



Healthcare Simulation for High School Students: It's Not Just for Grown-Ups

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INTRODUCTION

Simulation is fast becoming a new and preferred way of educating the adult learner¹. There have been many articles describing the techniques and uses of simulation in medicine and beyond, however there has been a paucity of articles in the young adult learner, namely high school students. Although still considered young learners, many high school students learn as adult learners do and simulation may be a great method to educate them.

There is a big challenge in teaching for this cohort in the realm of sexual education and choices². For years there has been a struggle of accurately describing and portraying the results of sexual choices, namely the act of birth. In other words, diagrams can only do so much. In the absence of these education tools, students are going to popular media for idealized and unrealistic portrayals.

To this end, a brief observational study was done. With local high school students a simulated birth was performed and explained in real time. The goal of the study was to see if there was any influence on high school students and if there was any desire to have more simulated experiences.

STUDY DESIGN AND METHODS

Over a three day period with three different groups of students (for a total of 47), birth was simulated using the Gaumard Noelle birth manikin. The students were all consented high school students involved in a scientific learning group. During the 30 minute session, birth was explained and performed with Noelle by an emergency medicine resident and/or attending. After each session a 6 question survey was given to each student to fill out and return. There was a 100% response rate with 96% completing all 6 questions.

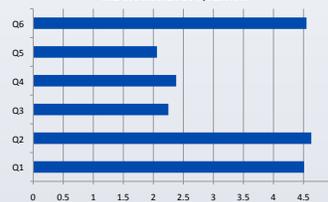
QUESTIONNAIRE STATEMENTS

1. I Learned more about the birth process by watching the simulation
2. I think seeing the simulation of birth was useful
3. I believe the simulation was an unrealistic representation of real birth
4. Seeing the simulation of birth will impact my sexual choices in the future.
-If you agree, please explain:
5. Seeing the simulation of birth created more questions than answered them.
6. I would like more simulation sessions and/or demonstrations as part of my training

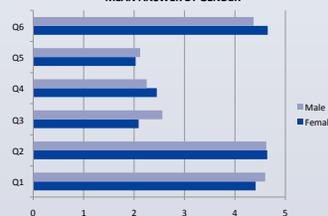
RESULTS

The questionnaire was six statements that the students were able to agree or disagree with on a scale of 1 to 5. A response of 1 meant the student disagreed, 2 somewhat disagreed, 3 neutral, 4 somewhat agreed and a response of 5 meant the student agreed. The students were also encouraged to write a comment for question 4 if they agreed. Only 7/47 (14.8%) students left comments and only one of those was male.

MEAN ANSWER BY QUESTION



MEAN ANSWER BY GENDER



DISCUSSION

The goal of this study was to see if there was a need and/or desire for more simulation in the education of high school students. Overwhelmingly the students felt that birth simulation was useful (mean 4.64 with 95% CI 4.44-4.82) and realistic (disagreed that it was unrealistic with mean 2.25 with 95% CI 1.84-2.66) as well as having a desire for more simulation education (mean 4.56 with 95% CI 4.32-4.78). Most of the students felt that the simulation would have no impact on their sexual choices (mean 2.38 with 95% CI 1.94-2.82).

One of the limitations of this study was that these high school students were motivated learners, doing a special science curriculum and it is unclear if simulation would be as warmly welcomed in other settings as it was with these students. It was a small group and only one high school. Another limitation was that the students were overwhelming female. However, there was little difference between the response averages between the two gender groups.

CONCLUSIONS

These results are encouraging for the future use of simulation education with high school students. Simulation has the potential to keep this difficult education group engaged and interested in the teaching point. With simulation, educators also have the ability to tackle difficult to explain topics, especially those related to healthcare. This observational study shows that this cohort group is a great target for simulation education and that other groups should be encouraged to include programs in their simulation centers.

REFERENCES

1. Konia M and Yao A, Simulation a new educational paradigm? *J Biomed Res* 2013 March 27(2):75-80.
2. Eisenberg et al Barriers to providing the sexuality education that teachers believe students need. *J Sch Health* 2013 May; 83 (5): 335-42.

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