# Does Clinical Exposure to Patients in Medical School Affect Trainee Doctors' Attitudes Towards Mental Disorders and Patients? - A Pilot Study

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## Summary

Stigmatising attitudes towards mental illness may improve with clinical exposure during medical school training. Attitudes of 48 fourth year medical students in Universiti Kebangsaan Malaysia were assessed before and after their compulsory attachment in Psychiatry, using the Attitude Towards Psychiatry-30 (ATP) and the Attitude towards Mental Illness (AMI) questionnaires. ATP scores improved significantly with training (104.8 and 114.4, pre- and post-attachment respectively) as did AMI scores (63.4 and 68.1 respectively). Both improvements were statistically significant. (ATP: z = 4.55, p < 0.0005) (AMI: z = 3.75, p < 0.0005). Attitudes towards mental illness appeared to have become more favourable with clinical training in psychiatry.

Key Words: Attitude, Medical students, Mental illness, Psychiatry

#### Introduction

According to the World Health Report 2001, 450 million people have a mental or neurological disorder 1. Every year, 1 million people commit suicide and 10 to 20 million attempt suicide. Although it is known that 60% of those with major depression can fully recover if adequately treated, less than 25% of those affected receive treatment in both industrialized and developing countries. This is for reasons that include stigma, discrimination and inadequate resources. Because patients do not get the care they need, their disorders impose a range of social and economic costs on individuals, households, employers, and society, ranging from the cost of care to the cost of lost productivity 1.

'Stigma' is defined by Goffman 2 as an "attribute that is deeply discrediting that reduces the whole person to a tainted, discounted one". Such a negative attitude has devastating effects on the lives of people with stigmatizing conditions, such as mental illness. The problem of stigma is universal<sup>3</sup>. In developing countries the impact is devastating and often shaped by culture. In India, families' fear of stigma has frequently resulted in the need to conceal a family member having schizophrenia from others because of the fear of rejection by neighbours, and diminished prospects of marriage4. In Malaysia, as in many developing countries, people prefer to seek help from the less stigmatising traditional healers of the various ethnic groups even if it means that the patient is subjected to ineffective and sometimes dangerous treatments like

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beatings<sup>5</sup>. The mental health professional is often the last resort.

Internationally there is a lack of neuroscience understanding of the nature of mental illnesses like schizophrenia. Be it in developed western countries like the United States<sup>6</sup> or developing eastern countries like China<sup>7</sup>, a common public perception is that mental illness is due to interpersonal causes<sup>8</sup> and that patients are personally responsible for bringing about their own illnesses <sup>7</sup>. