ORIGINAL ARTICLE

Feedforward Interview Technique in Obstetrics and Gynaecology Residents: A Fact or Fallacy

Shehla Sami[1] and Amina Ahmad[2]

Abstract

Objective: To determine the role of Feedforward Interview (FFI) technique in motivating residents of Obstetrics and Gynaecology for better learning and performance.

Study Design: An explorative study with mixed method approach being employed.

Place and Duration of Study: Department of Obstetrics and Gynaecology, Sandeman (Provincial) Hospital, Quetta, from November 2010 till May 2013.

Methodology: Feedforward interview technique was complimented by survey questionnaire employing similar philosophy of FFI to triangulate data through two methods. Survey questionnaire was filled-up by 21 residents and analysed by SPSS version 17. Fourteen of these participants were identified for in-depth Feedforward Interviews (FFI), based on non-probability purposive sampling after informed consent, and content analysis was done.

Results: Feedforward interview technique enabled majority of residents in recalling minimum of 3 positive experiences, mainly related to surgical experiences, which enhanced their motivation to aspire for further improvement in this area. Hard work was the main personal contributing factor both in FFI and survey. In addition to identifying clinical experiences enhancing desire to learn, residents also reported need for more academic support as an important factor which could also boost motivation to attain better performance.

Conclusion: Feedforward interview technique not only helps residents in recalling positive learning experiences during their training but it also has a significant influence on developing insight about one's performance and motivating residents to achieve higher academic goals.

Key Words: *Feedforward interviews. Obstetrics and Gynaecology. Residents. Feedback. Motivation.*

INTRODUCTION

In more than one-third of cases, feedback actually lowered subsequent performance, making it a double-edged sword.[1] Besides, formal and structured feedback has been found missing in clinical training by physicians.[2-5] Various reasons have been cited as barriers in provision of feedback by the trainers and trainees, including time constraints for direct observations, lack of faculty development in planned feedback sessions, and treating trainees as passive recipients for feedback information.[6] Moreover, the trainers, regardless of number of years as trainers, report general discomfort in giving negative or difficult feedback.[7] Furthermore, negative feedback and hospital culture have been found as main impediments to performance improvement and learning in hospital clinical settings.[8] To overcome the pitfalls of feedback provision, the questions are the goals, the progress being made and the activities needed to acquire better progress. These questions correspond to notions of feed-up, feed-back, and feed-forward respectively.[9]

Individuals tend to reject negative feedback that differs from their own self-perceptions and leads to deterioration in performance.[7,9] This is perceived to threaten their self-image and confidence.[5] Such a threat to self-esteem and debilitation of recipient by negative feedback occurs by eliciting prevention (defensive and threatening) regulatory focus, based on situational regulatory theory.[10,11] Consequently, negative feedback contributes to motivation and improved performance under the prevention focus, which deals with vigilance and is linked with punishment.[10] Conversely, positive feedback enhances motivation and performance under promotion focus, which is associated with eagerness and rewards. The premise of feedback is the creation of discrepancy between preferred standards and the actual performance.

Feedforward Interview (FFI) is an alternative learning mechanism through self-reflection, with modification of appreciative inquiry theory.[10] It enables a discrepancy between goal of performance and actual performance by relying on the metacognition of the learner.[11] Other researchers have outlined the theoretical background of FFI, where self-reflection on an 'aha moment' triggers integration of internal standards and performance information, and serving as a catalyst for change.[11,12] FFI technique could enhance the impact of feedback in clinical environment, as this is based on trainee's

