

# BMJ Open Psychiatry as a career choice among medical students: a cross-sectional study examining school-related and non-school factors

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## ABSTRACT

**Objectives** Given the low recruitment to psychiatry worldwide, the current study aimed to examine how premedical and intramedical school factors, perception of career aspects, attitudes towards psychiatry, stigma towards mental illness and personality traits may affect the likelihood of psychiatry as a career choice.

**Design** Cross-sectional online study.

**Participants** 502 medical students from two public medical institutions in Singapore.

**Methods** We critically examined existing literature for factors identified to influence psychiatry as a career choice and explored their effects in a group of medical students in Singapore. To avoid overloading the regression model, this analysis only included variables shown to have significant association ( $p < 0.05$ ) with the outcome variable from the initial  $X^2$  test and independent t-test analyses.

**Results** A considerable number of non-medical school factors such as preschool influence and interest, personality traits and importance of a high status specialty in medicine were found to affect students' choice of psychiatry as a career. Among medical school factors, attending a psychiatry/mental health club was the only influential factor. Negative attitudes towards psychiatry, but not stigma towards people with mental illness, significantly predicted the likelihood of not choosing psychiatry as a career.

**Conclusions** Improving educational environment or teaching practice in psychiatric training may aid in future recruitment for psychiatrists. While the changing of premedical school influences or personality factors may be infeasible, medical schools and psychiatry institutes could play a more critical role by enhancing enrichment activities or clerkship experience to bring about a more positive attitudinal change towards psychiatry among students who did consider a career in psychiatry.

## INTRODUCTION

An estimated 450 million people worldwide are believed to suffer from a mental or behavioural disorder, and one in four people will be affected by these conditions in some point of their life.<sup>1</sup> Despite the

## Strengths and limitations of this study

- Although studies have examined factors associated with choosing psychiatry as a career, none have looked into such extensive range of factors in a single study.
- There have been limited studies that explored psychiatry career among a sample of Asian medical students.
- Cross-sectional study design limits the ability to draw causal conclusions.
- The lack of qualitative data may also limit our understanding of how students were being influenced by certain factors in determining their career choice.

substantial disease disability and burden associated with mental disorders, there has been a shortage of psychiatrists in the field, sometimes termed as the 'recruitment crisis'.<sup>2</sup> For instance, the number of medical graduates choosing to specialise in psychiatry within the USA has shown a distinct decline from a consistent annual rate of 7%–10% during post-World War II period to approximately just 3%–4% in 2002–2007.<sup>3,4</sup> Although recent data from the USA indicates a reversal of trends, WHO data indicates that up to 45% of the world population live in a country that did not meet the recommended ratio of one psychiatrist for every 100 000 people.

Many factors influence medical students' career specialty decisions, which may be decided before, during or after their training in medical school. The extant literature has emphasised on premedical and intramedical school factors associated with choosing psychiatry as a specialty. The former include gender, ethnicity and exposure to mental illness while the latter include teaching methods, clinical exposure and enrichment activities related to the specialty.<sup>5–7</sup> Common

reasons for rejection of psychiatry as a career include low respect for psychiatry among the various medical specialties, low salary and negative comments by friends and family about choosing psychiatry.<sup>8 9</sup> The attitudes of medical students towards psychiatry have also been one of the most commonly researched topics in the psychiatry career literature. Most studies have reported an overall positive attitude towards psychiatry or a positive attitudinal change following psychiatric clerkship<sup>10–12</sup> but despite this, psychiatry as a career choice remains unpopular among students.<sup>13 14</sup> Stigma towards mental illness has been increasingly identified as a potential factor that influences medical students' attitudes towards psychiatry and deters them from choosing psychiatry as a career.<sup>15 16</sup> The personality correlates of a career interest in psychiatry were also explored in a few studies.<sup>17–19</sup>

The recruitment of medical students into the field of psychiatry is important to mental health educators and has also become an increasing priority of healthcare policy makers.<sup>20</sup> Given the multifactorial nature of a student's specialty choice, understanding these factors could aid in the recruitment and mentoring strategies to increase the uptake and quality of students choosing psychiatry.<sup>21</sup> The current study, therefore, seeks to identify factors associated with a future choice of specialisation in psychiatry among premedical and intramedical school factors, perception of career aspects, attitudes towards psychiatry, stigma towards mental illness and personality traits in a group of medical students from Singapore.

