

## ORIGINAL ARTICLE

## WORK PLACE BASED ASSESSMENT IN FOUNDATION YEAR: FOUNDATION UNIVERSITY MEDICAL COLLEGE EXPERIENCE

Shahid Rauf, Wajeeha Aurangzeb\*, Seyyedha Abbas, Naushaba Sadiq\*\*

Department of Biochemistry, \*Medical Education, \*\*Radiology, Foundation University Medical College, Islamabad

**Background:** In year 2011 the Department of Medical Education, Foundation University Medical College, Rawalpindi decided to implement workplace based assessments (WPBA) in the upcoming batch of students. The formative assessment included Mini-Cex, Direct Observation of Procedural Skills (DOPS), case-based discussions (CbD) and multisource feedback (MSF). The study was undertaken to explore and determine the perceptions of the surgical trainees and faculty regarding their experiences in WPBA. **Methods:** In this descriptive cross-sectional study, a 24 item, 5 point Likert scale questionnaire was administered to 30 trainees and 20 faculty members of surgery department at Foundation University Medical College. The questionnaire had reasonably high reliability ( $\alpha=0.90$ ). The results were analysed and tabulated using SPSS-16. The perceptions of faculty and trainee on WPBA were analysed separately for assessing the effectiveness of the assessment method. **Results:** Majority of the respondents were of the view that WPBA is beneficial and should be continued. However the trainees were of the view that it should be free of the personal preferences of the trainer. Moreover the training workshops for faculty and trainee should be regular and frequent. **Conclusions:** WPBA offers the opportunity to connect teaching, learning and assessment. More studies on WPBA in different departments of hospitals are required to be carried out in order to overcome the deficiencies and to improve the assessment methods.

**Keywords:** WPBA, FUMC, Mini-Cex, DOPS, CBD

### INTRODUCTION

Traditionally, training was defined in terms of time spent in training and in different clinical posts or attachments. It was assumed that learning occurs naturally as part of routine clinical work. There was no organised educational programme with clear objectives. The involvement by senior doctors was unstructured and haphazard and minimum attention has been paid to the educational needs of the trainee.<sup>1</sup> Work placed based assessments are now increasingly used for assessing the competencies of the trainee doctors in foundation years. The competence in the doctor is defined by Southgate as 'composed of cognitive, interpersonal skills, moral and personality attributes. It is in part the ability, in part the will, to consistently select and perform relevant clinical tasks in the context of the social environment in order to resolve health problems of individuals in an efficient, effective economic and humane manner'. In the past and even today in many hospitals in Pakistan the doctors are assessed in a non structured and irregular manner without any regular feedback. This situation led to more structured and different types of formative assessments with regular and detailed feedback.<sup>2</sup>

There are many methods including direct observation of procedural skills, mini-clinical evaluation exercises, case based discussions and multisource feedback. These all are important sources of feedback for the faculty and trainees. Mini-CEX, DOPS and CBD are types of formative assessments. These are led by trainee in a non threatening environment. Over the years many studies emphasised that assessments derive learning and

by regular feedback the learning process continues.<sup>3-5</sup> It is the evaluation of the learning and competency of the trainee observed in the workplace. The formative process gives the opportunity for feedback and reflection.<sup>2</sup>

Workplace-based assessment has numerous advantages. It is a formative assessment and provides feedback to the trainee for future improvement before appearing in the final summative examination. It is intended to identify areas for improvement in the individual trainee, on the basis of supportable and documented evidence. It complements the more traditional examination-based assessment of knowledge, and thus affords a more holistic and comprehensive assessment of trainees' progress.<sup>6</sup> Over the past few decades many studies carried out and emphasised the relationship between learning and assessment. Now, in this regard it is said that learning is the key purpose of assessment.<sup>3-5</sup> Many previous publications high lightened the effectiveness and flaws of workplace-based methods from the perspective of assessment alone.<sup>2</sup>

It is believed that these methods are similar to classroom tests but more effective. Still, it is hard to find the uniformity between institutions and the observations of faculty might be unbiased by the risks and association with the trainees. The multisource feedback can lead to performance improvement. The context of the feedback and the presence of facilitation have a profound effect on the response. The workplace based assessment tools (mini-clinical evaluation exercise, direct observation of procedural skills, and case based discussion) can lead to

improvement in performance and subjective reports on their educational impact are positive.<sup>7</sup> The internal consistency and reliability of WPBA are effected by multiple factors like working environment, nature of the competencies, method of assessment, training of the faculty and awareness of the trainee regarding assessment process.<sup>8</sup> Therefore considerable attention should be paid for providing favourable atmosphere for effective implementation of the assessment process.

