

# Evaluation of One Minute Preceptor (OMP) as a Teaching Tool for Interns in the Department of Obstetrics & Gynaecology - A Cross-Sectional Study in Punjab Institute of Medical Sciences

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## ABSTRACT

### BACKGROUND

In Punjab Institute of Medical Sciences, Jalandhar, one minute preceptor (OMP) is the 1st such teaching - learning tool, which has been used in the Department of Obstetrics and Gynaecology in a busy out-patient set up for effective clinical teaching for interns. We wanted to assess the perception of interns for acceptability of one minute preceptor as a teaching tool in Obstetrics & Gynaecology Department. We also wanted to assess the feasibility & acceptability of one minute preceptor as a teaching tool for the faculty in the Department of Obstetrics & Gynaecology in PIMS.

### METHODS

A prospective cross-sectional study was done in Punjab Institute of Medical Sciences, with 30 interns posted on rotational duty in the Department of Obstetrics & Gynaecology. 6 faculty members were sensitized along with interns for teaching one minute preceptor. 3 sessions were conducted with 3 different topics. Thereafter perception of interns & faculty was obtained through validated questionnaire. Data analysis was done by calculating percentage & frequency. Qualitative analysis was done by thematic analysis and word cloud.

### RESULTS

Almost all learners agreed that one minute preceptor (OMP) is better than traditional teaching methods as it helps in building concepts of the subject. 83.3 % interns admitted that OMP brings out the strengths & weakness in them. All learners were of the view that OMP enhances clinical reasoning skills. All members of the faculty agreed that all domains of learning are assessed during OMP and felt that OMP can be used as a teaching tool in busy OPD.

### CONCLUSIONS

One-minute preceptor has been proved to be an effective teaching tool in the busy OPD set up. It helps to teach essential skills to diagnose & manage common Obstetrical & Gynaecological problems in a short span of time.

### KEYWORDS

One-Minute Preceptor (OMP), Obstetrics & Gynaecology (OBG), Teaching Tool, Internship, Out-Patient Department (OPD)

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**BACKGROUND**

The Medical Council of India describes internship as “a phase of training wherein a graduate is expected to conduct actual practice of medical and health care and acquire skills under supervision so that he/she may become capable of functioning independently.”<sup>1</sup> Internship is the most crucial phase for learning practical knowledge by medical graduates. This dynamic phase & precious time of rotational internship in various departments should be utilized optimally to develop a competent doctor so that excellent health care is delivered to our citizens. In a busy OPD set up, shortage of time, in out-patient clinics, is the most important factor in deciding how much to teach while managing the patients effectively. To implement competency based medical education, it is mandatory to improve work place based learning. One minute preceptor is one of the effective methods of learning clinical reasoning skills, with effective and positive feedback from the preceptor in a short span of time.

It has been stated that OMP is time efficient and one of the effective teaching ways.<sup>2</sup> The “one minute” in “one - minute preceptor” does not refer to time limitation ; <sup>3</sup> this method is even useful in short encounters.<sup>4</sup> It is learner centred, validated and innovative method of teaching - learning to improve clinical reasoning skills in a clinical set up.<sup>5</sup> Clinical reasoning skills not only help physicians in reaching an appropriate diagnosis, but are also the key to preventing diagnostic errors. Diagnostic errors in medicine may occur in 5 – 15 % of cases.<sup>6</sup> The one-minute preceptor model of faculty development<sup>7</sup> is a popular and widely used method for improving teaching skills. “OMP” was first introduced as “Five Step Micro Skill Model” by Neher et al. in 1999.<sup>8</sup> Originally designed for use by faculty in busy ambulatory practices, it facilitates efficient clinical teaching with the use of 5 “micro - skills” to help the mentor guide the teaching interaction. The 5 micro - skills are:

1. Get a commitment — i.e. ask the learner to articulate his/her own diagnosis or plan
2. Probe for supporting evidence — evaluate the learner's knowledge or reasoning
3. Reinforce what was done well — provide positive feedback
4. Correct errors — provide constructive feedback with recommendations for improvement.
5. Teach general rules — teach the learner common “take-home points” that can be used in future cases, aimed preferably at an area of weakness for the learner.

