

Encouraging Early Surgical Exposure: A Virtual Theatre Experience

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Background

During the COVID-19 pandemic, medical students have had limited opportunities to attend the operating theatre, and even outside of the current climate, a medical student's exposure to the operating theatre can be very restricted. It is known that early exposure to surgery increases the likelihood of students pursuing a surgical career (McGuire *et al* 2019). In view of this, the current restrictions surrounding student placements created a challenge for educators to provide this early exposure to theatre in a safe and effective manner. Although the operating theatre undoubtedly provides unique learning opportunities, it can be a daunting environment for medical students. A lack of familiarity with the roles of theatre staff members and proper theatre etiquette have been shown to be contributing factors (Fukuta *et al* 2021). It has been shown that familiarising students with the theatre environment prior to attending the operating theatre in person results in a more useful and satisfactory experience (Fernando *et al* 2007).

Aims and Objectives

Our objectives were -three-fold:

- 1) We wanted to ensure all of our medical students were provided with an equal opportunity to meet their assigned course learning objectives during this challenging time. The students learning outcomes were:
 - Understanding the roles and expertise of theatre staff
 - Understanding the importance of teamwork in routine and emergency situations
 - Awareness of the complete patient journey
 - Basic understanding of theatre equipment
 - Understanding the importance of infection prevention.
- 2) We aimed to encourage enthusiasm for specialties such as Surgery, Anaesthetics and Obstetrics when real-world experience was lacking.
- 3) We aimed to produce a valuable learning resource that could continue to be used as an introduction to the theatre environment, even beyond the restrictions of the COVID-19 pandemic.

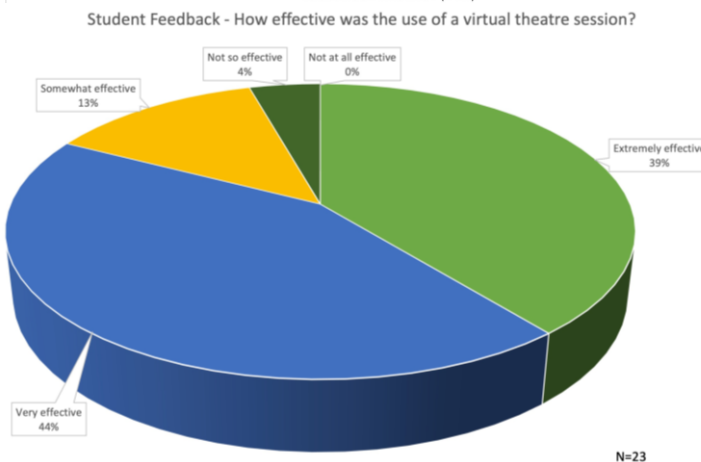
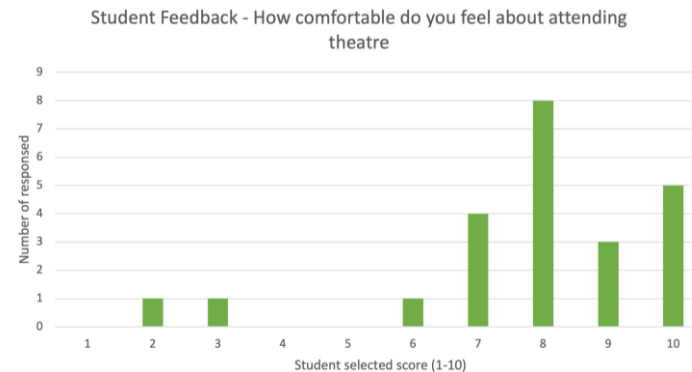
Method

As a theatre teaching team at a university hospital, we devised a virtual theatre session demonstrating a patient's journey through an elective surgical admission. We incorporated the use of a multidisciplinary team including surgeons, anaesthetists, nurses, Operating Department Practitioners and audio-visual professionals. We used a high-fidelity simulation team to storyboard, shoot and edit a theatre session. In the video we demonstrated: how a theatre is set up and run; the roles and expertise of each theatre team member; the relevance of theatre equipment and the importance of teamwork. The 30-minute virtual theatre production was delivered remotely via video conference to 160 medical students. A live commentary was provided by the theatre teaching team, allowing concurrent interaction with the students.

Following delivery of the session, we asked students to complete a post-experience questionnaire. The students were asked to rate their experience on a Likert scale from 1-10, or a scale of 'not at all effective' to 'extremely effective'. The questions aimed to assess the extent to which the students felt their learning objectives had been met, their opinions of the effectiveness of the virtual theatre session as a teaching modality, and their subsequent confidence about attending a theatre session in person.

Results

Feedback was obtained from 23 students and was overwhelmingly positive. 100% of the surveyed students were either satisfied or very satisfied. 83% of students felt that the session was extremely or very effective and 91% of students stated that their learning outcomes and expectations had been met. Additionally, 87% of students felt more comfortable about attending theatre following this teaching experience, giving a confidence rating of more than 6 out of 10.



Discussion

The feedback obtained shows that the virtual theatre teaching session was received well. Our session provided a good introduction to the operating theatre, taking the students through the patient journey from the anaesthetic room to recovery. We hope that this will encourage more medical student participation in theatre and eventually lead to more interest in pursuing surgical specialities as a career choice.

A significant limitation of our project was the low response rate to our request for feedback. This may have been because feedback was obtained via an online survey which is notorious for poor student response rates (Nulty 2008). Additionally, a pre- and post- questionnaire on confidence in attending theatre would help quantify the success of the virtual theatre session further.



Conclusion

The theatre environment can be an intimidating and unfamiliar place for medical students. Although our virtual theatre session was developed in response to lack of access as a result of the pandemic, it may also have a role in future teaching sessions as a useful introduction to the theatre environment.

References & Acknowledgements

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