Personal and educational experiences of medical students on attitudes towards Psychiatry

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Abstract

Introduction: Given the increasing global burden of mental illness, the existing shortage of psychiatrists internationally is a concerning development with a deteriorating trajectory. In 2016, only 5% of US medical students considered a career in psychiatry, and the situation is similar in other areas (e.g., European countries). Attracting medical students to the field of psychiatry is evidently necessary. This paper investigates European medical students' attitudes towards psychiatry, their intentions to pursue psychiatry as a career, and the role of different factors such as personal experience and education on their interest in psychiatry.

Methods: A cross-sectional survey was analyzed from 799 medical students in two European countries. Data was collected in 2016. Participants completed a survey on their attitudes towards psychiatry, their medical education regarding psychiatry, and personal experiences. Cross tabulations with chi-square tests were performed for inferential analyses using a significance level of 0.05.

Results: The number of years spent in medical school, the students' personal experiences, and the perceived quality of education was significantly associated with specialty choice and ranking of psychiatry relative to other specialties. Students' exposure to internships, psychiatric placements, and their view on psychiatric instructors also played a significant role in choosing psychiatry as a profession.

Conclusions: The systematic evaluation of students' attitudes towards psychiatry and motivational factors for pursuing psychiatry as a specialty, such as psychiatric education in medical school and personal experience, can inform necessary changes in the recruitment of students to the field. Efforts must address the worldwide shortage of psychiatrists to effectively reduce the burden of disease associated with mental health and substance use.

Introduction

For almost half of the world's population in 2014, there was less than one psychiatrist per 100,000 people, making it impossible to cover even the most basic mental health demands[1]. Even in highly developed European countries psychiatrists are scarce and the availability of psychiatrists differs significantly between countries. This is reflected in the psychiatrists per 100,000 citizens in a country, as reported by the World Health Organization in 2022. As of 2022, there are 5.9 to 48 psychiatrists in European countries per 100,000 citizens[2]. This extensive range of availabilities in psychiatrist results in unmet needs in the field of mental health and reflect the inhomogeneous global landscape of psychiatry. The shortage of psychiatrist is more severe than shortages faced in virtually any other specialty[3]. The enormous demand for psychiatrists, combined with the increasing burden of mental illness worldwide, has increased the number of untreated individuals experiencing mental illness. With estimated 970 million people globally with mental illness in 2019, an estimated number of half of these individuals are treated in first world countries[4]. The COVID-19 pandemic has further worsened this[5]. The demand for psychiatric services is expected to exceed the psychiatrist supply in 2025 by over 15,400 full-time

equivalents (FTE) psychiatrists[4]. This shortage of psychiatrists is also described as “the recruitment crisis”[6].

In Europe, the literature suggests that general attitudes towards psychiatry (ATP) among medical students are positive at the beginning of their medical school training[7–12]. However, these positive attitudes decline throughout medical school[13–15]. This deterioration has been partially attributed to how psychiatry is presented throughout education. For example, psychiatry is sometimes reported as a “symptom-based pseudo-scientific discipline”, with other fields offered as more scientific, prestigious, or of greater medical significance[16,17]. Such influence throughout medical school may also result in students not pursuing volunteer opportunities such as internships, research rotations, or clerkships in psychiatry, all of which have been reported to boost students’ interests in particular disciplines[18].

The skepticism towards the discipline’s validity, misrepresentation of patients, unclear responsibilities and treatment outcomes, the stigma associated with mental illness, and its perceived lower status within the medical field and general society[19] are a few reasons for this critical position, which vary across countries and even medical schools. There also exists financial aspects, where salaries in child and adolescent psychiatry are not competitive with other specialties[20,21]. Cultural factors can also affect personal experience through one's familial environment and educational background, such as the explicit attitudes of teachers[22,23].

Moreover, personal experience with mental health among students has been shown to influence their ATP in that students exposed to mental health problems seem to have more positive ATP [19,20]. Being more familiar with psychiatry, perhaps through educational or personal experiences with mental health specialists, may contribute to individuals feeling more interested, curious, and comfortable learning about psychiatry and treating psychiatric patients[21]. For instance, having a family member or close friend experiencing health issues could result in individuals being more sympathetic towards psychiatric illness and patients and, therefore, having a more positive outlook on the discipline[22]. It has been reported that having a family member who is a psychiatrist can also attract individuals to the field by serving as a role model and mentor while also lowering the risk of stigma and prejudice[23,24].

