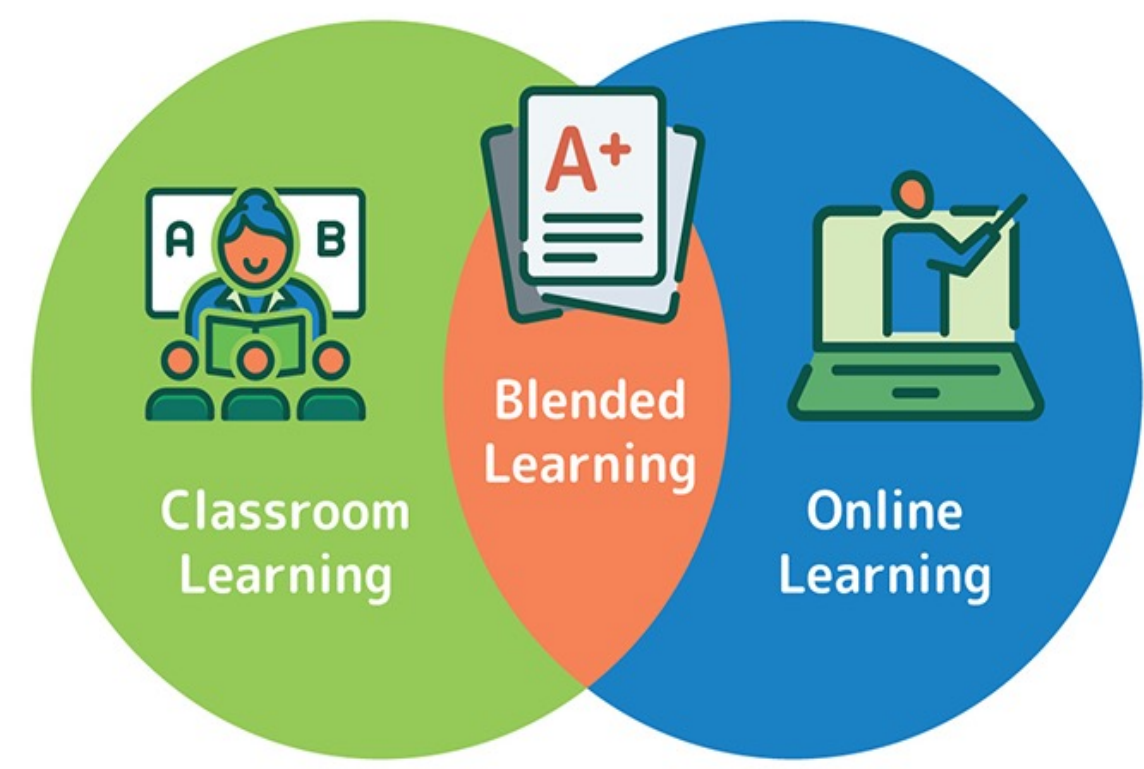




Evaluation of a blended learning programme aiming to improve students' skills and confidence in clinical assessment within obstetrics and gynaecology.

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Aim

This study set out to evaluate the effectiveness of a blended learning programme (online lectures and simulation teaching) in improving students' skills and confidence in clinical assessment within Obstetrics and Gynaecology (O&G).

Introduction

- Over the last few decades, the medical curriculum has undergone significant change, which was further escalated by the Covid-19 pandemic.
- 78% of medical schools successfully managed the rapid switch to online teaching and the popularity of simulation programmes is growing.
- However, the concept of blending these together for the benefit of medical students is an underexplored area.
- At the University of Southampton, 4th year Obstetrics and Gynaecology (O&G) students undertake a simulation session alongside attending standard online lectures (Figure 1).
- This project aimed to assess the effectiveness of a blended teaching programme (simulation teaching and lectures) introduced to students on their O&G placement.