**Objectives**

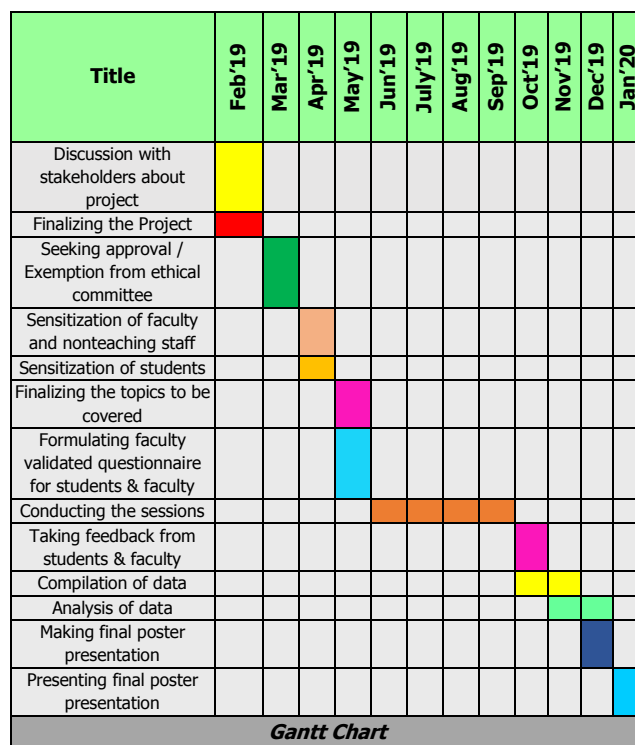
1. To introduce & evaluate one minute preceptor as a teaching tool for interns in Obstetrics & Gynaecology Department.
2. To sensitize and train the faculty & interns of Department of Obstetrics & Gynaecology for one minute preceptor as teaching tool.
3. To assess the perception of faculty & interns of Department of Obstetrics & Gynaecology for

acceptability and feasibility of one minute preceptor as teaching tool in busy OPD.

4. To assess the perception of the students for the identification of strengths and weaknesses & adequacy of feedback provided during one minute preceptor teaching.

**METHODS**

This is a prospective, cross-sectional interventional study conducted at OPD & demo room in OPD in the Department of Obstetrics & Gynaecology (OBG) in Punjab Institute of Medical Sciences, Jalandhar from February 2019 to January 2020. 30 interns posted on rotational internship & 6 faculty members of Obstetrics & Gynaecology Department in Punjab Institute of Medical Sciences; Jalandhar actively participated in the present study.



**Ethical Considerations**

Was obtained from institutional ethics committee. No grant was required as one minute preceptor was made part of the teaching-learning activities in the Department of Obstetrics & Gynaecology (OBG). Informed consent form (Annexure I) from participating interns posted in OBG department and (Annexure II) for participating faculty of OBG was prepared according to the requirement of the ethics committee.

Topics were identified. Feedback survey questionnaires (Annexure III) & (Annexure IV) were prepared for perception of interns and perception of faculty for one minute preceptor as a teaching tool. They were validated by taking the opinion of experts.

### **Administration of One Minute Preceptor as a Teaching Tool**

1. Faculty of Department of Obstetrics & Gynaecology was sensitized with one interactive lecture with power point presentation along with role play for using one minute preceptor as a teaching tool. It highlighted its potential benefits of using it in busy OPD setup, with immediate feedback to students by identifying their strengths & weakness for improving clinical reasoning skills for better accuracy of diagnosis. It was followed by active discussion.
2. Selection of clinical cases for execution of one minute preceptor in the OPD was done. The following topics were finalized.
  1. Case of carcinoma cervix
  2. Case of utero-vaginal prolapse
  3. Case of threatened abortion
3. Selection and validation of feedback questionnaire for participating interns, posted for internship and for participating faculty of Obstetrics & Gynaecology (OBG) Department was done.
4. Sensitization of interns, posted for internship in the Department of Obstetrics & Gynaecology was done with the help of one interactive lecture along with role play about one minute preceptor. Role play was chosen as the strategy to allow the participants to have active demonstration required to fulfill the overarching objectives of benefits of OMP as a teaching tool. Active discussion was utilized as an active learning strategy early on in the ongoing interactive lecture in order to have the learners together generate potential challenges in the perceiving the OMP encounter and could also enhance the learners' motivation to improve their clinical reasoning skills.
5. Informed written consent was taken from the participating faculty and participating interns posted for rotational OBG duty.
6. Total 3 sessions were taken. Duration of each session was variable, being approximately 5 - 8 min depending on the complexity of the problem, interpretation and knowledge of the learner and the time availability in the busy OPD. During the OMP sessions, interns were asked to obtain patients presenting symptoms, perform relevant examination and diagnose by thought processing as quickly as possible. Each session was taken by 2 faculty members with 15 interns each. Each time, 2 different faculty members conducted the OMP sessions with 15 students each simultaneously. Initial two sessions helped the interns to get used to this new teaching method. After the third session, they were asked to fill a post-project feedback questionnaire to assess their perception of acceptability & usefulness of this new educational model.