Given the increasing global burden of mental health disorders, especially in youth, combined with the existing shortage of psychiatrists internationally, there is a need to attract more medical students to psychiatry. This would cause a higher demand for education in psychiatry and subsequently catalyze solutions to address. Since positive ATP correlates with an increased intention to pursue psychiatry as a career[25], a first step in addressing the recruitment crisis in psychiatry is understanding which factors affect students’ attitudes towards the discipline.

To address this situation and stimulate the discussion in the field, this study aims to ask European medical students about their attitudes towards psychiatry, their intentions to pursue psychiatry as a career, and the role of different factors such as personal experience and education on their interest in it

psychiatry. We hypothesize significant associations between European medical school students' ATP and their educational and personal experiences with psychiatry.

Methods

Study design

This study was an online cross-sectional survey conducted at the Charite University hospital (Germany), Greifswald University (Germany), and the Universitaria Pisana (Italy). This study was led by an established collaborative group that had affiliations with these universities. Participants' inclusion criteria included access to a computer with an internet connection, current enrollment in an undergraduate medical program, and English language fluency. This study received ethical approval from the Behavioral Research Ethics Board at the University of British Columbia (H14-00176).

Study sample

Participants were medical students enrolled in undergraduate medical education programs at participating universities. A convenience sample of medical students was used through snowball sampling, which began by contacting student council members and leaders within the medical student community of their respective universities. These intermediate students then shared the survey link with their peers via email. Despite the limitations of snowball sampling, such as community bias and non-random participation[26], this method was deemed the best way for maximal recruitment and participation. Furthermore, study advertisements were posted around the university, especially in buildings frequented by medical students.

Recruitment and survey

Data collection started on January 1st, 2016 and ended on September 10th, 2016. Responses were collected electronically using Fluid Surveys. All responses were anonymous, and participation was voluntary. Information was hosted on Canadian databases and was kept confidential through password-protected accounts. All data was stored and managed according to the data protection guidelines of the University of British Columbia.

The survey consisted of 37 questions with possible responses varying between a 5-point Likert scale ('strongly agree,' 'agree,' 'undecided,' 'disagree,' 'strongly disagree'), a binary scale ('yes' or 'no') and a ranking scale. An in-depth breakdown of survey questions can be seen in Appendix A. The questions were categorized into the following sections: 1. demographic information, 2. personal experience and exposure to mental health, 3. education experience in psychiatry, 4. courses, 5. practical experiences, 6. teachers' perceived attitudes, 7. Student's attendance at courses and 8. attitudes towards psychiatry.

In total, 1131 individuals participated in the survey. However, 332 students (29%) did not complete any questions after the demographic section and were not included in this study. This is hypothesized to be attributed to attrition from the online questionnaire, which is common in literature[27].After removing this

subsample, 799 participants were included in the analyses. Within this primary data set of 799 students, missing data varied at 7.9% (n = 63). Missing data in the primary data set was ignored, as approximately 5% of missing data can be deemed inconsequential[28].

Data analysis

Responses were collected electronically using the Qualtrics platform. To eliminate the possibility of duplicated responses, students were allowed to respond to the survey only once. All data gathered was anonymous. Chi-square tests were performed for inferential analyses using a significance level of 0.05. Descriptive and inferential statistical analyses were executed using SPSS version 25 (IBM Corp, 2017).

Results

Participant Demographics

Out of the total 799 participants included, 379 were from Germany (47.3%), 343 from Italy (42.8%), and 77 missing values (9.6%) (Table 1). More than half of the participants were male (n = 414, 51.6%), and the mean age was 23.8 (± 3.8). From first to sixth, all academic years were represented in our sample. Tables 2 and 3 show descriptive statistics. Table 4show significant associations when comparing demographic variables. All other tables can be found in Appendix A.

