Methods

In conjunction with the Virginia Tech School of Neuroscience, we designed, initiated, and conduct twice yearly, a semester-long, experiential, deep immersion, undergraduate course entitled “Clinical Neurosciences in Practice.”

In this course, our team holds weekly seminars on various nervous system disorders, their medical management, and the related socio-economic and ethical ramifications. Students prepare discussions on various disorders and evaluate and critique related scientific journal articles. Students, then spend 4-6 hours per week with our team in all activities including surgery, rounds, and consultations. They actually scrub in on several operations during the semester. Students write weekly papers on various “related questions of the week” (predominately socio-economic, ethics, and personal-response-related). They prepare personal statements and undergo mock graduate school interviews, patient encounters, and even malpractice depositions. As a “final exam”, students must give in-depth presentations on specific patients, their radiological studies, their hospital courses, and related discussions about their disorders. They are also required to take two full nights of neurological call with our team twice in the semester.

We have studied student reactions to patient death, gore, and tragedy through “paper and pencil survey” (Likert Scale Questionaire), assigned essays, group discussions, and personal interview.

Results

80 students have participated in the course. 2-3 students per semester have become vasovagal or reported feeling nauseated or faint in witnessing care. In all, these were single events, and no student has withdrawn from the course or asked for limited exposure. The grand majority report rapid “acclimatization” to the death, acute tragedy, and maiming that they witness. The grand majority report that they think they could handle these entities throughout a career without terrible difficulty. Almost 20 percent, however, report that the emotional impact of the constant sadness they encountered would deter them from such a career. Most students report that the chronic sadness encountered, more than reported acute exposure to death and gore, weighed on them. The majority reported exhilaration when experiencing the many life and death situations they encountered.

We employed a 1-10 Likert Scale Survey about student responses to all the death and tragedy, I representing strongly disagree and 10, strongly agree with the following statements about the students’ experiences in the course.

Reported are the average Likert scores.

I felt well prepared for all the death and tragedy of the experience: 8 (moderately agree)

Discussion

Undergraduate student responses to death, maiming, and acute tragedy is remarkably adaptive and rapid. Even when plumbed through in-depth interview and discussion, most students felt that they could process the horrific events that they experienced, and could grow from them. Few heavily personalized these entities, or generalized them to concern for their loved ones. None of our students thus far have “punched out” of the course or asked for a less intense exposure.

There might be an auto-selection process going on here – the majority of our students are interested in healthcare professions. One way or the other, it does suggest that the initial barrage of death and tragedy is well withstood by many – that intensive and prolonged preparation may not be necessary.

This is in contradistinction to our work with our faculty and residents who report feeling that all the surrounding death and mayhem creep deep into their psyches. They worry particularly about their loved ones. They report greater sleep disturbance and nightmares. Perhaps the difference lies in the chronicity of exposure. Our providers are subjected to it all for 80 or more hours every week, year after year. This might suggest that periodic breaks from the experiences would be of great benefit – that even supremely resilient providers may need time to “recharge their batteries” before they wade into the next onslaught of human tragedy.