## METHODS

### Study participants

All students enrolled in two of the medical schools (one undergraduate and one graduate medical school) in Singapore were invited to take part in a web-based survey administered in the English language via school email. The only other undergraduate medical school in Singapore was excluded as it had been recently established at the time of survey administration. A total of 502 students were recruited with quota limits set to ensure adequate and representative sampling of students from each involved institution and across their academic years. Online informed consent was administered prior to the survey.

### Patient and public involvement

No patient was involved in this study.

### Instrument

The main online questionnaire in the current study was adapted from a cross-sectional survey that aimed to investigate mostly premedical and intramedical school factors which influence psychiatry as a career choice among medical students across 20 countries.<sup>6</sup> We also included additional scales to measure personality and stigma towards mental illnesses. The survey collected

sociodemographic data and the following information as described below.

### Premedical school factors

These included premedical school influences in choosing medicine and psychiatry (eg, parents' wishes, wider family and friends' advices, close contact with a trusted doctor/nurse who is a family member or a close friend, portrayal of doctor/nurses in books, television and the media, personal and family experience of a physical illness or mental illness, prior work experience), premedical school career choice, highest academic qualifications and exposure to subjects prior to admission (refer to online supplementary appendix A for the full list of subjects).

### Intramedical school factors

These included intramedical school influences (eg, academics and lectures, school advisors or tutors, clinicians during placement, other students in the same course), psychiatry-related enrichment activities (eg, optional electives, psychiatry/mental health club and programme, research experience, volunteering with mentally ill patients), weeks of psychiatric training attended, clinical exposure factors including reported highest responsibility for patient care during placement and subjects taught at medical schools (refer to online supplementary appendix B).

### Importance of career aspects in choice of speciality

These included 12 individual factors namely academic opportunities, research opportunities, competition for training places, flexible working, job prospects, work-life balance, perception of competency, job satisfaction, likelihood of suffering emotional drain/burnout, pay, prestige among general public and high status among medicine. Participants were asked to rate whether each of these factors was important, not important or indifferent in their choice of career.

### Others

Two validated instruments—the Attitude to Psychiatry Scale (ATP-18) and the Opening Minds Stigma Scale for Healthcare Providers (OMS-HC)—were also used to measure stigma towards psychiatry and mental illness, respectively. A principal component analysis of the ATP-18 revealed a three-factor structure which reflected 1) an unsympathetic view of psychiatry—its practitioners, patients and treatments, 2) dissatisfaction with the subject matter of psychiatry and 3) approval and interest in psychiatric skills and methods<sup>22</sup> while the OMS-HC favoured a three-factor structure, which included 1) attitudes towards people with mental illness, 2) disclosure/helpseeking and 3) social distance.<sup>23</sup> Finally, for the purpose of measuring the big five factors of personality (extraversion, agreeableness, conscientiousness, neuroticism and openness to experience) in our study, the Mini-International Personality Item Pool (mini-IPIP)<sup>24</sup> was included.

### Coding of outcome variable

Participants were first asked to rate their likelihood of a career in various specialties—paediatrics, radiography, general practice/primary care, clinical laboratory sciences, anaesthetics, obstetrics and gynaecology, accident and emergency medicine, surgery, psychiatry and general internal medicine—before proceeding to the remaining questionnaire. This variable was measured on a 5-point Likert-type scale (no way, unlikely, possible, seriously considering and definitely). As proposed by Farooq *et al.*,<sup>6</sup> the use of this outcome as a continuous variable was not recommended given that it was a subjective ordinal variable and the distribution was also not normal. A preliminary analysis revealed a <10% response rate for students who had endorsed strong likelihood (seriously considering and definitely) for specialising in psychiatry and this would result in a low power for calculation. For the purpose of this study, we have therefore created a binary outcome, with students being ‘unlikely’ to specialise in psychiatry (no way, unlikely) as the interest group versus students being ‘likely’ to specialise in psychiatry (possible, seriously considering and definitely).