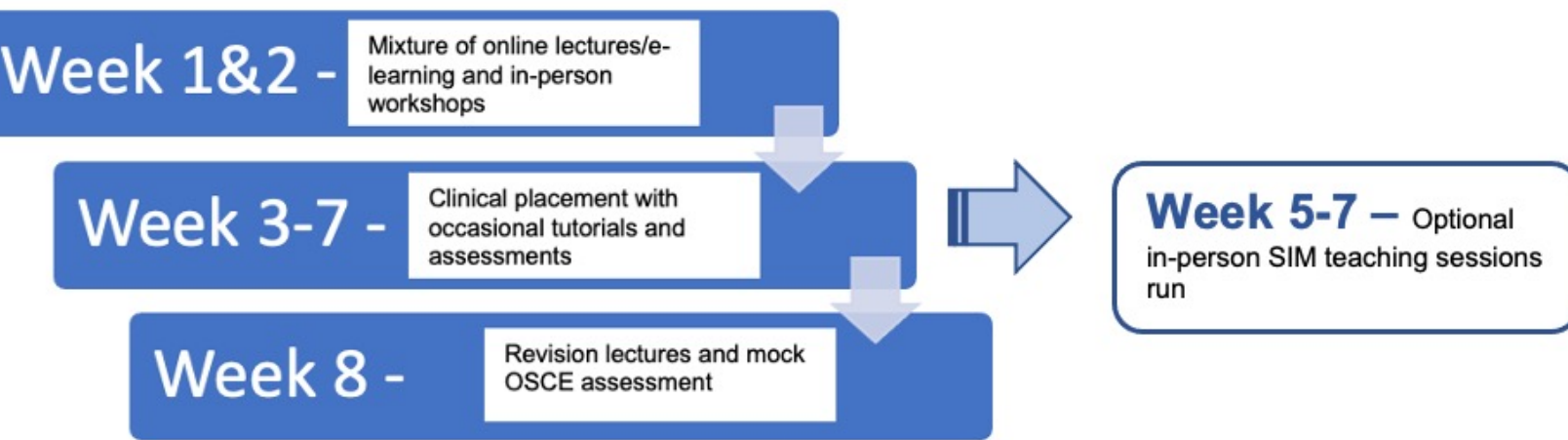


Figure 1: Flowchart showing the structure of the Yr. 4 obstetrics and gynaecology teaching

Methodology

We offered all 4th year medical students who were on their obstetrics and gynaecology placement between September to December 2021 an opportunity to sign up to simulation teaching.

Pre-simulation Questionnaire

Before the session each student completed a pre-simulation questionnaire assessing their confidence on different areas of O&G. This questionnaire consisted of 5 questions and participants were asked to indicate their agreement with each question in a five-point Likert-style response format. This ranged from 1 indicating "Strongly Disagree" to 5 indicating "Strongly Agree" (Figure 2).

Post-simulation Questionnaire

After the simulation the students completed a post-simulation questionnaire which assessed their confidence levels after completing the simulation. As well as Likert-style responses, the questionnaire also gave the students a chance to comment on things they would take away from the sessions and suggestions for improvements for future sessions.

Interviews

The students who filled in the questionnaires were subsequently offered the opportunity to talk more about their experience of blended learning in a virtual semi-structured interview. The interviews explored the concepts of improving confidence on O&G clinical skills including history taking and examinations and the students' views on the simulation teaching.

2. Obstetrics station					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I feel confident in obstetric examinations	1	2	3	4	5
I feel confident in using an ABCD approach in assessing an obstetric patient	1	2	3	4	5
I feel confident in common obstetric antenatal conditions	1	2	3	4	5
I feel confident in the management of these conditions	1	2	3	4	5
I feel confident in common obstetric complications	1	2	3	4	5

Figure 2: Example question that was featured in both the pre- and post-questionnaires

Conclusion

Blended learning for students on O&G placement increases confidence in clinical skills, including history taking, clinical examinations and assessing the unwell patient. It should be considered an effective method of learning during the Covid-19 Pandemic.

Results

Questionnaires

17 students completed a pre- and post-simulation questionnaire. There was an increase in mean confidence scores in performing O&G examinations, and making an ABCDE assessment in the unwell patient after attending the simulation training. All students agreed that the simulation-style teaching was more engaging than traditional teaching, and the most useful aspect was practising history taking.

