deviation were calculated as displayed in (table-2)

Qualitative data analysis:

Participants' audio recorded conversations in FGD were reduced through verbatim transcription. Transcription notes were given to participants for verification of interpretation and modifications were done in accordance with their suggestions. Researcher A (first author) then color coded responses under each question and identified 3 major mutually exclusive themes, consistent with PHEEM ideology, encompassing gist of ideas representing similar perspective. These themes, patterns and transcribed FGDs were given to researcher B (2nd author) and C (3rd author) for critical review to look for plausibility and triangulation. Consensus was developed by addressing differences of opinion among all researchers as regards interpretations, themes and patterns representing similar chunks of data. It was followed by data display in matrices by placing themes and trends in a table and calculating their frequencies as they appeared in the text, represented in table-1. Triangulation of themes and trends was done with their respective frequency of quotes to confirm the accuracy of information presented to the readers (see table-1). Conclusions were drawn by adopting a constant iterative process by re-visiting research question, FGD questions, transcriptions and matrices by all researchers individually by putting each other's interpretations to the test of plausibility, sturdiness and confirmability[11].

RESULTS

Completed questionnaires were returned by 152 out of 200 final years medical students with a response rate of 76%. The mean overall score was 65.98 implying 47.8% satisfaction, indicating plenty of problems in the learning environment (see table-2). Mean total scores for autonomy, teaching and social support was 20.5, 28.9 and 16.5. Satisfaction with regard to autonomy, teaching and social support was 20.5/48 (42.7%), 28.9/56 (51.6%) and 16.5/32 (51.5%) respectively (table-3).

Thematic analysis:

The patterns that emerged were categorized under predetermined PHEEM themes (priori codes) namely: perception of role autonomy, perception of teaching and social support.

Perception of role autonomy:

Participants (students) expressed that a structured teaching and training program enables them to understand their role in the team. In addition, explicitly stated learning outcomes and strategy to achieve them facilitate both learners and supervisors. (Table-1: comment 1 and 4). Hence, an introductory class in the beginning should be mandatory to make students aware of what and how they are expected to learn. (Table 1: comment 2 and 3) The amount of work is an important determinant in learning. However, it was realized that stressed out students not only lose interest but would also be more prone to committing mistakes. (Table-1 comments 5, 6, 7).

Perception of teaching

Participants appreciated the significance of supervision in formal training programs.

Unsupervised learning leads to misconceptions frustration and disappointment. (Table-1: comment 8, 9, 10, 11 and 12).

Table-2: PHEEM (Post Graduate Hospital Environment Measure) questionnaire responses by 152 participants.

S. no	Questions for feed back	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree	Mean	SD
1	My Consultant sets clear standards to be achieved	22	53	26	40	11	1.9	1.17
2	I am able to allocate time for continuous medical education	47	51	19	30	5	1.3	1.19
3	I had an informative orientation session before maternity duty	56	57	18	21	0	1.0	1.02
4	I have the appropriate level of responsibility in this position	17	19	24	81	11	2.4	1.03
5	I have good clinical supervision	30	40	32	44	6	1.8	1.11
6	My working hours conform to the guidelines provided by the PMDC	18	23	43	57	11	2.1	1.06
7	I have to perform inappropriate tasks	56	50	16	24	6	1.2	1.19
8	There is an informative guideline book for work	69	44	15	17	7	1.0	1.19
9	My consultant/seniors have good communication skills	27	35	27	54	9	1.9	1.17
10	Teaching classes are interactive	20	27	24	69	12	2.2	1.16
11	There are clear protocols in the post	38	48	28	33	5	1.5	1.16
12	My consultant/seniors are enthusiastic	18	33	35	56	10	2.1	1.15
13	I have good collaboration with my co-house officers	20	35	20	64	13	2.1	1.08
14	I have suitable access to career guidance	49	45	22	32	4	1.3	1.92
15	This hospital has good quality accommodation for house officers, especially when on call	58	44	19	22	9	1.2	1.24
16	I get regular feedback from seniors	25	57	30	35	5	1.6	1.06
17	My seniors (HO ,Registrars) are well organized	17	36	26	59	14	2.1	1.16
18	I feel physically safe within the hospital environment/ward	7	5	14	89	37	2.9	0.91
19	I am blamed inappropriately by my consultant/seniors	28	39	26	43	16	1.9	1.24
20	There are adequate catering/canteen facilities in the hospital	23	28	17	63	21	2.2	1.26
21	I have enough clinical learning opportunities	20	30	22	70	10	2.1	1.16
22	My registrars have good teaching skills	12	15	29	82	14	2.5	0.99
23	I feel part of the team working here	20	30	22	67	13	2.1	1.20
24	I have opportunities to perform appropriate practical procedures	27	34	15	61	15	2.0	1.26
25	My seniors and consultants are accessible	16	36	19	63	18	2.2	1.17
26	My workload in this post is fine	42	45	17	39	9	1.5	1.27
27	My consultant is a good role model	19	18	25	70	20	2.4	1.15
28	I get a lot of enjoyment out of my present job	22	32	19	62	17	2.1	1.23
29	My consultant/seniors encourage me to be an independent learner	17	31	13	67	24	2.3	1.24
30	The consultant/seniors provide me with good feedback on my strengths and weaknesses	35	38	29	42	8	1.7	1.21
31	My consultant/seniors promote mutual respect among members of my unit	23	23	31	59	16	2.1	1.22
32	My consultant is up to date in knowledge	13	12	20	80	27	2.6	1.04
33	Labor room working gave me opportunity for research	53	50	26	21	2	1.2	1.06
34	The training in this post makes me feel ready to practice independently as a medical officer	43	27	24	39	19	1.8	1.40