The present study was designed for providing structured feedback which is not only important in increasing validity and reliability of WPBA but, also will provide maximum benefit to the trainees.

## METHOD AND SUBJECT

After taking permission from the ethical committee of the University, a questionnaire based cross-sectional study was conducted on the trainees (Batch 2011) and faculty of surgical department. Twenty faculty members and 30 trainees were included in the study through purposive random sampling technique. The respondents participated in the study on voluntary basis. The questionnaire was prepared based on published literature.<sup>8</sup> The participants were asked to fill it while maintaining the confidentiality of the data by giving option to the participants to disclose or hide their identity. The data were analysed using SPSS-16.

## RESULTS

A 24-item closed ended questionnaire on 5 point Likert scale: 1 strongly agree, 2 agree, 3 neutral, 4 disagree and 5 strongly disagree, was constructed to assess the perceptions of trainees as well as faculty towards work placed based assessment in foundation year at surgical department at foundation university medical college. The questionnaire was constructed after exploring extensively the existing literature on the concerned topic. The qualitative item analysis was done by 3 experts in the field. Reliability analysis of the questionnaire indicated that all items had reasonably high internal consistency ( $\alpha=0.90$ ). Total participants of the study included 20 faculty members and 30 surgical trainees from surgical department at FUMC. The researchers were able to get 100% responses of the questionnaire as the data was collected through personal effort and meeting with the respondents. The results are tabulated in Tables 1–5.

### Faculty’s perceptions related to Workplace-based assessment:

- 49% respondents agreed whereas 10% strongly agreed that WPBA is backed by good evidence in literature. However most of the respondents gave neutral response related to the fact that WPBA is independent of the assessor’s personal preferences.

- 65% respondents were of the view that training imparted to assess the trainee needs to be more frequent and extensive.
- 78% respondents strongly agreed that WPBA is an effective tool to change the behaviour of trainees through formative assessments.
- 47% respondents strongly agreed whereas 18% agreed that assessment tools adopted by the college are relevant to surgery, easy to administer and score and help to facilitate training. 17% respondents disagreed whereas 15% were neutral in their response related to effectiveness of assessment tools.

**Table-1: Faculty’s perceptions about evidence in literature related to WPBA**

| Likert Scale      | Percent |
|-------------------|---------|
| Strongly Agreed   | 10      |
| Agreed            | 49      |
| Neutral           | 21      |
| Disagree          | 15      |
| Strongly Disagree | 5       |

**Table-2: Response related to assessment tools adopted by FUMC**

| Likert Scale      | Percent |
|-------------------|---------|
| Strongly Agreed   | 47      |
| Agreed            | 18      |
| Neutral           | 15      |
| Disagree          | 17      |
| Strongly Disagree | 3       |

### Trainees’ perceptions related to Workplace-based assessment:

- 60% respondents agreed that WPBA has improved their clinical practice as well confidence to perform better in real life situations at workplace. 13% respondents disagreed with the concept of WPBA whereas 18% were neutral responses.
- 58% respondents agreed, 23% strongly agreed, 13% were neutral whereas 5% disagreed that WPBA in its current form is acceptable for them. Most of the respondents viewed that WPBA is being used appropriately and is acceptable to them as trainees. They agreed that WPBA accurately reflects their progress.