### Statistical analyses

Statistical analyses were performed using IBM Statistical Package for the Social Science V.23.0. Statistical significance was set at  $p < 0.05$  level. Descriptive statistics were tabulated for the overall sample. Frequency and percentage were calculated for categorical variables, while mean and standard deviation (SD) were calculated for all other continuous variables. Chi-square test

and independent t-test were performed to analyse the effects of separate categorical and continuous variables, respectively. A final multiple logistic regression was then performed to examine the factors associated with ‘not choosing’ psychiatry as a career. To avoid overloading the regression model, this analysis only included variables shown to have significant association with the outcome variable from the initial bivariate analyses. A backwards selection procedure was employed to allow elimination of non-significant variables one at a time, based on the probability of the Wald statistic, until only the statistically significant variables remained.

## RESULTS

### Likelihood of rejecting psychiatry as a career

Only 4 students (0.8%) reported ‘definitely decided to do’, 43 (8.6%) reported ‘seriously considering (ie, top 3 choices)’, 174 (34.7%) reported ‘possible, unsure yet’, 199 (39.6%) reported ‘unlikely’ and 82 (16.3%) reported ‘no way’ with respect to psychiatry as a career choice. In terms of groupings, the majority ( $n = 281$ , 56.0%) of the students were ‘unlikely’ (no way, unlikely) to specialise in psychiatry while the rest were in the ‘likely’ group (including those who reported ‘definitely decided to do’, ‘seriously considering’ and ‘possible’).

### Sociodemographic

The sociodemographic characteristics and correlates are presented in [table 1](#). The respondents had a mean age of 22.4 years ( $SD = 3.1$ , range = 16–35) and were mainly females

**Table 1** Sociodemographic profile (n=502)

	Total		Likely		Unlikely		P values
	Mean	SD	Mean	SD	Mean	SD	
Age (years)	22.44	3.06	21.81	3.07	22.93	2.96	<0.001
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	
<b>Gender</b>							
Male	207	41.2	85	41.1	122	58.9	0.263
Female	295	58.8	136	46.1	159	53.9	
<b>Education</b>							
Undergraduate	383	76.3	177	46.2	206	53.8	0.076
Postgraduate	119	23.7	44	37.0	75	63.0	
<b>Monthly household income</b>							
<4000	186	37.1	91	48.9	95	51.1	0.193
4000–9999	177	35.3	70	39.5	107	60.5	
10 000 and above	139	27.7	60	43.2	79	56.8	
<b>Year of schooling</b>							
First year	132	26.3	77	58.3	55	41.7	<0.001
Second year	116	23.1	57	49.1	59	50.9	
Third year	71	14.1	31	43.7	40	56.3	
Fourth year	87	17.3	32	36.8	55	63.2	
Fifth year	96	19.1	24	25.0	72	75.0	

**Table 2** Premedical school influences in affecting likelihood of choosing psychiatry

		Likely		Unlikely		P values
		N	%	N	%	
Parents' wishes	Yes	11	42.3	15	57.7	0.856
	No	210	44.1	266	55.9	
Wider family and friends' advices	Yes	29	51.8	27	48.2	0.214
	No	192	43.0	254	57.0	
A trusted doctor/nurse who has close contact with you	Yes	39	57.4	29	42.6	0.017
	No	182	41.9	252	58.1	
Portrayal of doctors/nurses in books, television and the media	Yes	30	48.4	32	51.6	0.460
	No	191	43.4	249	56.6	
Personal/family experience of a physical illness	Yes	40	56.3	31	43.7	0.024
	No	181	42.0	250	58.0	
Personal/family experience of a mental illness	Yes	25	71.4	10	28.6	0.001
	No	196	42.0	271	58.0	
Prior work experience	Yes	51	48.6	54	51.4	0.291
	No	170	42.8	227	57.2	
Interest in psychiatry prior to admission	Yes	19	95.0	1	5.0	<0.001*
	No	202	41.9	280	58.1	
Highest education attained prior to admission	Pretertiary	177	46.2	206	53.8	0.033
	Undergraduate	35	33.7	69	66.3	
	Postgraduate	9	60.0	6	40.0	

\*P values determined by Fisher's exact test.