Table 1
Demographic

Sex, n (%)	
Female	378 (47.3)
Male	412 (51.6)
Missing	9 (1.1)
Age, n (%)	
17	1 (0.1)
18	12 (1.5)
19	34 (4.2)
20	48 (6.0)
21	74 (9.2)
22	87 (10.8)
23	141 (17.6)
24	125 (15.6)
25	89 (11.1)
26	46 (5.7)
27	43 (5.4)
> 28	88 (11.1)
Missing	1 (0.1)
Medical school region, n (%)	
German Universities (Berlin, Greifswald)	379 (47.3)
Italian Universities (Pisa, Monza)	343 (42.8)
Missing	77 (9.6)
Medical School Year	
1–3	308 (38.4)
4->6	488 (61.1)
Missing	3 (0.4)

Descriptive Statistics

Table 2
Yes/no questions

	Yes	No	Missing
Have you ever completed a voluntary internship, community service, practicum, clinical traineeship or similar voluntary activity in psychiatry (e.g., civilian service, social year, etc.)?	27.3% n = 218	72% n = 575	0.8% n = 6
Have you seen medical doctors of other disciplines speak disparagingly of psychiatrists.	49.1% n = 392	50.2% n = 401	0.8% n = 6
Have you decided to pursue psychiatry?	5.4% n = 43	94.6% n = 739	0% n = 0
Have you ever experienced a severe psychiatric illness in your personal life? (Severe psychiatric illness is defined through salience of psychiatric difficulties through participant or person close to participants)	62.6% n = 440	37.4% n = 299	7.5% n = 60

Table 3
Likert scale questions

	Strongly agree	Agree	I don't know	Disagree	Strongly disagree	Missing
Do you think training in psychiatry during university medical education is important?	28.3% n = 227	56.7% n = 453	10.8% n = 87	3.4% n = 27	0.3% n = 2	0.4% n = 3
I wish there would have been more education about psychiatric issues during university medical training (e.g., lectures, case discussions, seminars, beside teaching, etc.)	13% n = 104	34% n = 272	37% n = 296	12.6% n = 101	2.4% n = 18	1.0% n = 8
The psychiatry instructors and teachers were very dedicated to providing theoretical education for the students.	16.5% n = 132	40.7% n = 325	33.5% n = 268	4.9% n = 38	0.7% n = 6	3.8% n = 30
Psychiatry is not a scientifically based discipline.	1.1% n = 9	6.1% n = 49	13.5% n = 108	50.3% n = 402	24.5% n = 196	4.4% n = 35
I am well prepared for patients with psychiatric disorders.	1.1% n = 9	14.8% n = 118	27.5% n = 220	41.2% n = 329	9.8% n = 78	5.6% n = 45
Which criteria have been or are relevant for your decision regarding your intended specialization?	10.8% n = 86	33.7% n = 269	25.5% n = 204	16.0% n = 128	10.8% n = 58	6.8% n = 54
Good and motivating classes at medical school	10.8% n = 86	33.7% n = 269	25.5% n = 204	16.0% n = 128	10.8% n = 58	6.8% n = 54
Personal Experience	25.2% n = 201	43.1% n = 344	15.5% n = 124	7.0% n = 56	2.5% n = 20	6.8% n = 54

Significant Associations

Table 4
Impact of student demographic characteristics on psychiatry ranking among other medical specialties (1–14)

	Chi-square value	Degrees of Freedom	p- value
Age vs. Rank of psychiatry	358.931	338	0.208
Sex vs. Rank of psychiatry	7.671	13	0.864
Location vs. Rank of psychiatry	11.519	13	0.567

There were no significant associations between demographics and the rank of psychiatry.

Table 5
Impact of student's educational experience on attitudes towards psychiatry

	Chi-square value	Degrees of Freedom	p-value
Importance in psychiatric training Vs. Rank of psychiatry	47.513	52	0.651
Importance in psychiatric training vs. Pursuing psychiatry	*36.893*	*4*	*< 0.05*
Wished for more education in psychiatry vs. Rank of psychiatry	52.983	52	0.436
Wished for more education in psychiatry vs. Pursuing psychiatry	*45.175*	*4*	*< 0.05*
Is Psychiatry scientific vs Rank of psychiatry	*74.726*	*52*	*<0.05*
Is Psychiatry scientific vs. Pursuing psychiatry	*28.880*	*4*	*< 0.05*
Correlations to preparedness for psychiatric disorders vs. Rank of psychiatry	*92.945*	*52*	*< 0.05*
Correlations to preparedness for psychiatric disorders vs. Pursuing psychiatry	*29.814*	*4*	*< 0.05*