### **Feedback from Students**

1. Soon after the third session, for taking collective feedback on the questions, the feedback questionnaire was distributed to the students after a briefing, underscoring the importance of their honest and critical

feedback to assess their perception on OMP as a teaching tool.

2. Feedback was collected and data was entered periodically, whenever possible.

### **Feedback from Faculty**

At the end of these sessions, faculty perception was taken via feedback questionnaire, which had few open ended questions in the end.

### **Data Analysis**

The sessions were completed by the middle of October 2019 and data entry by the third week of November 2019, Data was analysed by using SPSS version 19 with which quantitative analysis was done. The descriptive statistics of categorical data was analysed using percentages and frequencies.

Themes were identified for the responses to open-ended questions and thematic analysis was done.

### **Outcome Measures of the Intervention**

#### *Short - Term Outcomes*

1. Faculty of Obstetrics & Gynaecology was sensitized and trained for one minute preceptor as a teaching tool in busy OPD.
2. Interns posted for Obstetrics & Gynaecology posting were sensitized for one minute preceptor.
3. The students' satisfaction level improved with immediate feedback, to improve their clinical reasoning skills.
4. Perception of interns improved regarding identification of strengths in the selected topics for one minute preceptor.
5. Perception of interns improved regarding identification of weaknesses in the selected topics for one minute preceptor
6. Perception of faculty about acceptability and feasibility in the Department of Obstetrics & Gynaecology showed satisfaction over OMP being used as a teaching tool.

#### *Intermediate Outcomes*

1. More topics have been added for one minute preceptor as teaching tool in busy OPD.
2. The schedule of OMP has been prepared as part of out-patient curriculum for interns posted in Obstetrics & Gynaecology (OBG), for teaching of clinical reasoning skills.
3. One minute preceptor has been implemented as a teaching tool for interns posted in Department of Obstetrics & Gynaecology for rotational internship.

#### *Long Term Outcomes*

1. The clinical reasoning skills of interns improved to have better accuracy of diagnosis in the busy OPD of Department of Obstetrics & Gynaecology.
2. The hospital functioning improved with interns working more appropriately.

3. Patient - outcome improved in Department of Obstetrics & Gynaecology and better satisfaction indices from care - givers.
4. One minute preceptor as a teaching tool incorporated in curriculum.

**RESULTS**

Perception of Interns about One Minute Preceptor as a Teacher Tool (N = 30)						
Sr. No.	Statement	1	2	3	4	5
1	Satisfied with OMP as clinical teaching tool	56.7 (17)	40.2 (12)	3.3 (1)	0 (0)	0 (0)
2	OMP enhances clinical reasoning skills	66.7 (20)	33.3 (10)	0 (0)	0 (0)	0 (0)
3	Augments confidence in expressing oneself	66.7 (20)	30.0 (9)	3.3 (1)	0 (0)	0 (0)
4	OMP has proper time utilization in busy OPD	100 (30)	0 (0)	0 (0)	0 (0)	0 (0)
5	Able to use all five micro - skills of OMP (during each session.)	60 (18)	36 (11)	3.3 (1)	0 (0)	0 (0)
6	OMP invoked my thought process during discussions.	70.0 (21)	26.7 (8)	3.3 (1)	0 (0)	0 (0)
7	OMP helps strengthens teacher student bond	76.7 (23)	20.0 (6)	3.3 (1)	0 (0)	0 (0)
8	OMP is better than traditional teaching	66.7 (20)	33.3 (10)	0 (0)	0 (0)	0 (0)
9	OMP brings out strengths & weakness in learner	83.3 (25)	16.7 (5)	0 (0)	0 (0)	0 (0)
10	OMP generates non - threatening atmosphere	53.6 (16)	36.7 (11)	10 (3)	0 (0)	0 (0)
11	OMP directs self - directed learning	60 (18)	40 (12)	0 (0)	0 (0)	0 (0)
12	Feedback was provided every time	63.3 (19)	36.7 (11)	0 (0)	0 (0)	0 (0)
13	Feedback was helpful	63.3 (19)	30.0 (9)	6.7	0 (0)	0 (0)
14	Faculty covered all micro skills	53.6 (16)	36.7 (11)	10 (3)	0 (0)	0 (0)
15	OMP should be a regular part of learning	80 (24)	20 (6)	0 (0)	0 (0)	0 (0)

**Table 1 (Frequency & Percentage): Perception of Interns about One Minute Preceptor as a Teaching Tool**

Likert Scale Strongly agree = 1 agree = 1 Neutral = 3 Disagree = 4 Strongly disagree =5, Percentage %

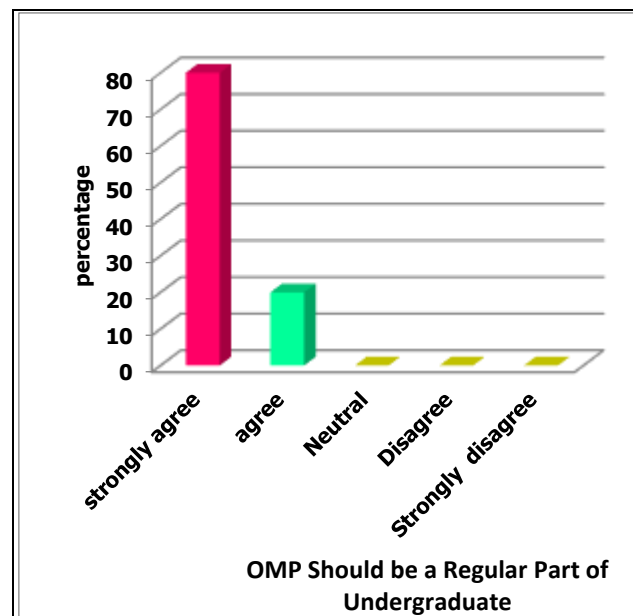
**Data Analysis - Interns**

30 interns posted on rotational OBG internship duty participated in the present study. Survey response was 100 % for the three conducted sessions for one minute preceptor as teaching tool in response to post session feedback survey. 15 male and 15 female students (Out of 30 interns) participated in this present study.

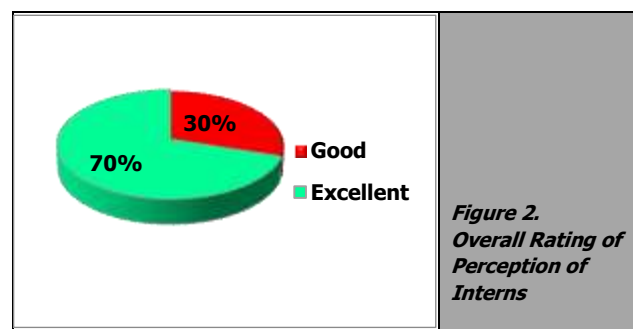
96.7 % interns felt satisfied with one minute preceptor as a teaching tool. Nearly 70 % interns realised that one minute preceptor improves their clinical reasoning skills. 66.7 % interns agreed that OMP invokes their thought process, improves their confidence. Almost all of them agreed that in busy OPD, it is an excellent tool to learn clinical co-relates with clinical reasoning skills in short span of time.

83.3 % of learners felt that their strengths & weakness of the learning are identified. They felt that feedback provided

is very timely (63.3 %) and it was helpful (93.3 %). Almost all agreed that one minute preceptor is better teaching tool than traditional teaching methods. 100 % students agreed that one minute preceptor should be made a regular part of teaching of clinical reasoning skills. 80 % students had strong opinion for its implementation while none was against it. Almost all interns were of the view that one minute preceptor directs them for self-directed learning, 90.3 % interns felt that OMP generates non-threatening environment while 10 % interns disagreed to the same. 76.7 % learners felt that OMP helps strengthen teacher student bond while 3.3 % interns did not opine on this.



**Figure 1. Views of Students for OMP to be a Regular Part of Undergraduate Teaching Training**



**Figure 2. Overall Rating of Perception of Interns**

**Overall Rating**

70 % students strongly agreed that one minute preceptor is a beneficial teaching tool which helps them to co-relate their theory with clinical scenarios which helps them in their learning. 80 % students were very enthusiastic about OMP as a teaching tool. They felt satisfied and strongly demanded that OMP should be made a regular part of OPD curriculum during their posting in OBG department in internship.



Figure 3. Thematic Analysis (Word Cloud) of Open-Ended Questions (Perception of Interns for OMP as a Teaching Tool)

Perception of Faculty about One Minute Preceptor as a Teacher Tool (N = 6)						
Sr. No.	Statement	1	2	3	4	5
1	Satisfied with OMP as clinical teaching tool	0 (0)	83.5 (5)	16.7 (1)	0 (0)	0 (0)
2	OMP is different from traditional teaching	0 (0)	83.5 (5)	16.7 (1)	0 (0)	0 (0)
3	Faculty covered all micro skills	0 (0)	83.5 (5)	16.7 (1)	0 (0)	0 (0)
4	OMP has proper time utilization in busy OPD	100 (6)	0 (0)	0 (0)	0 (0)	0 (0)
5	OMP helps strengthens teacher student bond	0 (0)	66.7 (4)	33.3 (2)	0 (0)	0 (0)
6	OMP motivates students to gain wider knowledge	0 (0)	66.7 (4)	33.3 (2)	0 (0)	0 (0)
7	OMP is better than traditional teaching	0 (0)	66.7 (4)	33.3 (2)	0 (0)	0 (0)
8	OMP encompasses all 3 cognitive domains	100 (6)	0 (0)	0 (0)	0 (0)	0 (0)
9	OMP brings out strengths & weakness in learner	100 (6)	0 (0)	0 (0)	0 (0)	0 (0)
10	OMP raises overall performance of students	0 (0)	83.5 (5)	16.7 (1)	0 (0)	0 (0)
11	OMP is time consuming	0 (0)	33.2 (2)	0 (0)	66.7 (4)	0 (0)
12	OMP improves clinical reasoning skills of students	0 (0)	83.5 (5)	16.7 (1)	0 (0)	0 (0)
13	OMP should be regular part of teaching	0 (0)	83.5 (5)	16.7 (1)	0 (0)	0 (0)

Table 2. (Frequency & Percentage): Perception of Faculty about One Minute Preceptor as a Teaching Tool

Likert Scale Strongly agree = 1 agree = 2 Neutral = 3 Disagree = 4 Strongly disagree = 5 ; Percentage %