(58.8%), in an undergraduate medical course (76.3%), had a monthly household income of below SGD4000 (37.1%) and were year 1 students (26.3%). Both age and the year of schooling were found to be factors associated with the likelihood of rejecting psychiatry.

### Premedical school factors

Table 2 presents the premedical school factors associated with the likelihood of not specialising in psychiatry. Sources of influence that showed significant associations included having close contact with a trusted doctor or nurse, personal or family experience of a physical illness and of a mental illness. The lack of interest in psychiatry and the highest education level attained, both prior to admission, were also significant in predicting the rejection of psychiatry. Our analyses did not reveal significant association with any of the subjects listed in online supplementary appendix A.

### Intramedical school factors

Table 3 presents the intramedical school factors associated with the likelihood of not specialising in psychiatry. Sources of influence that showed significant associations included academics or lectures and junior clinicians during placement. Having attended an optional elective in psychiatry and joined a psychiatry/mental health club were associated with choosing psychiatry as a career. Those who completed their clinical placement in psychiatry were less likely to specialise in psychiatry

than those who did not. Weeks of psychiatry training received and level of responsibility in patient care were also significant factors for not choosing psychiatry. Our analysis did not reveal significant association with most subjects, except 'neuroscience,' taken at medical school.

### Career aspects associated with psychiatry as a career choice

Of the 12 individual career aspects, analyses revealed that only those who perceived 'high status among medicine' as an important career aspect were more likely to be deterred from choosing psychiatry as a career (table 4).

### Attitude towards psychiatry and stigma against mental illness

Table 5 reveals that those who were unlikely to choose psychiatry had significantly lower ATP-18 score (greater negative attitudes towards psychiatry) and higher OMS-HC score (greater stigma towards people with mental illness) than their counterparts.

### Personality

Among the self-rated personality traits, only agreeableness and neuroticism were found to be significant factors associated with choosing psychiatry as a career on the mini-IPIP. Those who were unlikely to choose psychiatry scored significantly lower in these two personality traits (table 6).

**Table 3** Intramedical school influences in affecting likelihood of choosing psychiatry

		Likely		Unlikely		P values
		N	%	N	%	
Academics or lectures	Yes	96	51.3	91	48.7	0.011
	No	125	39.7	190	60.3	
School advisors or tutors	Yes	81	42.9	108	57.1	0.682
	No	140	44.7	173	55.3	
Senior clinicians during placements	Yes	91	40.6	133	59.4	0.168
	No	130	46.8	148	53.2	
Junior clinicians during placements	Yes	55	36.4	96	63.6	0.024
	No	166	47.3	185	52.7	
Other students in the same course	Yes	30	46.2	35	53.8	0.711
	No	191	43.7	246	56.3	
Attended optional courses/modules/electives	Yes	32	58.2	23	41.8	0.025
	No	189	42.3	258	57.7	
Joined psychiatry/mental health club	Yes	22	73.3	8	26.7	0.001
	No	199	42.2	273	57.8	
Joined student wellness/mental health programme	Yes	79	44.6	98	55.4	0.839
	No	142	43.7	183	56.3	
Research experience in psychiatry	Yes	15	60.0	10	40.0	0.099
	No	206	43.2	271	56.8	
Volunteered with mentally ill patients	Yes	15	38.5	24	61.5	0.466
	No	206	44.5	257	55.5	
Weeks of psychiatric training	0 week	153	55.2	125	44.8	<0.001
	<5 weeks	24	29.6	57	70.4	
	>5 weeks	43	30.3	99	69.7	
Completed clinical placement in psychiatry	Yes	56	29.6	133	70.4	<0.001
	No	165	52.7	148	47.3	
Level of responsibility in patient care	No responsibility or asked opinion	176	51.9	163	48.1	<0.001
	Clerking/assess risk/do therapy under supervision	45	27.6	118	72.4	
Took neuroscience	Yes	154	41.0	222	59.0	0.017
	No	67	53.2	59	46.8	