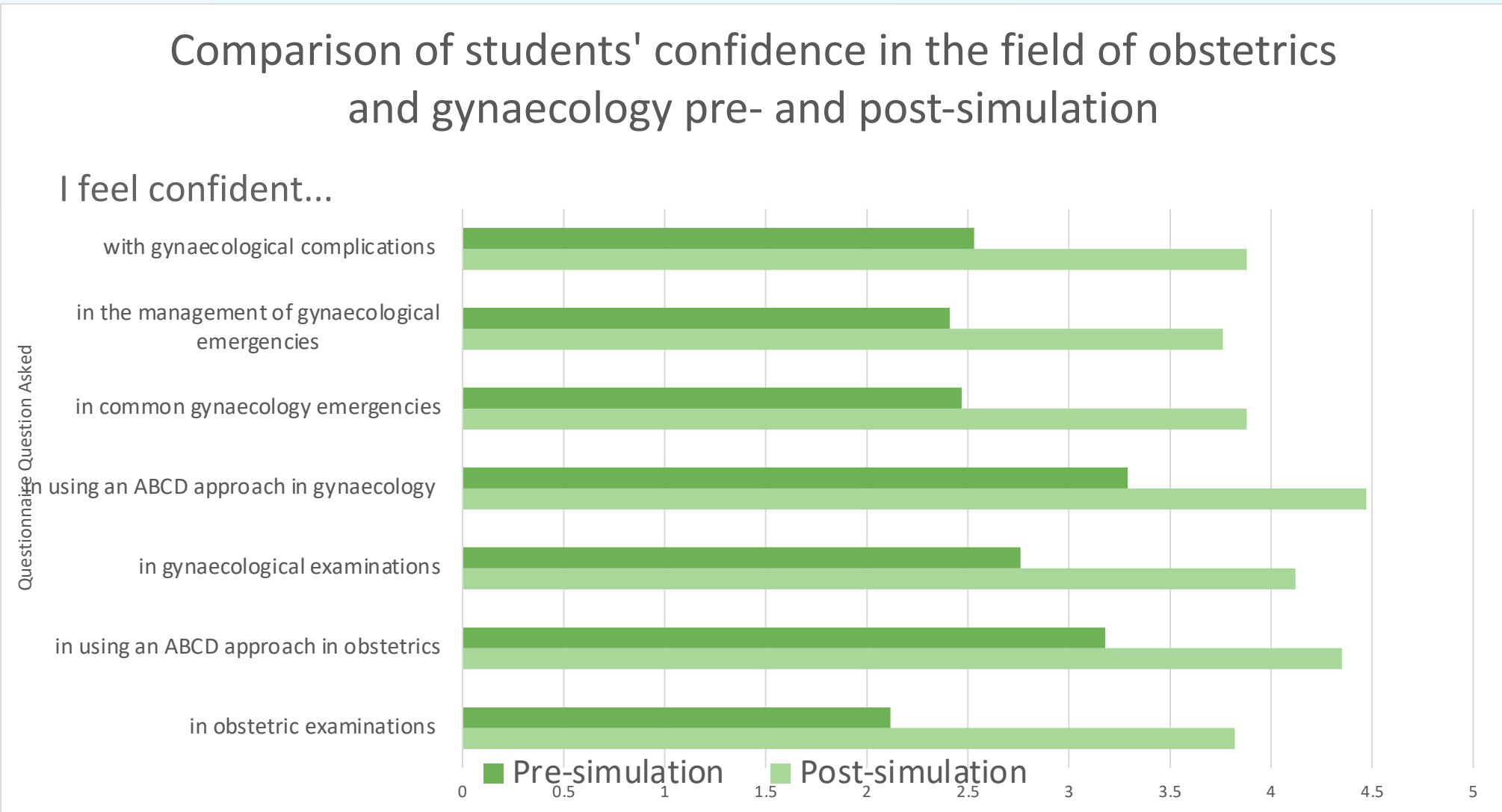


Figure 3: Comparative bar chart showing the mean change in students' confidence before attending the simulation and after attending - Strongly Agree (1), Disagree (2), Neutral (3), Agree (4), Strongly agree (5).