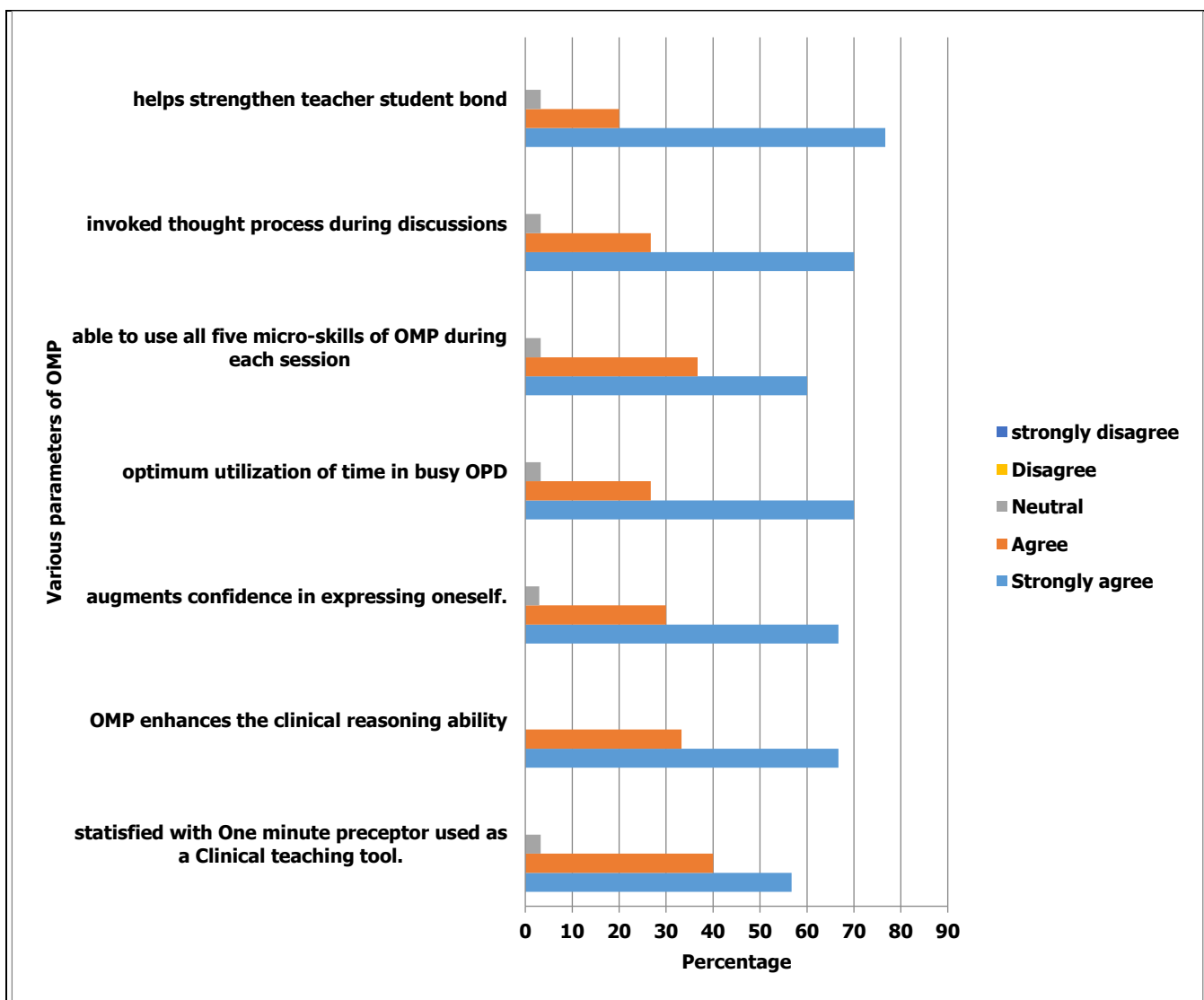


Figure 4. Summary of Perception of Interns for OMP as a Teaching Tool

Many of the students commented in response to their open-ended questions that it should be made a regular feature of OPD teachings. They were very enthusiastic about its' implementation. One the students wrote 'one minute preceptor will help shy students to have better interaction with good bonding with the patients'. Another student wrote 'one minute preceptor is an excellent method of theory & clinical co-relation and it should be started from Final year M.B.B.S'. Almost all faculty opined in the favour of one minute precptor as a teaching tool. Nearly 50 % faculty found it as an excellent method of teaching clinical reasoning skills. Almost all faculty members strongly agreed that OMP is useful and an effective teaching tool which improves teaching ability and helps identify specific learning gaps of the students. 66.7 % of faculty felt OMP is better than traditional teaching method.

83.3 % faculty was of the view that OMP helps to improve the student's performance. All members of the faculty agreed that all domains of learning are assessed during OMP and felt that OMP can be used as a teaching tool in busy OPD. It needs a special mention that 100 % faculty was very enthusiastic and showed acceptability to start OMP as a teaching tool in busy OPD in the Department of Obstetrics & Gynaecology in PIMS. All members of faculty of OBG want OMP should be a regular feature for undergraduate training. Faculty suggested that all members (including senior residents) should be sensitized for smooth conduction of OMP. 33.3 % were a bit worried with time constraints, to make a balance between busy OPD and OMP sessions simultaneously. 66.7 % agreed in unison that OMP sessions can be handled within the time frame. 83.3 % agreed that OMP improves clinical reasoning skills of the students.

## DISCUSSION

Ever since OMP was introduced in early nineties in fast ambulatory care set up, it is mostly practiced in western countries. Discussion is utilized as an active learning strategy.<sup>9</sup> It has been used to teach faculty many skills, including the one-minute preceptor.<sup>10,11</sup> Role plays have multiple benefits for the learner including practicing a skill, reflecting on performance, and understanding the perspectives of others through a more realistic training scenario.<sup>12</sup> In faculty development, role plays have been used face to face and online and can improve individual faculty self-assessment of teaching behaviours<sup>13</sup> Interactive lecture with PPT & discussion + Role play have been used for faculty training and orientation and training of interns. There are only a few studies from our country which shows OMP as an effective teaching and learning module. A study by Kachewar from Maharashtra aimed at teaching the radiology residents by a systematic approach toward performing the ultrasound scan for acute abdomen using OMP was found to be very effective in diagnosing a definite cause for acute pain abdomen.<sup>14</sup> In a study by Gulati HK from New Delhi, on routine teaching of histopathology slides to pathology postgraduates, found OMP to be effective in improving exam skills, communicating the findings, thinking