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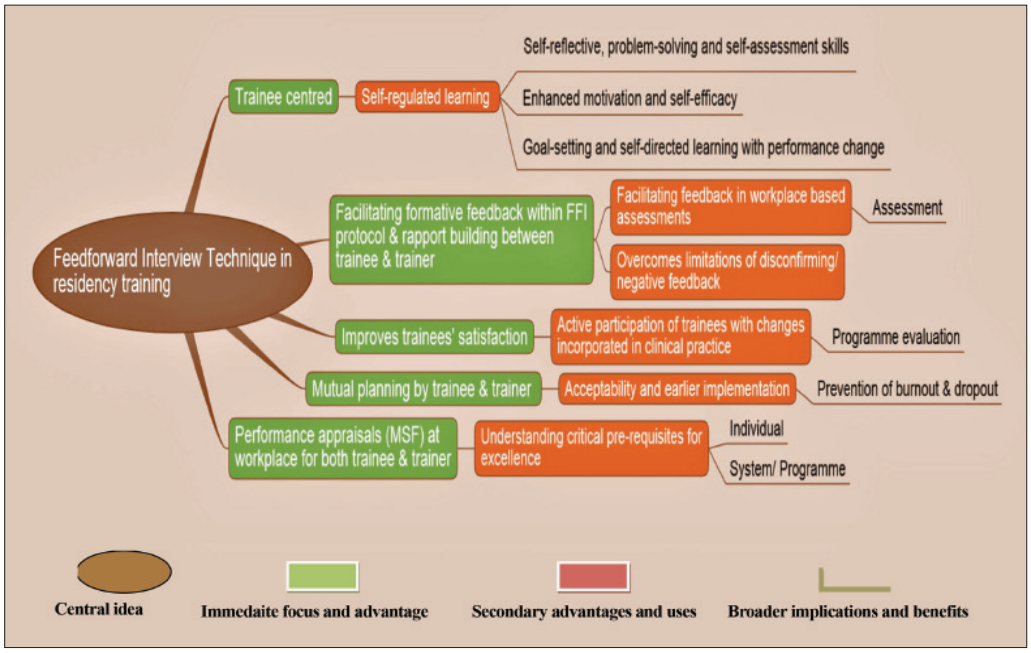

Figure 1: Theoretical advantages of feedforward interview technique in clinical learning and training.

positive experiences in workplace which boost happiness and satisfaction at work.[10,12] An illustrative concept of FFI technique and its advantages in clinical learning and performance are given in Figure 1, to test the usefulness of innovative and discursive FFI technique in clinical education environment.

This study was conducted to determine the role of feedforward interview technique in motivating residents of Obstetrics and Gynaecology for better learning and performance.

METHODOLOGY

It was an explorative study employing mixed method design.[13] FFI technique was complimented by a survey questionnaire employing similar philosophy of FFI in order to triangulate information collected through two methods for finding out which of the learning experiences in Obstetrics and Gynaecology residency programme were positive and how they helped in motivating learners in better learning and performance.

This study was conducted at the Department of Obstetrics and Gynaecology, Sandeman (Provincial) Hospital, Quetta, Balochistan, Pakistan, from November 2010 till May 2013.

Twenty-one postgraduate trainees, who were already registered for training at the initiation of study, were enrolled in this study. Participants were registered with three different accredited trainers (supervisors) of CPSP of the same Department, excluding those of the first researcher (SS*), thus mitigating researcher's bias. Besides, being a part of the same Obstetrics and Gynaecology Department, researcher SS* was not regarded as an 'outsider' by the trainees for sharing their positive experiences. Selection bias was avoided by including interviewees from different residency years, and those registered with different trainers. All those residents whose training was uninterrupted by significant gaps of more than 3 months were enrolled, with a pre-requisite of acquiring an informed consent.

Mixed method approach was used to overcome any single method research bias.[14] FFI technique was complimented by survey questionnaire employing similar philosophy of FFI to triangulate data through two methods. This was done using corresponding tools that is FFI protocol for interviews (Table I) and survey questionnaire (Table II).

For in-depth albeit semi-structured FFI was purposeful to include those participants who had at least one year residency experience. This criterion for sampling was considered to elucidate (positive) clinical experiences from the participants, detailed orientation on their learning and working needs, besides awareness of the existing workload and competency standards of the postgraduate programme. As a result, this led to non-probability purposive sampling of 14 residents for conducting FFI; yielding 6 residents from year 4, 4 from year 3, 4 from year 2 of residency. The average time required to conduct a FFI was 30 minutes per participant.

Confidentiality of participants was guaranteed and anonymity of participants was ensured as they were not required to write their names in the survey questionnaire and both types of raw data was handled by the principal researcher herself. The proposal was submitted and permission was sought from the Administrative Head of the Department, in view of non-existent ethical review board. Furthermore, the study followed the principles in Declaration of Helsinki.

Qualitative data was reduced through transcriptions of audio recordings of FFI by researcher SS* and was given to the participants (member-checking) to confirm the authenticity of interpretations and trustworthiness.[15] Similar viewpoints were grouped under one theme representing gist of the ideas, leading to identification of major themes. These were supported by comments verbatim of participants to present 'Lebenswelt' or the essence of account,[15] which also depicted the plausibility of inferences drawn by researcher SS*. To verify conclusions drawn from the data, the second researcher (AA**) matched transcriptions with audio-recordings, reviewed themes, and cross-checked coding and conclusions drawn by the first researcher to address

Table I: Content analysis of feedforward interview technique.

FFI protocol	Key ideas / subthemes	Verbatim narratives	Content analysis: frequency of responses (%)
Theme-I. Positive experiences:			
1. How many positive experiences do you consider important in your OBGYN* working that had significant impact on your performance?	Number of positive experience(s)	"There were numerous experiences which made me happy and satisfied in the last 3 years. Whenever I face a similar clinical situation, I tend to unconsciously recall the 'positive' experience and that really motivates me to do better." (Participant 1A1-1)	3 or more positive experiences= 10 out of 14 (71.4)
2. Which was the most significant positive experience in making you happy/ motivated at work?	Types of positive experiences	"It was my first surgery unsupervised. The case was a difficult one and I took it as a challenge. Later, I also chipped-in financially and helped arrange blood for transfusion in recovery of patient. Even after discharge I followed-up her case and was very happy when patient hugged me and said thank you." (Participant 1A3-2)	Equally distributed were care and surgery-related experiences (42% each)
3. Why did you find it an important experience and how did it make you happy?	Reason(s) of positive impact by the experience	"The lady had no child alive. It was again a complicated pregnancy. When I handed her the newborn baby, and she cried with happiness and started praying for me immediately, I was really touched and felt happy." (Participant 1B1-3)	Patients' recovery-related positive impacts were predominant= 6 out of 14 (42.8)
4. Would you like to share the details of one such experience?			
5. Was your happiness/ satisfaction result-oriented or were you satisfied with the efforts put-in by you, regardless of the result/ outcome of the case? Please explain why.	Goal of positive experience	"The patient came in shock. I helped in her resuscitation, and later operated upon her. I was most satisfied when patient opened her eyes and talked to me postoperatively. Then, I felt relieved despite the seriousness of her condition." (Participant 1C2-4)	Cure was main goal during the positive experiences= 8 out of 14 (57)
6. Can you describe your psychological response(s) to that experience such as happiness, satisfaction, anxiety, frustration etc?	Psychological responses during positive experience	"I can never recall any day in my postgraduate training when I did not feel rush of anxiety on arrival of a serious patient. On some instances, my inability to provide an ideal management causes frustration in me. However, when I look back, such spontaneous cynical feelings are ultimately replaced by sense of achievement as my seniors have always been reassuring in all such situations." (Participant 1A4-5)	Frustration and anxiety=10 out of 14 (71.4)
7. Can you describe your physiological response(s) to that experience such as exhaustion, fatigue, depression, relaxed, comfortable, fresh/ energised etc?	Physiological responses during positive experience	"It was the encouragement of all my team in the operation theatre which enabled me to achieve the desired good outcome. The satisfaction shared by us was the reason of forgetting our physical fatigue." (Participant 1B4-5)	Exhaustion and fatigue were the main responses= 8 out of 14 (57)
8. Which major factor contributed towards the occurrence of this event (motivation, inspiration, hard work etc)?	Major personal contributing factor(s)	"I always try to work hard, regardless of patient or case outcome. If the outcome is cure and health, then it becomes as an icing on the cake." (Participant 1C4-6)	Hard work was identified as major personal factor= 8 out of 14 (57)
9. To what extent were you helped/ supported by the team-members (peers/ related staff) that allowed this event/ occurrence to happen (extrinsic motivation, mentoring, early and accessible guidance and support etc)?	Major external contributing factor(s)	"I was given permission to operate a patient with previous four Caesarean Sections. This was my first time. The senior on-call was present but entrusted and supervised me, instead of doing it herself. It not only enhanced my confidence in surgical skills but also increased my motivation to learn more." (Participant 1C1-6)	Equal contribution by peers, senior attending doctors and paramedical staff=8 out of 14 (57)
10. What were the circumstances in the Unit/ organisation that allowed this event/ occurrence to occur (free of restrictions at work, relaxed duty roster, new management, protocols adherence in patients' care, better time-management, more facilities etc)?		"At that time, our (trainees') duty hours were the same but rotation was after a couple of days. I found time to recover my energy, study previously dealt cases and be ready to struggle with new enthusiasm again." (Participant 1A5-6)	Relaxed duty roster (less duty hours) and restriction-free working environment were major external contributing factors=8 out of 14 (57)
Theme-II. Interviewees' reflection on their learning opportunities:			
What are your own needs, which if addressed, can improve quality of your training?	Personal learning needs	"We never seem to have any time for academic teaching. How am I supposed to get an encouragement to learn more if nobody has time for discussing evidence-based literature?" (Participant 2A6-1)	More academic learning with closer supervision (by all trainees)
Theme-III. Information about distance from expected standards:			
1. To what extent does the prevailing working environment enable you to be happy/ satisfied at work?	Reasons of demotivation	"Did you see our duty room and labour room now? Well, we try to produce our best under these conditions. If provided with more facilities for our refreshment and equipment for patient care, I think we may do wonders!" (Participant 3A2-1)	Less satisfied with clinical working and academic environment=10 out of 14 (71.4)
2. To what extent does your current behaviour/personal limitation cause hindrance/ dissatisfaction in the performance of your duties?		"I am fed up with my sleeping habits, as I never seem to have enough sleep to allow me to invest time for any other professional activity, besides routine duties." (Participant 3C4-4)	Predominantly personal habits=8 out of 14 (57)
3. Suggest measures/ steps for improvement in working environment that will assist you in future to perform even more efficiently in OBGYN*.	Plans to achieve higher standards	"Though I can enlist many…importantly we need better relaxation and refreshment facilities in our duty room, besides protective and safe working environment. Moreover, closer supervision and more academic teaching sessions are needed for professional improvement. Also, more patient-care facilities will enable better quality of care." (Participant 4B6-3)	Patient-care related equipment, academic teaching sessions and doctors' relaxation facilities=8 out of 14 (57)
4. What are your immediate future plans about your profession?		"Of course my immediate aim is to pass the diploma examination. After all, I will not be able to practice and manage independently unless I am duly qualified." (Participant 3C3-3)	Passing of examination=12 out of 14 (85.7)

** Obstetrics and Gynaecology; (%) Percentages*

Table II: Quantitative data analysis: Feedforward technique questionnaire (total n*=21).

