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## Abstract

**Context:** Simulated exercises are now used widely for education and evaluation in the medical profession (1). Simulated scenarios are beneficial to both students and patients, as they protect both realism and enhance patient safety (2). The aim of our pilot study was to evaluate the experiences of medical students taught on three standardised paediatric scenarios. **Description:** We generated three new paediatric scenarios, based on common emergencies. Students worked individually or in pairs to complete the exercise. The 'Satisfaction with Simulation Experience Scale' was used to gauge the students' experiences (3). Each of the 18 items were scored from 1 'strongly disagree' to 5 'strongly agree', as well as an opportunity to provide freehand comments. **Observation:** Of the 36 students invited to participate, 11 (31%) responded and agreed to take part. The maximum and minimum scores for each of the 18 items was 5 and 4 respectively. The median for each of the 18 items was 5. 5 (45%) of the students rated 5 for all of the feedback questions. 10 (91%) of the students rated 5 that it was a 'valuable learning experience' and 9 (82%) rated 5 that it 'developed their clinical decision making skills'. 8 (72%) gave free text comments. Comments included: 'very useful' (2), 'great experience' (2), 'really useful' (1), 'enjoyable' (1), 'fantastic session' (1) and 'very good session' (1). **Discussion:** It was clear that the students found the scenarios very useful. Almost half of the students rated 5 for every feedback question. The free text comments further highlighted their satisfaction with the sessions. It was apparent that each scenario took one hour to prepare and deliver; this would pose a significant resource burden to train 270 undergraduates per annum. In conclusion, we demonstrated that paediatric simulation is an effective and desirable teaching tool for medical students. It remains to be seen whether there are sufficient resources to allow for these scenarios to be incorporated into the undergraduate curriculum.

## Objectives

The aim of this pilot study was to perform simulated paediatric scenarios with a cohort of Glasgow medical undergraduates and gain qualitative feedback as to their experiences.

## Methods

During the 5 week child health block (October-November), all students were invited to take part in the simulated scenarios. All the students were in their final year of the MBChB course, at the University of Glasgow. These sessions were split across two afternoons, with the same scenarios used both times. Three scenarios were constructed, covering common paediatric emergencies: anaphylaxis, bronchiolitis and meningococcal sepsis. Our sessions were delivered using the SimBaby© simulated mannequin. After the scenarios, the students were debriefed and micro teaching used to address learning needs. At the end of the sessions, the 'Satisfaction with Simulation Experience Scale' (SSE) was used to evaluate student satisfaction (Fig 1) (3). This is an 18-point, validated questionnaire, assessing subjective simulation experience. They were also given the opportunity to give additional comments which they thought relevant. The feedback forms were anonymised to encourage open feedback.

	1	2	3	4	5
This was a valuable learning experience					
The simulation tested my clinical ability					
The simulation helped me to recognise my clinical strengths and weaknesses					
The simulation helped me to recognise patient deterioration early					
The simulation enabled me to demonstrate my clinical reasoning skills					
The simulation developed my clinical reasoning skills					
The simulation developed my clinical decision making ability					
The simulation helped me to apply what I learned from the case study					
The simulation caused me to reflect on my clinical ability					
The debriefing provided an opportunity to ask questions					
The facilitator made me feel comfortable and at ease during the debriefing					
The facilitator's questions helped me to learn					
The facilitator provided constructive criticism during the debriefing					
The facilitator summarised important issues during the debriefing					
I had the opportunity to reflect on and discuss my performance during the debriefing					
The facilitator provided feedback that helped me to develop my clinical reasoning skills					
I received feedback during the debriefing that helped me to learn					
Reflecting on and discussing the simulation enhanced my learning					

Figure 1: Satisfaction with Simulation Experience Scale (SSE)

## Results

Of the 36 students invited to participate, 11 agreed to take part (9 male, 2 female). The maximum and minimum scores for each of the 18 items was 5 'strongly agree' and 4 'agree', respectively. The median and mode for each of the 18 items was 5. 5 (45%) of the students rated 'strongly agree' for all of the feedback questions. 10 (91%) of the students rated 'strongly agree' that it was a 'valuable learning experience' and 9 (82%) rated 'strongly agree' that it 'developed their clinical decision making skills'. Out of the 11 students, 8 (72%) gave free text comments. Comments included: 'very useful' (2), 'great experience' (2), 'really useful' (1), 'enjoyable' (1), 'fantastic session' (1) and 'very good session' (1).



## Conclusions

It is clear that medical students value simulation as a useful learning and revision tool. In the context of paediatric simulation, it is clear from our results that it is an acceptable, and much desired, educational tool. Our feedback form demonstrated that students, on average, strongly agreed with each of the experience questions. Although our sample size was small, feedback was unanimously in favour of embedding paediatric simulation into the undergraduate curriculum. This pilot study has identified several challenges, which must now be considered. Firstly one of the difficulties with integrating these sessions into the curriculum, is the length of time each scenario takes to run. On average, each scenario lasted an hour, including time to brief and debrief. Finding space in the programme for these sessions will be a significant undertaking, whilst not compromising core teaching time. Also, to ensure sustainability, we will need to ensure we have the necessary trained faculty to deliver these teaching sessions in a regular and consistent manner. Further analysis is required to determine the feasibility of integrating paediatric simulation into the undergraduate curriculum.

## References

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