of logical differentials, and in motivating the learner to do self-study. However, they showed OMP to be time consuming. Our present study shows that almost all participating interns are of the view that one minute preceptor is better teaching tool than traditional teaching methods,<sup>15</sup> In another study by Harkare et al. from Nagpur on the use of OMP for effective clinical teaching in ear, nose and throat (ENT) for final year MBBS students found implementing OMP as effective teaching and learning method for undergraduates students in ENT<sup>16</sup> In a randomized controlled trail by Furney et al. from the USA on 2nd and 3rd year internal medicine residents with teaching responsibility found OMP model as a brief and easy to administer intervention that provides modest improvements in residents' teaching skill.<sup>17</sup> Aagaard et al. from the United States of America (USA) in his study on OMP found preceptors 'ability to diagnose patients' medical problems correctly was better, and they had greater self-confidence in rating students.<sup>18</sup>

The OMP model is supported by literature for its effectiveness as a teaching model and preference by students and preceptors. It has been shown to increase teaching techniques including feedback and assessment of students' clinical reasoning.<sup>19</sup> In a study conducted by Syed et al.<sup>20</sup> show that OMP is a useful instructional tool for improving presentation skills (78.2 %), providing feedback (72 %), formulation of an assessment plan (75.9 %) and encouragement to read more about the disease (77 %). Qualitative analysis shows that it is a student friendly tool which provides instruction in a short period of time. The present study shows that maximum no of learners admit that OMP brings out their strengths & weakness in presenting a clinical case. 70 % agree that teaching environment becomes non-threatening, with 75 % learners admitting that OMP helps strengthen teacher student bond for better learning. 93.3 % learners found that immediate feedback provided was helpful. Almost all learners agreed that OMP stimulates thought process for learning clinical reasoning skills and stimulates for further self-directed learning. Almost all members of participating faculty of Department of Obstetrics & Gynaecology agreed that OMP is acceptable to them in busy OBG OPD. 83.3 % strongly believed that OMP is better teaching tool than traditional teaching methods. All faculty members agreed that OMP encompasses all three domains (Cognitive, Psychomotor, affective) of learning. In open ended questions, faculty appreciated the efforts to sensitize them to learn one minute preceptor as a teaching tool and suggested that it should be made a regular part to teach interns posted for rotational OBG internship.

## CONCLUSIONS

One-minute preceptor has been proved to be effective teaching tool in the busy OPD set up. OMP helps in teaching essential clinical reasoning skills to diagnose & manage common Obstetrical & Gynaecological problems in a short span of time. Faculty found OMP as feasible and acceptable teaching tool in busy OPD. Students found OMP as an excellent method for identification of strengths and

weaknesses. Immediate feedback helped them to improve their diagnostic skills. Although the sample size of this study is small, the response of faculty and the learners was very positive & enthusiastic. It shows better future of OMP for implementation in OPD in Department of OBG as a part of out-door curriculum with OMP as a teaching tool.

### Implications

1. Introduction of one minute preceptor as a teaching tool in OPD, will improve student-engagement to improve clinical reasoning skills.
2. More topics with common ailments related to OBG OPD should be added for teaching with OMP.
3. Other teachers would introduce one minute preceptor as a teaching tool in the busy OPD, making it a norm in the institution.
4. Identifying strengths and weaknesses of students through such teaching tools will help in changing teaching learning strategies for the better. Clinical reasoning skills.
5. Interns will make diagnosis with better accuracy.
6. Introducing regular use of one minute preceptor with essential skills (in essence, all the competencies) will result in graduates becoming more competent in knowledge and skills required for internship.
7. Improved knowledge and skills would help graduates to function better in the hospital.
8. This would result in better patient-outcome in Obstetrics & Gynaecology and better satisfaction indices from care-givers.

Data sharing statement provided by the authors is available with the full text of this article at jebmh.com.

Financial or other competing interests: None.

Disclosure forms provided by the authors are available with the full text of this article at jebmh.com.

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