Statements	Strongly agree		Agree		Undecided		Disagree		Strongly disagree	
	n	%	n	%	n	%	n	%	n	%
1. Encountered positive experiences in OBGYN† as a resident	6	28.5	10	47.6	1	4.7	3	14.2	1	4.7
2. Positive experiences with significant impact on current work	7	33.3	8	38	3	14.2	2	9.5	1	4.7
3. Procedure/ surgery-related positive experiences	4	19	14	66.6	1	4.7	1	4.7	1	4.7
4. Patients' care-related positive experiences	5	23.8	4	19	3	14.2	7	33.3	2	9.5
5. Efforts derived satisfaction, regardless of outcome	5	23.8	14	66.6	2	9.5	0	0	0	0
6. Case/ patient's result-oriented satisfaction	8	38	8	38	2	9.5	3	14.2	0	0
7. Happiness and satisfaction during positive experience	3	14.2	7	33.3	3	14.2	6	28.5	2	9.5
8. Anxiety and frustration as main psychological responses	3	14.2	9	42.8	3	14.2	5	23.8	1	4.7
9. Fatigue and exhaustion as the main physiological responses	2	9.5	12	57	0	0	5	23.8	2	9.5
10. Relaxed and comfortable state during positive experience	1	4.7	7	33.3	1	4.7	9	42.8	3	14.2
11. Internal/ innate desire to work hard as main personal factor	8	38	10	47.6	2	9.5	1	4.7	0	0
12. Encouragement, supervision and guidance as external factors	6	28.5	5	23.8	1	4.7	7	33.3	2	9.5
13. Significant degree of team-work involved in positive experiences	4	19	8	38	3	14.2	4	19	2	9.5
14. Easily accessible and available supervision & assistance	1	4.7	11	52.3	2	9.5	6	28.5	1	4.7
15. Happy and satisfied peers / related clinical team-members	6	28.5	9	42.8	2	9.5	4	19	0	0
16. Exhausted and fatigued peers / related clinical team-members	2	9.5	10	47.6	3	14.2	5	23.8	1	4.7
17. Academic teaching and supervised training were major contributors	0	0	3	14.2	2	9.5	13	61.9	3	14.2
18. Management/ administrative changes were mainly responsible	0	0	4	19	4	19	7	33.3	6	28.5
19. Provision of more facilities for patients as the main contributor	1	4.7	5	23.8	1	4.7	13	61.9	2	9.5
20. Duty roster changes / more time availability were responsible	1	4.7	4	19	4	19	11	52.3	1	4.7
21. Clinical skills and learning needs are being adequately met now	1	4.7	1	4.7	3	14.2	13	61.9	3	14.2
22. Communication skills are routinely supervised with patients and working staff	1	4.7	2	9.5	4	19	8	38	6	28.5
23. Satisfaction and happiness with existing working environment	3	14.2	6	28.5	3	14.2	6	28.5	3	14.2
24. Need of improvements and resources to enhance performance and learning	13	61.9	7	33.3	1	4.7	0	0	0	0
25. No discrimination by the seniors in supervision of residents	1	4.7	2	9.5	3	14.2	11	52.3	4	19
26. Personal habits causing hindrance in professional growth	3	14.2	9	42.8	5	23.8	3	14.2	1	4.7
27. Family and personal responsibilities as impeding factors	1	4.7	5	23.8	6	28.5	7	33.3	2	9.5
28. Academically strong and competent clinician as professional goal	6	28.5	12	57	1	4.7	1	4.7	0	0
29. Quite far from achieving professional goals in the near future	5	23.8	6	28.5	3	14.2	6	28.5	1	4.7
30. Personal contributing factors present as hard work and motivation	4	19	14	66.6	1	4.7	2	9.5	0	0
31. Feedback provided before on learning or performance	0	0	3	14.2	3	14.2	11	52.3	4	19

** Numbers; † Obstetrics and Gynaecology; % Percentage.*

triangulation. Final inferences were drawn by subjecting analysis to checks of confirmability, trustworthiness and authenticity.[16]

The survey (quantitative data) questionnaire was prepared by researcher SS*, considering the FFI's open-ended questions, to counter-check the authenticity of responses. It was revised and imprecise and ambiguous items were modified by the second researcher (AA**) for ease of residents' understanding and aligning it in context of FFI protocol. Likert agreement scale was used to rate the residents' responses from 1-5 (1=strongly disagree to 5=strongly agree). Questionnaires were mailed (with prepaid envelope) to all the 21 trainees, with two reminders being sent to non-responders over a time period of 9 months. The returned questionnaires were scrutinised for any missing responses. Quantitative data was analysed through Statistical Package for Social Sciences, version 17 (SPSS, Chicago, IL, USA) for calculating descriptive statistics such as frequencies and percentages.

RESULTS

The response rate for the survey questionnaire was 100%, without any missing values. Three major themes were identified through content analysis and nine sub-themes.

Positive experiences were considered as those experiences that made trainees satisfied, happy and motivated in clinical working environment. The positive experiences were further explored and categorization done into following six subthemes by thematic analysis. These included types of positive experiences, reasons of positive impact, goal of positive experience, psychological and physiological responses and major contributing factors. The verbatim narratives of each subtheme have been quoted in Table I.

An interesting observation during this study was that all those trainees who had been a part of the FFI research study, were significantly cognizant of their 'positive emotions' while managing even the challenging clinical cases.

Within the trainee's self-reflection on learning opportunities theme, the main subtheme identified was the personal learning needs, which has been highlighted in Table I, along with the verbatim narrative of a trainee.

Regarding the distance from expected standard theme, the two subthemes that were identified included reasons of demotivation and the plans to achieve higher standards. These have been given in Table I along with verbatim narratives of trainees. Approximately more than half of the trainees considered themselves quite far from achieving their professional goal and competencies expected from them in that specific residency year.

An eye-opener for the authors was the lack of feedback provision at workplace, revealed in both FFI and survey.

DISCUSSION

FFI is a relatively innovative educational tool for facilitating self-reflection and in helping trainees verbalise conditions that elicit their better performance and in improving learning through identification of desirable standards in one's own performance. This study reports similar finding as trainees considered FFI as a very useful technique to reflect and recall positive experiences, which made them happy and satisfied at work. This technique not only raised their self-esteem but also motivated them to achieve similar results in future as well.

Commencement of FFI from the positive experiences encountered by trainees and their elaboration makes trainees acquire a habit of self-reflection. More trainees identified positive experiences to be surgery-related in survey (cumulative percentage of strongly agree and agree: 85.7%; n=18/21), as compared to FFI. Moreover, trainees attributed happiness to achieving desired results in FFI, while majority of trainees in survey attained satisfaction with their invested efforts (cumulative percentage of strongly agree and agree: 90%, n=19/21). Such positive experiences based on efforts in majority of trainees endorse the premise of cognitive perspective of motivation.[17] It signifies FFI's role in motivating learners intrinsically and in making them understand the significance of attributing one's success to effort, hence enabling them in controlling educational environment to their advantage.

Frequent use of probes and prompts by the researcher SS* (71%; n=10/14) during the FFI helped the trainees recall finer details of positive experiences. This difficulty in recall of finer details by the trainees is also corroborated by the frequency of undecided responses in the survey. Trainees believed this to be due to their unique first-time opportunity to recall and share their clinical experiences.

Through FFI, the cognitive perspective of boosting motivation including goal setting, planning and monitoring progress toward a goal can be fostered in trainees.[17] Though, self-reflection and development of goal-setting skills were not immediately evident in our study, as majority (n=12/14) were aiming to pass the examination without explicit goals and objectives. Nevertheless, such skills as self-reflection and goal-setting would need more than a single FFI opportunity to be nurtured.[11,12]

Development of an action plan to approach trainees' personal learning needs 'closes the loop' which is desired in any effective formative assessment technique.[3] Likewise, the participants in this study defined prerequisites which could further enhance their learning and performance. This is underpinned by humanistic perspective of motivation, which stresses on the basic human needs to be satisfied before higher needs as self-actualization can be attained.[17] These included relaxation amenities, non-threatening environment, more academic sessions, establishment of Clinical Skills Learning (CSL) laboratories, inter-disciplinary clinical practice drills and keeping aside protected time for feedback and learning. Higher satisfaction of trainees (assessed by D-RECT satisfaction questionnaire)[18] using a multi-pronged approach of FFI constitutes our on-going study of FFI and feedback.