### Regression analyses

Logistic regression was used to examine the effect of various factors on likelihood of rejecting a career in psychiatry and nine factors remained significant (table 7). Medical students who were unlikely to choose psychiatry as a career were significantly older (OR=1.18), had longer weeks of psychiatric training (OR=2.67 for those with <5 weeks and OR=2.60 for those with >5 weeks compared with those who did not receive any training), and were those who perceived a specialty which has ‘high status in medicine’ as important (OR=1.97), compared with those who were indifferent. Those who had close contact with a trusted doctor/nurse (OR=0.52), interest in psychiatry prior to admission (OR=0.05), postgraduate

degree (OR=0.05; compared with pretertiary education) prior to admission, joined a psychiatry or mental health club (OR=0.24) were less likely to reject psychiatry as a career. Lastly, those who were unlikely to choose psychiatry had significantly lower ATP-18 and neuroticism trait scores compared with their counterparts.

### DISCUSSION

The current study attempts to examine the multiple factors identified from the literature that affect psychiatry as a career choice. These factors include premedical and intramedical school influences, career aspects, attitude to psychiatry, stigma towards mental



**Table 4** Importance of career aspects in affecting likelihood of choosing psychiatry

Factor	Important?	Likely		Unlikely		P values
		N	%	N	%	
Academic opportunities	Yes	97	45.1	118	54.9	0.908
	No	32	42.7	43	57.3	
	Neutral	92	43.4	120	56.6	
Research opportunities	Yes	66	46.2	77	53.8	0.827
	No	54	43.5	70	56.5	
	Neutral	101	43.0	134	57.0	
Competition for training places	Yes	128	44.4	160	55.6	0.975
	No	19	43.2	25	56.8	
	Neutral	74	43.5	96	56.5	
Flexible working	Yes	155	44.0	197	56.0	0.723
	No	10	37.0	17	63.0	
	Neutral	56	45.5	67	54.5	
Job prospects	Yes	164	43.2	216	56.8	0.788
	No	8	47.1	9	52.9	
	Neutral	49	46.7	56	53.3	
Emotional drain/burnout	Yes	176	43.9	225	56.1	0.633
	No	5	33.3	10	66.7	
	Neutral	40	46.5	46	53.5	
Salary/pay	Yes	82	39.6	125	60.4	0.212
	No	36	50.0	26	50.0	
	Neutral	103	46.2	120	53.8	
Prestige among general public	Yes	39	35.5	71	64.5	0.101
	No	74	48.4	79	51.6	
	Neutral	108	45.2	131	54.8	
High status among medicine	Yes	31	32.6	64	67.4	0.041
	No	79	45.4	95	54.6	
	Neutral	111	47.6	122	52.4	
Work-life balance	Yes	176	43.3	230	56.7	0.792
	No	8	50.0	8	50.0	
	Neutral	37	46.3	43	53.8	
Perception of competency	Yes	92	42.4	125	57.6	0.811
	No	32	45.7	38	54.3	
	Neutral	97	45.1	118	54.9	
Job satisfaction	Yes	186	42.2	253	57.6	0.053
	No	4	36.4	7	63.6	
	Neutral	31	59.6	21	40.4	

illness and personality traits. While numerous studies have explored factors associated with choosing psychiatry as a career, none have looked into such an extensive range of factors in a single study. A combination of student characteristics, values, needs, medical school experiences and perception of specialties were found to influence the students' career decision in psychiatry in our sample.

#### Premedical and intramedical school factors

Both premedical and intramedical school factors were found to influence students' choice of psychiatry as a career. Our study did reveal a considerable number of non-medical school factors such as preschool influences, personality trait and importance of a high status specialty in medicine to be significant in affecting psychiatry as a career. Preference of specialty prior to medical school

**Table 5** Attitudes towards psychiatry and stigma towards people with mental illness in affecting likelihood of choosing psychiatry

	Likely		Unlikely		P values
	Mean (SD)		Mean (SD)		
ATP-18 scores	66.66 (5.49)		63.50 (6.08)		<0.001
OMS-HC scores	36.87 (6.59)		39.10 (6.69)		<0.001

ATP-18, Attitude to Psychiatry Scale; OMS-HC, Opening Minds Stigma Scale for Healthcare Providers.