Table 6
Impact of student's personal experience on attitudes towards psychiatry

	Chi-square value	Degrees of Freedom	p-value
Personal experience affecting decision on specialization vs. Rank of psychiatry	*69.243*	*52*	*0.055*
Personal experience affecting decision on choosing specialization vs. Pursuing psychiatry	7.672	4	0.104
Experienced psychiatric illness in life vs. Rank of psychiatry	46.980	39	0.178
Experienced psychiatric illness in life vs. Pursuing psychiatry	2.976	3	0.395

Students' views on psychiatry as a scientific discipline were significantly associated with their ranking and pursuit of psychiatry (Table 6). Students' opinions on the importance of psychiatric education were also significantly related to their pursuit of psychiatry. In addition, their preparedness to deal with psychiatric disorders was significantly associated with the rank and pursuit of psychiatry. Almost all (98%) of the medical school students pursuing psychiatry found psychiatric training to be essential compared to 85% of medical school students pursuing other specialties.

Table 7
Impact of psychiatric training on attitudes towards psychiatry

	Chi-square value	Degrees of Freedom	p-value
Quantity of psychiatry theoretical lessons attended **(overall number)** vs. Rank of psychiatry	30.571	39	0.831
Quantity of psychiatry theoretical lessons attended **(overall number)** vs. Pursuing psychiatry	1.464	3	0.691
Quantity of psychiatry clinical lessons attended **(overall number)** vs. Rank of psychiatry	24.537	26	0.545
Quantity of psychiatry clinical lessons attended **(overall number)** vs. Pursuing psychiatry	3.897	2	0.142
Completion of voluntary internship **in psychiatry** vs. Rank of psychiatry	11.593	13	0.561
Completion of voluntary internship in psychiatry vs. Pursuing psychiatry	*40.767*	*1*	*< 0.05*
Motivating classes affecting pursuit of intended specialization Vs. Rank of psychiatry	46.735	52	0.680
Motivating classes affecting pursuit of intended specialization vs. Pursuing psychiatry	3.651	4	0.455

Students who completed voluntary activity in psychiatry were significantly associated with their pursuit of psychiatry (Table 7). As expected, 70% of medical students pursuing psychiatry had completed a psychiatry-related voluntary activity, whereas only 25% of medical students pursuing other specialties had completed such activities in psychiatry.

Table 8
Impact of professors and doctors on attitudes towards psychiatry

	Chi-square value	Degrees of Freedom	p-value
Psychiatric instructors/teachers were dedicated to providing theoretical education vs. Rank of psychiatry	55.008	52	0.361
Psychiatric instructors/teachers were dedicated to providing theoretical education to teaching vs. Pursuing psychiatry	*12.282*	*4*	*< 0.05*
Witnessing doctors speak disparagingly of psychiatrists Vs. Rank of psychiatry	14.797	13	0.320
Witnessing doctors speak disparagingly of psychiatrists vs. Pursuing psychiatry	17.627	1	*< 0.05*

Having a dedicated instructor or teacher was significantly associated with pursuing psychiatry (Table 8). On the flip side, witnessing doctors speak disparagingly of psychiatrists was also significantly associated with one's pursuit of psychiatry. One-third (34%) of medical school students pursuing psychiatry believed their psychiatric instructors were dedicated to providing theoretical education compared to 15% of medical students pursuing other specialties. Almost all (81%) of medical school students pursuing psychiatry saw doctors speak disparagingly of psychiatrists compared to 48% of medical school students pursuing other specialties.

Discussion

This study sought to assess medical students' attitudes towards psychiatry and the factors influencing their medical specialization. The main findings were that students who viewed psychiatry as a scientific discipline and deemed psychiatric education critical, ranked psychiatry higher among their top-choice specializations and reported a greater interest in pursuing psychiatry. Moreover, students' exposure to psychiatry activities such as internships, community services, practicum, clinical traineeship, and personal experiences with psychiatric illness were also positively associated with their ATP and their willingness to pursue it as a specialty.