One of the major hurdles identified in feedback implementation at workplace was the lack of time and effective faculty participation.[2] Average time duration of 30 minutes for each FFI compares effectively with that of a structured feedback,[19] besides peer-assessment time of 1 hour per doctor.[20] The story-telling narrative style of FFI generates interests in trainees and faculty members to promote workplace performance and helps in effectively incorporating formative feedback in future performance, leading to improvement in workplace performance.[10-12] Therefore, FFI helps to overcome the hierarchical feedback acceptance issues by giving trainees the ownership of the FFI, besides mutual goal-setting.[10-12]

Although there may be ample reasons to be sceptical of trainees' self-assessments, especially on their independently learning and clinical performances.[21] This difficulty in trusting adequacy of trainees' judgement on their successful preparation by a training programme is due to lack of extensive practice in their field. Nonetheless, evidence suggests that aggregating many personal opinions can yield highly accurate information.[21] Formal training in self-assessment can effectively address issues related to accuracy of assessment and can easily outweigh trainers' feedback based on their tunnel vision due to limited exposure to trainees performance within time constraints.

The paradoxical findings of positive experience narrated by trainees associated with feelings of anxiety and frustration from outset, both personally and at team level, are not surprising. Positive emotions (hallmark of FFI) in learning events lead to global processing and overview of the learning experiences, such as positive or negative.[22] Conversely, negative emotions (including anxiety) lead to attention to specific details of a scene and more frequent recalls of individual aspects of an experience as trainees mull over the event.[22]

By focusing on the positive emotions in FFI, the learners can be made aware of their potential mood effects and the extent to which they can modulate their performance. This in turn can foster the ability to identify their own emotional state which enhances learning, clinical skills and knowledge transfer. Attention to emotions of trainees goes well beyond their individual well-being, as positive emotions facilitate cognitive flexibility, acceptance of information and transferring knowledge and skills to new situations.[22] This can potentially reduce the clinical and diagnostic errors, and cognitive biases attributable to premature closure as a consequence of negative emotions (fear, anxiety, anger,

sadness).[22] In this study, the trainees became cognizant of their emotions while learning and performing in clinical environment. This was the consequence of self-reflection on emotions explicitly using their own metacognitive skills.

Furthermore, the immediate impact apparent from the study was an increased rapport between trainees and trainers, with provision of constructive and structured workplace-based feedback in a setting where it was never given before. Full participation of trainees through FFI in all aspects of clinical practice is mandatory to eradicate medical errors and boost patient safety.[5]

Since the study sample was limited to trainees from the Department of Obstetrics and Gynaecology only, hence generalising the study results can not be beyond the given context. Multicentre studies are, therefore, recommended.

Additionally, in high-stakes episodes in clinical environment, where immediate and direct feedback may be required, by the supervisor or a senior doctor, there is limited role of retrospective and reflective conversation.[11] The minimum duration and frequency of FFI needs to be established that may inculcate self-reflective and self-regulatory abilities, needed to improve workplace learning, performance and can play a vital role in improving self-regulated learning.

Besides the faculty training in constructive and structured feedback at workplace, FFI may add to time- and resource-constraints in a busy clinical environment.

Although it was a non-randomised study, with threat to validity by Hawthorne effect; nonetheless, due to consideration given to extending study duration to more than a year, this phenomenon has been minimised.[23] Furthermore, researcher and data triangulation, and close collaboration between authors throughout all research stages enhanced the interpretive rigor of the results.[4,16]

CONCLUSION

Feedforward Interviews (FFI) can be effectively applied in clinical workplace environment for trainees. However, the impact and influence of FFI and feedback requires research in their own right.

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