Neurophobia in Medical Students and Junior Doctors—Blame the GIK

Kai-qian Kam*, 1MBBS, Glorijoy SE Tan*, 1,4MBBS, Kevin Tan, 2,3MBBS, MRCP, Erle CH Lim, 3MBBS, FRCP, Nien Yue Koh, 4MBBS, MRCP, Nigel CK Tan, 2,3MBBS, FRCP

Abstract

Introduction: We aimed to create a definition of neurophobia, and determine its prevalence and educational risk factors amongst medical students and junior doctors in Singapore. Materials and Methods: We surveyed medical students and junior doctors in a general hospital using electronic and paper questionnaires. We asked about knowledge, interest, perceived difficulty in neurology, and confidence in managing neurology patients compared to 7 other internal medicine specialties; quality and quantity of undergraduate and postgraduate neuroscience teaching, clinical neurology exposure, and postgraduate qualifications. Neurophobia was defined as ≤4 composite score of difficulty and confidence with neurology. Results: One hundred and fifty-eight medical students (63.5%) and 131 junior doctors (73.2%) responded to the questionnaire. Neurophobia prevalence was 47.5% in medical students, highest amongst all medical subspecialties, and 36.6% in junior doctors. Multivariate analysis revealed that for medical students, female gender (OR 3.0, 95% CI, 1.3 to 6.7), low interest (OR 2.5, 95% CI, 1.0 to 6.2), low knowledge (OR 10.1, 95% CI, 4.5 to 22.8), and lack of clinical teaching by a neurologist (OR 2.8, 95% CI, 1.2 to 6.6) independently increased the risk of neurophobia. For doctors, low interest (OR 3.0, 95% CI, 1.3 to 7.0) and low knowledge (OR 2.7, 95% CI, 1.2 to 6.2) independently increased the risk of neurophobia, and female gender was of borderline significance (OR 2.0, 95% CI, 0.9 to 4.6). Conclusion: Neurophobia is highly prevalent amongst Singapore medical students and junior doctors. Low interest and knowledge are independent risk factors shared by both groups; female gender may also be a shared risk factor. The mnemonic GIK (Gender, Interest, Knowledge) identifies the risk factors to mitigate when planning teaching strategies to reduce neurophobia.

Key words: Medical education, Phobia, Trainee doctors

*Equal Contribution

1Yong Loo Lin School of Medicine, National University of Singapore, Singapore
2Office of Neurological Education, Department of Neurology, National Neuroscience Institute, Singapore
3Department of Medicine, Yong Loo Lin School of Medicine, National University of Singapore, Singapore
4Department of General Medicine, Tan Tock Seng Hospital, Singapore

Address for Correspondence: Dr Nigel Tan, Department of Neurology, National Neuroscience Institute, 11 Jalan Tan Tock Seng, Singapore 308433.

Email: nigel.tan@alumni.nus.edu.sg.