These results are in line with the currently available literature. A recent survey study also found similar results that showed a correlation between previous experiences, specifically curriculum/education-related and personal experience affecting ATP[29]. Furthermore, a recent systematic review published in 2021 on medical studens' attitudes towards psychiatry found that psychiatry as a career choice was rated poorly

and found to be unpopular for many students due to beliefs on “the lack” precision, “lack of treatment options”, and “personal prestige”, despite generally positive attitudes toward psychiatry[30–36] Stigma and cultural norms have a significant role in an individual’s attitude towards psychiatry. In the general population, there is also a well-documented lack of knowledge to identify features of mental illnesses, ignorance about how to access treatment, prejudice against people who have a mental illness, and expectation of discrimination against people diagnosed with mental illness[37].

Students who grew up in a culture or family environment that perceives psychiatry as irrelevant may believe that psychiatry is emotionally demanding, ineffective, unscientific, and imprecise[38–40]. Our data suggests that these students are more likely to not pursue psychiatry (Table 5). Moreover, unlike in other specialties, more time spent with the patient does not always equate to immediate health impacts and better patient health outcomes, which many perceive as unrewarding or discouraging. In addition, students may have a flawed perception of psychiatrists’ day-to-day activities, such as spending many hours talking to individual patients and providing psychological aid without significant concrete results quickly, which can lead to mental and emotional exhaustion[39].

In the current study, medical school students who reported that personal experiences affect their specialty choice were significantly associated with their ranking in psychiatry (Table 6). Other authors have also highlighted the critical roles of culture and health politics in shaping ATP[39,41,42]. Specifically, mental illnesses, such as depression, post-traumatic disorders, and suicidality are affected by culture[39]. Family factors, coping methods, mental health stigmatization, and availability of treatment depending on country of origin can all contribute to developing cultural perspectives and views on mental health and psychiatry. Having a family history of psychiatric illness can also increase students’ ATP[43,44].

Increasing students’ exposure to psychiatry-oriented educational opportunities is an important avenue to explore mental health care systems. In our study, participation in voluntary psychiatric activities was positively associated with the pursuit of psychiatry (Table 7). These results align with the findings of a recent study that reported students having positive ATP when completing over a month in psychiatric rotation and having studied psychiatry in college[44]. In addition, this aligned with a recent systematic review that looked at 42 different studies, with trends showing that clerkship improved ATP in students[45] .Although students interested in psychiatry might naturally also voluntarily participate in such psychiatric activities as internships and community services to appeal to their curiosity and interest, hands-on and shadowing experiences can significantly impact all students and impact their choice of specialization. McParland et al. (2003) observed that medical students who were directly involved in the care of psychiatric patients were more receptive to psychiatry compared to students who did not receive such experiences[46]. This was also apparent in a recent systematic review, in which 61% of the included studies reported an overall improvement in students 'interest in psychiatry following psychiatry clerkship[47]. Such interactions remove barriers and destigmatize mental health topics through lived experiences, all the while reshaping the student’s perceptions of psychiatry and the day-to-day activities of psychiatrists.

These educational experiences can provide valuable and rewarding information to medical students and spark an interest in knowing more about psychiatry[48–50].

Psychiatric education in the medical curriculum can seem deficient in the undergraduate level[51–52]. Nevertheless, training in psychiatry for medical students is vital, no matter the specialty. For instance, in a recent study including 6213 cancer patients, 23.4% had depression, 17.7% had anxiety, and 9.3% had PTSD[25]. Mental health care and support, along with the basics of psychiatric principles, equip students with the skills necessary when dealing with difficult and complex situations such as a mental health crisis. Medical students who can adequately address mental health symptoms or refer patients to the appropriate mental health specialists are few and far between. Integrating psychiatry teachings with other clinical subjects like general medicine and specialties like dermatology (e.g. the case of OCD/trichotillomania/delusional parasitosis), cardiology (e.g. the point of panic disorder or depression), gastroenterology (e.g. the issue of psychosomatic illness), surgery (e.g. the case of delirium), neurology (e.g. the case of dissociative convulsions), and pediatrics (e.g. the case of OCD/ADHD/dyslexia) could help demonstrate the importance of psychiatry and introduce students to the necessity of acquiring psychiatric skills. Most importantly, this will be to the benefit of patients[53].