Overall impression = 34 questions **Mean** = 65.9 (Plenty of problems)

Interpretation of obtained score according to PHEEM (Post Graduate Hospital Environment Measure) analysis:

0-34: very poor, 35-68: plenty of problems; 69-102: More positive than negative but room for improvement 103-136: Excellent

Question no 7and 19 are scored in reverse because of their negativity missing values are scored 2 for uncertain

and compromised patient management. Lack of supervision and inappropriate guidance generate

Effective labor room services require team comprising house officers, registrars, senior registrars, consultants, paramedics and support staff. Students become part of this team where clinical staff acts as supervisors, teachers and facilitators. In the absence of structured training program, clinical staff is not clear about their specific roles as teachers and supervisors (table-1 comment: 16) since senior faculty delivers lectures, students expect that labor room training will also be supervised by them. (Table-1: comment 17 and 18) Clear guidelines are required to avoid any miscommunication if junior faculty members are to be involved in clinical teaching (table-1: comment 19 and 20) Nevertheless, a busy labor room provides exceptional learning opportunity to hone one's clinical skills and thus should be availed. (Table-1: comment 13, 14 and 15)

Perception of social support

Participants pointed out that adequate facilities in the form of duty room, clean washroom, food and safety play an important role in learning and motivation. These basic human needs, if fulfilled can maximize learning. On the other hand, their absence promotes anxiety and can de-motivate them. (Table-1 comment: 21, 22, 23, 24, 25 and 26). Besides, bullying, humiliation and unfavorable attitude can all undermine learning as they shatter students' confidence and interest in learning. (Table-1: comment 27, 28, 29, 30 and 31). In addition, lack of structured training protocol and absence of any guide books pose more challenges to both learners and trainers, which must be looked into. (Table-1: comment 32)

Whereas, a supportive team positively influences motivation and helps in enhancing learning. (Table-1: comment 33 and 34) Labor room learning provides an opportunity to use theoretical knowledge in real life setting, which must not be wasted and should be used as a window of opportunity. This provides opportunity to students to be a part of clinical team and enables them to relate with their team through experience sharing. (Table-1: comment 35, 36, 37 and 38).

DISCUSSION

The aim of medical education is to produce physicians who can work competently in the future[12]. Besides, theoretical learning, practical training in a clinical setting is essential for undergraduate students. This implies adequate clinical exposure and opportunities to care for patients at undergraduate level[13]. Students encounter many challenges in clinical learning environment. The experience that a medical student gains during clinical attachments in general was found to have a significant impact on selection of the specialty as a career[14]. The OBGYN clerkship has been rated the worst overall educational experience in medical school[15]. Whitten and Higham[13] reported that 25% of undergraduate British students are discouraged by the working conditions and tensions in the labor ward consequently resulting in negative experiences that put off students.

This study suggests that more than two third of our students according to PHEEM survey consider that maternity duty provides an excellent practical, real life learning experience. Same emerged from focus group discussion. This learning opportunity becomes a negative experience due to lack of formal orientation sessions, scarce supervision and teaching facilities. Moreover, hostile attitude of clinical team and inadequate facilities for food and duty room further deteriorate learning. The overall score obtained on PHEEM questionnaire was 65.9 indicating plenty of problems. All these major issues pointed out by the students in our study regarding labor room learning environment conform closely with published evidence in this context.

