



Letter to the Editor

Initiatives to reduce neurophobia in medical students: a novel neuroscience conference model



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Dear Editor,

We read with great interest the recent article published in your journal by Roze et al. [1] describing the impact of their mime-based role-play initiative in helping medical students to understand neurological seminology and reduce neurophobia. We commend the authors for their efforts to develop ways to support neuroscience education for medical students as we believe this is important for encouraging more students into the brain-related specialties (neurology, neurosurgery and psychiatry). Here we wanted to describe a novel conference design we developed to support neuroscience education outside the mainstream curriculum and reduce neurophobia, which has been reported to exist at our institution [2], amongst medical students.

Student neuroscience conferences offer an additional opportunity for exposure to neuroscience outside the core teaching time. Not only will this offer students a chance to reinforce learning but it can provide an alternative teaching approach from a leading expert who is passionate about their field. As most student conferences are designed and organised by students themselves, they may be more likely to invite speakers who they have found to be engaging and inspiring teachers. In addition, conferences can be designed with specific groups of students, with particular levels of pre-existing knowledge, in mind. This can help to reduce perceived complexity as speakers can explain their area of interest starting from students' existing knowledge base.

Our conference focused on four fundamental neuroscience topics: Neuro-oncology, Parkinson's Disease, Neurodegeneration and Neuropsychology. For each topic we ran four parallel streams, based on previous exposure to neuroscience, which were; school students and first year students, intercalating medical students and second/third year neuroscience students, clinical medical students and finally students pursuing post-graduate degrees. The parallel sessions were interspersed with keynote lectures for all conference delegates, irrespective of their streams, exploring cutting edge innovative neuroscience topics outside the university neuroscience curriculum. Additional events during the day included CV workshops run by clinicians and neuroscientists, a career's fair with various representatives from industry and healthcare and a poster presentation session that provided students with the opportunity to present research related to the neurosciences.

118 students attending the conference were asked to complete a 9-

item questionnaire prior to the conference and a 6-item questionnaire following the last session of the conference related to motivation to pursue and perception of the brain-related specialties. Demographic data including age and gender were collected on the pre-conference questionnaire. 30.5% of attendees completed questionnaires. 29 participants completed the pre-conference questionnaire and 12 completed the post-conference questionnaire. Anonymous identifier codes were used to allowing pairing of pre- and post-conference responses. Unfortunately only five paired responses were collected so pre- and post-conference data was analysed independently.

79.3% of respondents were aged 18–24 and 67.9% were female. 37% of attendees had no previous experience of the neurosciences with the remaining students either having completed another degree in the neurosciences or a special study module as part of their medical curriculum. 35.7% did not agree that their formal teaching in neurosciences had been easy to understand.

After attending the conference, 66.7% of student agreed they were more interested in the neurosciences than before the event and 100% felt conferences were important for increasing neuroscience knowledge. 20% of students who responded felt they had a “greater appreciation” for the neurosciences, regardless of the stream they attended. The stream-based structure allowed student to learn about a neuroscience topic from a level that was comfortable and based on familiar material with comments from students that the conference helped “clarify knowledge” and “explore areas [they] had not been exposed to”. Students also commented that they found speakers to be “engaging”, “passionate” and presented with “clarity”, further stimulating interest.

Students further highlighted the importance of such conferences in that they “engage society”, especially enlightening students with “new discoveries” and “cutting-edge research” in the neuroscientific field. Learning about innovative techniques and wide range applications from outside the core curriculum offers students a glimpse into the “life of a neuroscientist or neuro-clinician” and potential career prospects. Additionally, the opportunity to network during lunch and evening receptions provide a platform for collaboration and thought-provoking conversation with speakers, faculty and peers.

Overall we have found the multi-streamed neuroscience conference with allocation dictated by previous neuroscience experience to be a useful format for engaging students and improving knowledge of

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neuroscience topics. We believe this multi-stream structure is an optimal skeleton for future neuroscience conferences to be built on with the aim of reducing “neurophobia” and encouraging student interest in neurosciences.

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