The attitudes of professors and doctors within the educational environment also have a prominent role to play in shaping medical students' interest in the field. Our study demonstrated a positive association between dedicated instructors and interest in psychiatry and a negative association between doctors speaking disparagingly of psychiatry and interest in the field (Table 8). A recent systematic review found that stigmatizing attitudes towards people with mental disorders are common among physicians in primary care settings, particularly older and more experienced doctors[54]. Stigmatizing attitudes can act as an essential barrier for patients to receive the treatment they need and can also instill stigmatizing attitudes among younger medical students and lead to disinterest in the pursuit of psychiatry as a career choice[55]. Efforts must be invested to increase the quality and quantity of psychiatric education in the medical curriculum to improve students' impression of psychiatry and their attraction to the field.

The fact that training in psychiatry was deemed necessary by the vast majority of participants (28.3% strongly agreed, 56.7% agreed) is in stark contrast to those who stated to plan to pursue the specialty (5.4%). Additionally, most students said that personal experience is for their career choice, but only 27.4% had ever gained expertise in psychiatry. Previous research showed that in a sample of US medical students, 45% were able to predict their ultimate specialty choice in their orientation year[56]. Hence, one approach to tackle the recruitment crisis could include an early introduction of psychiatric teaching in the medical curriculums.

The perception of psychiatry in medicine and medical schools reflects its marginalized healthcare and health education position. Psychiatry as a discipline is contributing to this problem. This limits the capacity and quality to respond appropriately to an increasing burden of disease and mental health's impact on overall health outcomes. Interestingly long-term studies on medical students' attitudes throughout their medical training are still rare. Educational and personal experience can significantly

affect medical students' interest in psychiatry. The systematic evaluation of students' attitudes towards psychiatry and motivational factors for pursuing psychiatry as a specialty, such as psychiatric education in medical school and personal experience, can inform necessary changes in the recruitment of students to the current mental health and medical education systems.

Limitations

The sample was from Germany and Italy. This study primarily reflects these European countries' education systems, socio-economic backgrounds, and mental health care systems. Studying medical students' attitudes in various countries should focus on future research to better understand the impact of cultural differences on attitudes towards psychiatry. Despite our findings, the participants' responses were self-reported and could not be verified. Finally, the cross-sectional design does not allow us to infer causality between education and ATP. A longitudinal study surveying students' ATP during the first and last years of medical school would better predict how medical education can directly change one's ATP. This questionnaire fails to capture students that choose to go into psychology majors and skip the expensive, late to fruit and demanding medical schools. This means that students are getting filtered, and "participants might have been subject to selection bias. As a result, this paper only reflects ATP in medical school students in Europe and not all students in healthcare-related fields. Lastly, psychiatry could be ranked low because students are **realistic** and would select the specialties less interested in but more achievable.

Conclusions

There is an evident need to engage medical students more with psychiatry, improve curricula and provide more hands-on clinical experience. Moreover, though curriculums are constructed for students, studies that evaluate students' attitudes concerning the curriculum are rare. The learners' voices are primarily neglected in the curriculum design and implementation process. The image of Psychiatry among medical students based on their experience in medical school and the lack of practical experience is not motivating to choose the discipline. The essential factors of this image and the role of Psychiatry and Medicine are reflecting real problems of Psychiatry in healthcare as well as this discipline is presented. This study builds on the existing research on the question of what influences medical students' perception of psychiatry. It is primarily a challenge for psychiatry to take on this discussion and start research on self-presentation, stigma, and strategies to change it. Improved curricula and an open dialogue among students and faculty would be an essential next step.

Declarations

Ethics Approval and Consent to Participate

This study received ethical approval from the Behavioral Research Ethics Board at the University of British Columbia (H14-00176). All methods were carried out in accordance with relevant guidelines and

regulations from the UBC Clinical Research Ethics General Guidance. The University of British Columbia is governed by Policy LR9: Research Involving Human Participants (previously #89) and the Tri-Council Policy Statement (TCPS2): Ethical Conduct for Research Involving Humans. All experimental protocols were approved by the UBC Behavioural Research Ethics Board. Informed consent was obtained from all subjects and/or their legal guardian(s).

Consent for publication

Not applicable.

Availability of data and materials

The datasets used and/or analysed during the current study available from the corresponding author on reasonable request.

Competing interests

No, I declare that the authors have no competing interests as defined by BMC, or other interests that might be perceived to influence the results and/or discussion reported in this paper.

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Authors' contributions

AMYT wrote majority of the manuscript text and tables. JS, GC and JNW wrote minority of the text. All authors reviewed the manuscript.

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