The ultimate aim of undergraduate learning in the labor room is to give sufficient exposure to medical students in obstetric patient management. This requires existence of an organized and structured program/guide book for the learners as well as for the clinical team

working in the labor room. FGDs highlighted lack of orientation sessions and non-existent structured program as key issues, negatively influencing learning. A mean score of less than 2 on questions pertaining to orientation and learning protocol indicate poor planning and organization of learning during maternity duty.

Students perceived that they were over burdened and duration of maternity duty and working hours were beyond human capacity. Due to tiredness and sleep deprivation they could not avail learning opportunities leading to suboptimal participation in clinical activities. Longer working hours amongst undergraduate students in OBGYN were associated with lower clerkship ratings, an increase in academically unproductive (scut) work, reluctance to consider surgical specialties as a career and deterioration in mental health[16-18].

Our students felt that lack of appropriate supervision affected their learning. The mean score of less than 2 on questions concerning supervision reflects dissatisfaction of students on supervision and feedback. Effective supervision is a key to success in clerkships. Kilminister and Jolly defined supervision as the provision of regular monitoring and guidance besides timely and specific feedback on matters of personal, professional and educational development in a clinical context[4]. Our findings from FGD suggest that labor room supervision and feedback were mostly provided by house officers and registrars, who were junior team members with limited experience and no formal training. A mean score of less than 2 regarding feedback and supervision from survey further highlights the need to improve the situation. This confirms findings from a study by Scott et al[19] who reported that most of the time supervision was not based on direct observation and apparently inferred from vicarious sources of information. According to students perspective observation and constructive feedback are key features of effective clinical learning experiences[20]. Feedback underscores the significance of assessment for learning rather than assessment of learning and encourages students to reflect thus making any educational activity more valuable.

Clinical learning occurs in the fast paced and dynamic environment, with clinicians-teachers struggling to handle dual roles of care providers and teachers[21]. Results of our study asserted suboptimal teaching by registrars, emerging as the factor contributing significantly to the opinion that labor ward teaching was inadequate. The mean score of 28.9 for perception of teaching also indicates need of retraining. The quality and attitude of staff towards teaching was further highlighted with an expression of dissatisfaction in focus group discussion. The quality of teaching during clinical clerkships is an important factor that enhances learning and examination performance[22]. No matter, our students are expected to be taught and supervised by senior consultants but the ground reality is that the senior most team members available on floor happens to be senior registrars, with much less teaching experience resulting in dissatisfaction at students' end. Lack of motivation for teaching among staff and negative attitude towards students and poor organization of students' time may be due to their competing responsibilities towards students and patients as explained by Deketelaere et al[22]. However, faculty training can address all such issues, ensuring students satisfaction[6].

The most basic set of human needs are physiological. Human beings strive to achieve a state of homeostasis, which consists of physiological stability and psychological consistency[23]. Eating, drinking, sleeping, and other activities maintain physical homeostasis, and are considered to be the most basic and extrinsic motivator of human behaviors followed by safety and social bonding. Our student's response in regards to assessment of basic facilities available in the labor room environment was discouraging. They labeled it as "not a pleasant place to work". FGD further highlighted absence of duty room, insufficient time-out for refreshment, bullying and humiliation by paramedical staff and allocation of inappropriate

tasks as major deterrents to effective learning. The problems perceived by our students were remarkably similar to those reported by others[25]. tasks (e.g. porter work, getting food, shifting patients etc). Various issues raised in our study have been identified previously as sources of

Table-3: Mean of three components of PHEEM (Post Graduate Hospital Environment Measure) by the participants.