**Table-3: Trainees’ perceptions about Workplace-based assessment**

| Likert Scale      | Percent |
|-------------------|---------|
| Strongly Agreed   | 7       |
| Agreed            | 60      |
| Neutral           | 18      |
| Disagree          | 13      |
| Strongly Disagree | 2       |

**Table-4: Trainees’ perceptions about Workplace-based assessment in its current form**

| Likert Scale      | Percent |
|-------------------|---------|
| Strongly Agreed   | 23      |
| Agreed            | 58      |
| Neutral           | 13      |
| Disagree          | 5       |
| Strongly Disagree | 1       |

**Table-5: Comparison of trainees' and faculty's perceptions about workplace-based assessment**

|                                                           | Trainees (n=30) |    |   |    |     | Faculty (n=20) |    |   |    |     |
|-----------------------------------------------------------|-----------------|----|---|----|-----|----------------|----|---|----|-----|
|                                                           | SA              | A  | N | DA | SDA | SA             | A  | N | DA | SDA |
| <b>Assessment tools:</b>                                  |                 |    |   |    |     |                |    |   |    |     |
| Are easy to use                                           | 4               | 15 | 6 | 2  | 3   | 3              | 13 | 2 | 2  | 0   |
| Are relevant to surgery                                   | 18              | 7  | 2 | 3  | 0   | 3              | 11 | 4 | 2  | 0   |
| Facilitate well in training                               | 15              | 12 | 0 | 2  | 1   | 5              | 10 | 0 | 2  | 3   |
| <b>Overall perception about WPBA in its current form:</b> |                 |    |   |    |     |                |    |   |    |     |
| Is being used appropriately                               | 8               | 15 | 3 | 2  | 2   | 5              | 9  | 2 | 2  | 2   |
| Accurately reflects trainee's progress                    | 15              | 10 | 2 | 2  | 1   | 2              | 12 | 3 | 3  | 0   |
| Is better than previous system and should be retained     | 17              | 8  | 2 | 3  | 0   | 11             | 3  | 4 | 0  | 2   |

## DISCUSSION

Workplace-based assessment is referred as the assessment of working practices based on what doctors actually do in the workplace, and it is predominantly carried out in the workplace itself. It is designed to enhance and support the learning process.<sup>10</sup> WPBA is the comprehensive evaluation of a doctor's progress in his/her performance in those domains of professional practice that can be best tested in the workplace. It is a complete and thorough process through which evidence of competence is gathered through a systematic and structured framework. WPBA helps to connect teaching, learning and assessment and gives a direction towards the expected competencies of the trainees. It is an authentic tool because doctors are assessed in real situations at their workplace. Some behaviour such as handling stress and fatigue, team working, time management and continuity of patient care can be properly assessed through this tool in addition to other clinical and medical aspects.

Workplace-based assessment is being done effectively in foundation year at surgical department of Foundation University Medical College. As assessment is integral part of WPBA, it is utmost duty of the doctors to demonstrate full engagement with the assessment process. The major purposes of assessment carried out in Foundation year are:

- Highlighting achievements and areas of excellence.
- Emphasising need for feedback.
- Supplying and demonstrating evidence of progression linked to the curriculum of the respective year.
- Identifying doctors who may need additional help.

The assessment methodology being used for WPBA in foundation year is based upon two perspectives, i.e., self assessment and continuous assessment. Continuous assessment encompasses overall judgments of the assessee which is based upon multiple assessments by the observers. To ensure unbiased assessments, the assessee reports are subject to monitoring by others as well. In self assessment, the doctors are personally responsible to make assessments in their professional life. Assessment tools being used at surgical department of FUMC are as under:

1. Multi-Source Feedback
2. Mini-Clinical Evaluation Exercise (mini-CEX)
3. Direct Observation of Procedural Skills (DOPS)

4. Case-based Discussion (CBD)

5. Log book

Trainees were of the view that WPBA should be free of personal preferences and based upon fair judgments. They viewed that it has been introduced in a comprehensive and thought-out manner, accompanying sufficient and relevant information and guidance. Assessment tools are relevant to surgery and facilitate in training. Trainees find it interesting to self assess themselves and guide their own learning, skill and attitudes. The results showed that trainees were not much satisfied with WPBA as they thought that it is not free of assessor's personal preferences. This aspect needs to be taken into consideration.