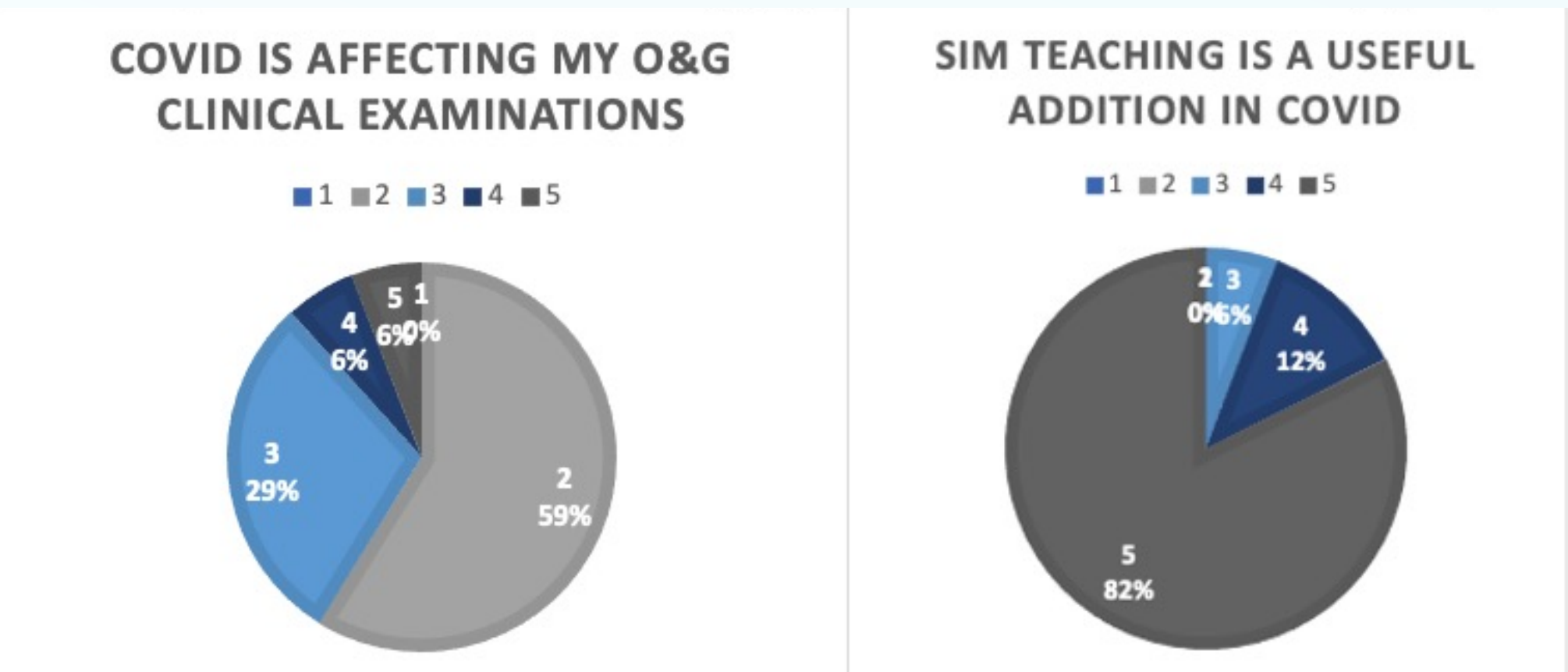


Figure 4: Pie charts to show students opinions on teaching during the COVID-19 pandemic. Strongly Agree (1), Disagree (2), Neutral (3), Agree (4), Strongly agree (5).

Interviews

Semi structured interviews (n=2) revealed that students welcomed a blended learning style of teaching, especially during the time of the Covid-19 Pandemic where patient contact is limited and more consultations are taking place virtually. Although not a replacement for seeing patients on the wards, students felt that simulation teaching alongside online lectures improved their confidence in clinical skills, allowed them to obtain personalised feedback and was good practise for their end of placement assessments.

The interview transcripts were thematically analysed and grouped the students' answers into 4 main themes:
- blended learning, simulation, confidence and COVID-19

Generally online lectures were seen as a negative, with students preferring to learn in-person and on the wards.