1: Perception of role autonomy: Questions = 12

No	Questions	n = 152	Mean
3	I had an informative orientation program		1.0526
4	I have the appropriate level of responsibility in this position		2.4079
6	My working hours conform to the guidelines provided by the PMDC		2.1974
7	I have to perform inappropriate tasks		1.2105
8	There is an informative guideline book for work instead		1.0329
11	There are clear protocols in the post		1.5329
23	I feel part of the team working here		2.164
24	I have opportunities to perform appropriate practical procedures		2.0855
26	My workload in this post is fine		1.5789
31	My consultant/seniors promote mutual respect among members of my unit		2.1842
33	Labor room working gave me opportunity for research		1.2566
34	The training in this post makes me feel ready to practice independently as a medical officer		1.8026
	Cumulative Mean		20.5 A negative view of one's role

PHEEM (Post Graduate Hospital Environment Measure) interpretation for perception of role autonomy by the participants:
0-14 Very poor, 15-28 a negative view of one's role, 29-42 A more positive perception of one's job, 43-56 Excellent perception of one's job

2: Perception of teaching: Questions = 14

No.	Questions	n = 152	Mean
1	My consultant sets clear standards to be achieved		1.9
2	I am able to allocate time for continuous medical education		1.3
5	I have good clinical supervision		1.8
9	My consultant/seniors have good communication		1.9
10	Teaching classes are interactive		2.2
12	My consultant/seniors are enthusiastic		2.1
17	I get regular feedback from seniors		1.6
18	My seniors (HO, Registrars) are well organized		2.1
21	I have enough clinical learning opportunities		2.1
22	My registrars have good teaching skills		2.5
25	My seniors and consultants are accessible		2.2
29	My consultant/seniors encourage me to be an independent learner		2.3
30	The consultant/seniors provide me with good feedback on my strengths and weaknesses		1.7
32	My consultant is up to date in knowledge		2.6
	Cumulative mean		28.9, In need of some retraining

Interpretation of PHEEM (Post Graduate Hospital Environment Measure) perception of teaching by the faculty: 0-15: very poor quality. 16-30: In need of some retraining, 31-45: moving in right direction, 46-60: model teachers

3: Perception of social support by the participants: 8

No.	Questions	n = 152	Mean
13	I have good collaboration with my co-house officers		2.1
14	I have suitable access to career guidance		1.3
15	This hospital has good quality accommodation for house officers, especially when on call		1.2
18	I feel physically safe within the hospital environment/ward		1.9
19	I'am blamed inappropriately by my consultant/seniors		2.2
20	There are adequate catering/canteen facilities in the hospital		2.2
27	My consultant is a good role model		2.4
	I get a lot of enjoyment out of my present job		2.1
	Cumulative mean		16.5, Not a pleasant place

Interpretation of PHEEM (Post Graduate Hospital Environment Measure) for perception of social support:
0-11: nonexistent, 12-22: not a pleasant place, 23-33: more pros than cons, 34-44: good supportive

These include verbal abuse, institutional abuse (e.g. excessive workload, including unnecessary scut work) and the assignment of inappropriate stress. These include academic pressure, workload, sleep deprivation and student abuse[25].

In short, clinical rotations are believed to be of crucial importance to medical students as they provide unmatched opportunities for skill learning, knowledge application, patient interaction and exposure to real life situations. Conducive learning environment can take this learning to a different level with worthwhile results.

Strengths and weaknesses of the study

The majority (76%) of questionnaires distributed were returned. Triangulation was used for confirmation of results using mixed method approach. Themes identified for qualitative analysis on the basis of PHEEM questionnaire remained unchanged as no new patterns beyond pre-determined themes emerged, which validates both findings.

While our findings are clearly not generalizable, they provide insight into the perceptions of undergraduate students about the factors promoting or hindering learning opportunities in a labor room in a developing country, where extraordinary patient turn-over is further complicated by deficient resources. We are unaware of similar publications in the literature.

Limited time frame and sampling from a single institution and lack of clinical staff's perspective regarding educational environment at the Gynaecology unit are some of the limitations of this study and require further data collection for more comprehensive conclusion drawing.

Students' perspective remained same both in Survey and FGD as highlighted in the discussion portion, validating findings from both sources.

CONCLUSION

The friction between the need for service delivery and the structured learning of medical students are evident in the labor room. These experiences affect students' learning during maternity duty negatively. Their major concerns are similar to those reported in the literature. Whereas, problems with the poor organization, lack of guidance, supervision and inadequate teaching by junior faculty members remained as the most significant problems. Nevertheless, interaction with patients, encountering myriad situations and practical skill learning were perceived as the most beneficial aspect of maternity duty. It is therefore necessary that a well organized learning program with explicitly defined training goals should be introduced and students as well as clinical faculty must also be appropriately sensitized to it.

An encouraging aspect of the study was that the all participants of focus group were confident about their clinical skills to manage normal pregnancy and labor as well as obstetric emergencies, despite reservations about quality of supervision and teaching.

Conflict of interest: Authors alone are responsible for reporting these findings and have no conflict of interest.

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