was also a strong predictor (OR=10.8) in the study by Farooq *et al.*<sup>6</sup> where 78% of those who expressed interest in psychiatry when entering medical school remained likely to choose psychiatry during their final year. While we did find highest education attained prior to admission to be a factor, no association was found for students' qualification before medical school in the study by Farooq *et al.* Our finding on higher neuroticism among those who were more likely to pursue a career in psychiatry was also supported by other studies that cited neuroticism or the presence of emotional disturbance as the central motivating factor in pursuing psychiatric practice.<sup>25 26</sup> The underlying psychological conflict of these individuals who choose to become psychiatrists has been described as 'often severe but not necessarily of neurotic quality' and they may be searching for an answer to a strong inner drive that seeks to resolve the experienced conflict.<sup>27</sup>

Manassis *et al.*<sup>28</sup> had identified the most influential career choice factors by psychiatry residents to be initial interest, clerkship experiences and enrichment activities. Similarly, we found enrichment activities such as joining a mental health/psychiatry club (p=0.005) and attending optional courses/modules/electives (p=0.05) to be influential factors in our final logistic regression. Again, these were two of the six variables that remained significantly associated with students being likely to pursue psychiatry as a career in the regression model of the study by Farooq *et al.* Studies have also emphasised developing and improving specific enrichment activities such as electives or university psychiatry societies to further enhance recruitment to psychiatry.<sup>29-31</sup> None of the preschool subjects or modules/courses taken at medical school was found to be associated with the decision to choose psychiatry as a career choice,

**Table 6** Personality traits in affecting likelihood of choosing psychiatry

	Likely		Unlikely		P values
	Mean	SD	Mean	SD	
Extraversion	11.19	3.65	11.47	3.58	0.397
Agreeableness	16.35	2.26	15.63	2.38	0.001
Conscientiousness	13.50	3.28	14.08	3.24	0.050
Neuroticism	11.64	3.43	10.75	3.16	0.003
Intellect/Imagination	14.57	3.02	14.69	3.09	0.662

although those who took neuroscience were more likely to not choose psychiatry at univariate analysis. Gold- enberg and Krystal found that medical students with an undergraduate neuroscience majors preferred to specialise in neurology (21.5%), neurosurgery (13.1%) or internal medicine (11%) compared with only 2.3% who preferred psychiatry at matriculation.<sup>32</sup>

With respect to clerkship experience, our study may imply that those who were exposed to a clinical placement were more likely to not choose psychiatry as a career choice, although the result was not significant in the multivariable analysis. A study among local medical students revealed positive attitudinal change but worsening associative stigma towards psychiatry following a clinical rotation and suggested that stigma relating to psychiatry could be the main cause for a lack of consideration of psychiatry as a career.<sup>11</sup> One possibility could be that the medical students undergoing clinical rotation in psychiatry in Singapore were generally exposed to sicker and more chronic patients which led them to view psychiatry more negatively. Such negative experiences encountered during clinical exposure during the students' medical school years could lead them to narrow their medical specialty options. However, further qualitative research may be required to establish the underlying reasons.

### Societal stigma

Studies have generally found that medical students considering a career in psychiatry tend to be exposed to stigmatising comments by others including family members and friends, or the general public on their career choice and therefore, alienating themselves from psychiatry as a career.<sup>9 33</sup> However, our study did not find any significant influences due to parents' wishes, wider family and friends' advice, prestige among general public or even other students in the same course. Rather, our data revealed factors such as the influence of junior clinicians (but not senior clinicians) during placements and having close contact with a trusted doctor/nurse who could be a family member or close friend to be significant in influencing a career in psychiatry. This probably suggests that the medical students in our sample may be more influenced potentially by contact with healthcare professionals whom they have a stronger sense of connection as compared to those from their social networks.