Faculty members of surgical department at FUMC agreed that assessments are easy to organise and have no impact on time frame available for clinical duties. They fully agreed that full support by colleagues and supervisors was being provided to them. They viewed that WPBA is being used appropriately at FUMC and accurately reflects the trainee's progress. The 360° feedback provided to the trainee has a positive impact and helpful in improving the competencies.<sup>11</sup> The faculty and trainees are of the view that WPBA is a better system and should be retained.

## CONCLUSION

WPBA offers the opportunity to connect teaching, learning and assessment. More studies on WPBA in different departments of hospitals are required to be carried out in order to overcome the deficiencies and to improve the assessment methods.

## RECOMMENDATIONS

WPBA is a comprehensive tool for assessing trainees' behaviours, giving them formative feedback in order to improve in workplace and real life clinical situations. In order to ensure that quality observations are being made by the trainer and feedback being received by the trainee is effective, non-judgmental and effective; some training programs should be conducted on regular basis so that the faculty gets trained for WPBA. WPBA should be implemented in hospital settings in a thought out manner and carried out systematically so that its effectiveness is maintained. The feedback provided by the trainers should be consistent with the needs of the trainee and personal preferences should be avoided.

## TAKE HOME MESSAGE

No doubt that the feedback by the respondents is encouraging but more frequent and regular training workshops for the faculty and awareness sessions for the trainees should be held in the future in order to make the formative assessments at workplace more effective and meaningful.

## ACKNOWLEDGEMENTS

We are highly grateful to the faculty and trainees of surgical department who voluntarily participated in the survey. We are thankful to Principal Dr. Nasim ul Majeed for his overwhelming support to carry out this research. We are indebted to Dr. Eitezaz A Bashir for providing us all possible help and support in collecting data from surgical department of FUMC.

## REFERENCES

1. Holm HA. Postgraduate education. In: Norman GR, van der Vleuten CPM, Newble DI, (eds). International handbook of research in medical education. Dordrecht: Kluwer, 2002.p. 381–413.
2. Norcini J, Burch V. Workplace-based assessment as an

- educational tool: AMEE Guide No. 31. Med Teach 2007;29:855–71.
3. Van der Vleuten CPM. The assessment of professional competence: developments, research and practical implications. Adv Health Sci Educ 1996;1:41–67.
4. Gronlund NE. 1998. Assessment of Student Achievement, 6<sup>th</sup> ed. Boston : Allyn & Bacon, 1998.
5. Shepard LA. The role of assessment in a learning culture. Educ Res 2000;29(7):4–14.
6. General Medical Council. Workplace Based Assessment: A Guide for Implementation. GMC, 2010. Available at: [http://www.gmc-uk.org/Workplace\\_Based\\_Assessment\\_A\\_guide\\_for\\_implementation\\_0410.pdf\\_48905168.pdf](http://www.gmc-uk.org/Workplace_Based_Assessment_A_guide_for_implementation_0410.pdf_48905168.pdf)
7. Tooke J Aspiring to Excellence: Findings and Final Recommendations of the Independent Inquiry into MMC. Aldridge Press, 2008.
8. Saedon H, Saedon MH, Aggarwal SP. Workplace-based assessment as an educational tool. Med Teach 2010;32:e369–72.
9. British Medical Association. Competency Based Assessment: A Discussion Paper for Consultants. BMA, 2008. Available at: [http://www.bma.org.uk/employment\\_and\\_contract/doctors\\_performance/1\\_appraisal/CompetencyBasedAssessment.jsp](http://www.bma.org.uk/employment_and_contract/doctors_performance/1_appraisal/CompetencyBasedAssessment.jsp)
10. Memon S, Winston S, Sullivan G. Workplace-based assessment: Attitudes and perceptions among consultant trainers and comparison with those of trainees. Psychiatrist 2012;36(1):16–24.
11. Hattie J, Temperly H. The power of feedback. Rev Educl Res 2007;77:81–112.

## Address for Correspondence:

**Dr. Shahid Rauf**, Department of Biochemistry, Foundation University Medical College, Islamabad. **Tel:** +92-51-5788171/Ext: 301, **Cell:** +92-333-5306386  
**Email:** s\_rauf61@hotmail.com