

EFFECT OF 'MINI-CLINICAL EVALUATION EXERCISE' IN THE FORMATIVE ASSESSMENT OF M.S. STUDENTS OF PRASUTITANTRA-STRIROG

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ABSTRACT

The 'Mini-CEX' (Mini-clinical evaluation exercise) facilitates the assessment of skills required for good clinical care and provides immediate feedback to the students. **Aims:** **1.** To make the volunteers (Six M.S. second year residents of Prasutitantra-Strirog) clinically competent by introducing 'Mini-CEX'. **2.** To evaluate the effectiveness of 'Mini-CEX' method in the formative assessment of volunteers. **3.** To assess various domains of volunteers by observing competencies demonstrated in 'Mini-CEX'. **Methods:** **1.** Volunteers were selected after Ethical Consent for the study **2.** Volunteers' assessment of different Domains was done by using Global Rating Scale Sheet and Multiple samples of volunteers' performance by Pre-test and Post-test design. **Result:** Statistical Analysis shows that introduction of 'Mini-CEX' resulted in significant improvement in competencies demonstrated in 'Mini-CEX' and made them competent. **Conclusion:** Result signifies that 'Mini-CEX' helps to make residents' competent and it is effective in formative assessment by judging various domains.

Key words: Mini-CEX, Global Rating Scale.

INTRODUCTION

The assessment of doctor's performance in practice remains a major challenge. Test of competence assess a doctor's ability to perform a task on a single occasion but measurement of performance in daily clinical practice is more difficult. Assessment of many different aspects of work may be desirable e.g. Interviewing

Skills, Obstetrical Examination, Humanistic qualities, Clinical judgment, Counseling and communication skills, Organization /efficacy and Overall clinical competence. But these are not amenable to traditional methods of assessment.

The 'Mini-clinical evaluation exercise' is an observation tool that facilitates

the assessment of skills that are essential for good clinical care and provision of immediate feedback to the students.

AIMS AND OBJECTIVES –

1. To make M.S. Students of Prasutitantra-Strirog clinically competent by introducing 'Mini-clinical evaluation exercise'.
2. To evaluate the effectiveness of this method in the formative assessment of M.S. students of Prasutitantra-Strirog.
3. To assess cognitive, affective, and psychomotor domains of students by observing Interviewing skills, Obstetrical Examination, Humanistic qualities, Clinical judgment, Counseling and communication skills, Organization/Efficacy and Overall clinical competence.

MATERIALS AND METHODS –

1. Ethical consent from Institutional Ethical Committee and Head of the Department of Prasutitantra-Strirog was taken to conduct proposed study.
2. Six M.S. students of Prasutitantra-Strirog (volunteers) second year residents were selected for introduction of 'Mini-clinical evaluation exercise'.
3. Students' assessment were done by using Global Rating Scale Sheet and by comparing Pre-test and Post-test design.
4. Elimination of the bias associated with single teacher 'Mini-clinical evaluation exercise' was done by using two teachers.
5. To assess student's performance in different domains – 'Multiple Sam-

ples of Students' Performance in different domains' were assessed by Pre-test and Post-test.

6. During project, each student was assessed four times by two teachers.

Descriptors of Competencies demonstrated by Mini-CEX:

(1) Medical Interviewing Skills:

Facilitates patient's telling of story; effectively uses questions/directions to obtain accurate, adequate information needed; responds appropriately to affect, non-verbal cues.

(2) Obstetrical Examination Skills:

Follows efficient, logical sequence; balances screening/diagnostic steps for problem; informs patient; sensitive to patient's comfort, modesty.

(3) Humanistic Qualities / Professionalism:

Shows respect, compassion, empathy, establishes trust; attends to patient's needs of comfort, modesty, confidentiality, information.

(4) Clinical Judgement:

Selectively orders/performs appropriate diagnostic studies, considers risks, benefits.

(5) Communication and Counseling Skills:

Explains rationale for test/treatment, obtains patient's consent, educates/counsels regarding management.

(6) Organization / Efficiency:

Prioritizes; is timely; succinct.

(7) Overall Clinical Competence:

Demonstrates judgment, synthesis, caring, effectiveness, efficiency.

OBSERVATION AND RESULT

1. Medical Interviewing Skill (M.I.S.)

	Observer I			Observer II		
	Mean	S.D.	S.E.	Mean	S.D.	S.E.
Pre Test	4	0.00	0.00	4.8	0.41	0.17
Post Test 1st Follow Up	5.5	0.55	0.22	5.7	0.52	0.21
Post Test 2nd Follow Up	6.5	0.55	0.22	6.3	0.52	0.21
Post Test 3rd Follow Up	7.2	0.75	0.31	7.2	0.75	0.31
t-Value	-6.708			-6.708		
P-Value	0.001			0.001		

2. Obstetrical Examination Skill (O.E.S.)

	Observer I			Observer II		
	Mean	S.D.	S.E.	Mean	S.D.	S.E.
Pre Test	4.3	0.52	0.21	4.3	0.52	0.21
Post Test 1st Follow Up	5.7	0.52	0.21	5.5	0.84	0.34
Post Test 2nd Follow Up	6.3	0.52	0.21	6.2	0.41	0.17
Post Test 3rd Follow Up	6.8	0.41	0.17	6.8	0.41	0.17
t-Value	-7.319			-5.966		
P-Value	0.001			0.002		

3. Humanistic Qualities (H.Q.)

	Observer I			Observer II		
	Mean	S.D.	S.E.	Mean	S.D.	S.E.
Pre Test	4.2	0.41	0.17	4.7	0.52	0.21
Post Test 1st Follow Up	5.2	0.75	0.31	5.7	0.52	0.21
Post Test 2nd Follow Up	6.5	0.55	0.22	6.3	0.52	0.21
Post Test 3rd Follow Up	7.2	0.41	0.17	7	0.00	0.00
t-Value	-11.619			-11.068		
P-Value	0.000			0.000		

4. Clinical Judgement (C.J.)

	Observer I			Observer II		
	Mean	S.D.	S.E.	Mean	S.D.	S.E.
Pre Test	4.2	0.41	0.17	4.5	0.55	0.22
Post Test 1st Follow Up	5.5	0.55	0.22	5.5	0.84	0.34
Post Test 2nd Follow Up	6.7	0.52	0.21	6.7	0.52	0.21
Post Test 3rd Follow Up	7.3	1.03	0.42	7.2	0.75	0.31
t-Value	-6.635			-6.325		
P-Value	0.001			0.001		

5. Communication and Counseling Skills (C.C.S.)

	Observer I			Observer II		
	Mean	S.D.	S.E.	Mean	S.D.	S.E.
Pre Test	4.3	0.52	0.21	4.7	0.52	0.21
Post Test 1st Follow Up	5.3	0.52	0.21	5.7	0.52	0.21
Post Test 2nd Follow Up	6.5	0.55	0.22	6.5	0.55	0.22
Post Test 3rd Follow Up	7	0.00	0.00	7	0.00	0.00
t-Value	-12.649			-11.068		
P-Value	0.000			0.000		

6. Organization / Efficiency (O./E.)

	Observer I			Observer II		
	Mean	S.D.	S.E.	Mean	S.D.	S.E.
Pre Test	4.2	0.41	0.17	4.8	0.41	0.17
Post Test 1st Follow Up	5.5	0.55	0.22	5.5	0.55	0.22
Post Test 2nd Follow Up	6.5	0.55	0.22	6	0.63	0.26
Post Test 3rd Follow Up	7.2	0.41	0.17	7	0.00	0.00
t-Value	-11.619			-13		
P-Value	0.000			0.000		

7. Overall Clinical Competence (O.C.C.)

	Observer I			Observer II		
	Mean	S.D.	S.E.	Mean	S.D.	S.E.
Pre Test	4.3	0.52	0.21	5	0.00	0.00

Post Test 1st Follow Up	5.5	0.55	0.22	5.8	0.41	0.17
Post Test 2nd Follow Up	6.7	0.52	0.21	6.8	0.41	0.17
Post Test 3rd Follow Up	7.2	0.41	0.17	7	0.00	0.00
t-Value	-9.22			-13		
P-Value	0.000			0.000		

8. Examiner's Satisfaction (E.S.)

	Observer I			Observer II		
	Mean	S.D.	S.E.	Mean	S.D.	S.E.
Pre Test	4.5	0.84	0.34	6.8	0.41	0.17
Post Test 1st Follow Up	5.7	0.82	0.33	6.8	0.41	0.17
Post Test 2nd Follow Up	6.8	0.41	0.17	7.5	0.55	0.22
Post Test 3rd Follow Up	7.7	0.52	0.21	7.8	0.41	0.17
t-Value	-6.635			-3.873		
P-Value	0.001			0.012		

9. Resident's Satisfaction (R.S.)

	Observer I			Observer II		
	Mean	S.D.	S.E.	Mean	S.D.	S.E.
Pre Test	4.7	0.52	0.21	6.5	0.55	0.22
Post Test 1st Follow Up	6	0.63	0.26	6.8	0.41	0.17
Post Test 2nd Follow Up	7	0.00	0.00	7.5	0.55	0.22
Post Test 3rd Follow Up	7.8	0.41	0.17	7.8	0.41	0.17
t-Value	-10.304			-6.325		
P-Value	0.000			0.001		

RESULT

From the above Statistical Analysis, it can be concluded that, introduction of 'Mini – Clinical Evaluation Exercise' for second year M. S. students/residents of Prasootitantra-Strirog shows significant improvement in competencies as t-value of- Interviewing Skills changes from pretest 4 and 4.8 to post-test-6.708,for Obste-

trical Examination t-value changes from pretest 4.3 to post-test -7.319 and -5.966 , for Humanistic Qualities t-value changes from pretest 4.2 and 4.7 to post-test -11.619 and -11.068, for Clinical Judgment t-value changes from pretest 4.2 and 4.5 to post-test-6.635 and -6.325, for Communication and Counseling Skills t-value changes from pretest 4.3 and 4.7 to post-test-12.649 and -11.068,for Organization /

Efficacy t-value changes from pre-test 4.2 and 4.8 to post-test-11.619 and -13 and for Overall Clinical Competence t-value changes from pretest 4.3 and 5 to post-test-9.22 and -13 and lastly for Examiner's satisfaction t-value changes from pretest 4.5 and 6.8 to post-test-6.635 and -3.873; Resident's satisfaction t-value changes from pretest 4.7 and 6.5 to post-test-10.304 and -6.325.

CONCLUSION

Mini-CEX Assessment by Pre-test and post-test design shows significant improvement of residents' competencies. It helps in the formative assessment of residents.

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Source of Support: Nil

Conflict Of Interest: None Declared

How to cite this URL: Kalpana Ayare & Trupti Gawade: Effect Of 'Mini-Clinical Evaluation Exercise' In The Formative Assessment Of M.S. Students Of Prasutitantra-Strirog. International Ayurvedic Medical Journal {online} 2017 {cited April, 2017} Available from:

http://www.iamj.in/posts/images/upload/1159_1164.pdf