### Attitudes towards psychiatry and stigma towards mental illness

The ATP-18 explores academic and clinical domains as well as perceptions of psychiatrists and psychiatric patients,<sup>22</sup> while the OMS-HC assesses stigma and behavioural discrimination towards people with mental illness among healthcare workers.<sup>23</sup> Our study showed that those who were likely to reject psychiatry as a career were those who had lower ATP-18 score and higher OMS-HC score at univariate analyses. Multivariate

**Table 7** Logistic regression examining factors with not choosing psychiatry as a career\*

Factor	Category	OR	95% CI		P values
			Lower	Lower	
Age (years)		1.18	1.02	1.36	0.029
A trusted doctor/nurse who has close contact with you	Yes	0.52	0.28	0.94	0.030
	No	Ref.	–	–	–
Interest in psychiatry prior to admission	Yes	0.05	0.01	0.38	0.004
	No	Ref.	–	–	–
Highest education attained prior to admission	Postgraduate	0.05	0.01	0.34	0.002
	Pretertiary	Ref.	–	–	–
Joined psychiatry/mental health club	Yes	0.24	0.09	0.64	0.005
	No	Ref.	–	–	–
Weeks of psychiatric training	0 week	Ref.	–	–	–
	<5 weeks	2.67	1.21	5.91	0.015
	>5 weeks	2.60	1.44	4.70	0.002
High status among medicine	Important	1.97	1.10	3.51	0.022
	Indifferent	Ref.	–	–	–
ATP-18 score		0.92	0.88	0.96	<0.001
Neuroticism		0.92	0.86	0.98	0.009

\*Backwards selection procedure, variables entered initially: age, stage of schooling, having close contact with a trusted doctor/nurse, personal/family experience of a physical and mental illness, interest in psychiatry and highest education attained prior to admission, academic and lectures, junior clinicians during placement, optional courses and electives, mental health club membership, weeks of psychiatric training received, clinical placement, level of responsibility in psychiatric patient care, neuroscience module, high status among medicine, ATP-18 score, OMS-HC score, agreeableness and neuroticism.

ATP-18, Attitude to Psychiatry Scale; OMS-HC, Opening Minds Stigma Scale for Healthcare Providers.

analysis, however, revealed that only ATP-18 score were significant in predicting the likelihood of not choosing psychiatry as a career. This may suggest that medical students in our sample were more likely to reject psychiatry as a career mainly due to their dissatisfaction with psychiatric practice but not because they had a stigmatising attitude towards patients with mental illness or mental illness itself. Our data on ATP-18 were consistent with past research<sup>6 34</sup> showing that those who were likely to specialise in psychiatry had a higher ATP score or a more positive attitude towards psychiatry. While strategies on teaching practices such as the exposure to and taking responsibility for patients who are motivated and recovering, as well as co-taught seminars by both patients and professionals to improve medical students' attitudes towards psychiatry have been proposed,<sup>26 35</sup> studies also found that changes in educational environment may not necessarily lead to significant increase in the number of students wanting to pursue psychiatry.<sup>11 36</sup>

### Limitations

The current study is cross-sectional, and is therefore unable to establish causal relationship between the various factors and likelihood of rejecting psychiatry as a career. For instance, it may be possible that those who were interested in or had decided on choosing psychiatry as a career had also joined the mental health or psychiatry

club in their school due to their interest. The lack of qualitative data may have also limited our understanding of how these students were being influenced by their contact with junior clinicians and trusted doctor/nurse, along with the larger-scale cultural issues that might affect their decision to specialise in psychiatry. We are unable to determine the response rate of the study as we do not know how many students had seen the email invitation but decided not to take part in the study. Furthermore, the current study only looked at medical students' likelihood of choosing psychiatry as career choice in the future and this may not reflect their actual decisions on graduation. Nonetheless, one study had found the stability of psychiatry specialty choice from matriculation to graduation to be at slightly above 50%, which was greater than for any other specialties.<sup>37</sup>

### CONCLUSION

In Singapore, a graduating medical student would apply to a residency programme in accordance to his choice of medical specialty although there is a selection process where the candidate would be assessed through various ways for his or her suitability for that specialty. Our study has revealed a low interest among medical students wanting to specialise in psychiatry. However, there is a pool of 8.6% of students who would seriously



consider psychiatry as a career and this may be the group that could possibly be targeted at to encourage recruitment into the field. While it may not be feasible to change aspects of premedical school influences, medical schools and psychiatry institutes could play a more critical role by improving clerkship experience or enhancing enrichment activities to bring about a more positive attitudinal change towards psychiatry in this group of students.

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