Using a heart operation video with live comments to inspire students in pre-clinical studies - A pilot study

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Abstract

A simple moment of inspiration based on the American empiric psychologist Csíkszentmihályi’s theory about optimal experience, internal motivation and flow was presented to medical students. The students, from the preclinical terms, were exposed to a movie showing a routine heart operation (coronary bypass) with comments during the film. The team presenting the film consisted of nurses in cardiothoracic and vascular anesthesia, a cardiothoracic surgeon, and a perfusionist. Questions from the students were answered by them. Thereafter, there was a panel discussion with junior specialists in cardiothoracic surgery and cardiology about the years after graduating. The moment was evaluated using Touchpoint® and one single question: What is your opinion about the inspiration moment? Of the 77 participating students 65 (84%) answered that the moment was “very good” and 12 (16%) answered “good”.

These preliminary data suggest that the method may possibly be an adequate tool to increase internal motivation among preclinical semester medical students.

Keywords: student inspiration, clinical reality, motivation

Article

Background

The American empiric psychologist Csíkszentmihályi wrote that “Joy is the best teacher”(1). Motivation is the most important driving force in all learning; if students enjoy learning, their hard work will not only be useful but also enjoyable.
Csikszentmihalyi also mentioned that all talented youth have the possibility to enter into a flow condition in which the individual’s capability matches the challenge, and the individual works at her or his full capacity and the time dimension almost disappears. The whole process begins with an optimal experience (1). In medical schools throughout Sweden test results for students enrolled in preclinical-semesters have started to decline. We therefore decided, in line with Csíkszentmihályi’s thoughts, to try to boost student joy and motivation in their preclinical studies. We aimed to construct an “optimal joyful experience” for students at the Medical School in Linköping, in order to help them be more motivated and thereby achieve better results. We hypothesized that if we show students the importance of preclinical knowledge in their future clinical work they will be more motivated to learn not just for good marks but for possibly being better clinicians in the future.

“The inspiration afternoon”

The planned inspirational activity was a movie showing a routine coronary artery bypass operation with dubbed and live commentary, followed by question-and-answer session with students and a panel consisting of a junior cardiothoracic surgeon and a junior cardiologist. We elected to hold this activity at the beginning of the autumn semester on the first day after the summer holidays. The activity was open to all medical students, and approximately 80 students participated, mostly from the third semester. A 50-minute movie showing a routine open heart surgery case was presented, with commentary from three individuals from the Cardiothoracic Surgery department: a nurse anesthetist, an operating room nurse and a perfusionist. The activity was supervised by a senior consultant in clinical physiology and a senior consultant from cardiothoracic anesthesia. Prior to the presentation we had a short 5-minute introduction by the activity leader first author about the aim of the activity, followed by the 50-minute film and a 15 minutes of Q&A moderated by the activity leader, and ending with a panel discussion with the junior physicians. There were 80 participants at the beginning of the activity, and 3 students left after 30-40 minutes. The remaining 77 students participated in the full activity and asked numerous relevant questions, indicating an avid interest in the clinical issues that were presented. Their questions covered topics in anatomy, biochemistry, physiology, pharmacology and surgical technique. The questions were answered over approximately 15 minutes by the nurse anesthetist, an operating room nurse and a perfusionist and also by activity leader, with the junior physicians entering the discussion gradually. The panel discussion centered on the physicians’ life after graduation from Medical School. The junior physicians first described their career path after graduation from Medical School, and then discussed the everyday realities of their present work. The panel discussion lasted 35 minutes.

Results

We evaluated the activity using Touchpoint® and asked a single question: What was your opinion about this inspirational afternoon? Students answered the question at the end of the activity, choosing from four possible answers: very good, good, neutral, bad, very bad. All of the 77 students who completed the entire activity answered the poll (with one answer per student), with the results shown in Figure 1: 65 students (84%) considered the activity to be very good and 12 students (16%) considered it to be good.
We describe the results of a pilot activity meant to motivate medical students enrolled in preclinical studies by giving them a glimpse of an everyday clinical scenario, and by offering insight and reflection from junior clinicians. The majority of the participating students considered the inspirational activity as being very good, suggesting that this was an optimal experience.

Our aim is to define factors that have negative and positive effects on students’ motivation in order to find opportunities for interventions leading to better motivation and hopefully better results. Desirable effects include improved student motivation to learn and to have self-discipline, and perseverance to succeed with their studies at Linköping Medical School or at any medical school in the world.

In the words of Csikszentmihalyi: “The psychical negentropy is a condition in which one feels whole and acts with clarity, commitment and enthusiasm”, which includes internal motivation (2). The negentropy also always demands mental energy (2). Based on Csikszentmihalyi we organized an activity in order to provide a negentropic optimal experience for the students, and we hypothesized that the “moment” will be followed by enhanced motivation. Csikszentmihalyi stated: “In other words, the enjoyable course is the one in which the student will do best”(2).

As the flow is the way to the internal motivation. This will lead to better results and the student will get the best result in a class that is enjoyable. Creating enjoyable classes may begin with an enjoyable moment of inspiration built on a picture of future career and predicated on the usefulness of incorporated preclinical knowledge. Designing enjoyable courses may be a major challenge to every university.
Our study had a number of limitations. The goal of the activity was to assess its feasibility and the number of participants was relatively low. Moreover we had only one question to evaluate the moment. It is possible that only the more motivated students attended this late-afternoon activity, and hence it is unclear if the results are representative of all students at our Medical School. We measured the students’ immediate impression, but it is unclear if the activity had any lasting impression on their long-term motivation or on their future examination test scores. These effects would have to be examined in future studies.

In summary, our preliminary results indicate that a motivational activity was well received by medical students enrolled in preclinical studies. Future studies will be needed to assess the long term effects of similar activities, especially when applied to a wider audience.

Take Home Messages

- The presentation of future clinical activities, in this case a movie about coronary bypass operation, seems to attract medical students.
- The students were caught up in the moment, and engaged enthusiastically in the discussion about advanced techniques. This may help emphasize the importance of preclinical knowledge in their future careers.
- The inspirational afternoon possibly was a negentropic, optimal experience for the students, and as such it is conceivable that it may serve as a foundation for improved student motivation.

Notes On Contributors

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Bibliography/References


Appendices

Declaration of Interest

The author has declared that there are no conflicts of interest.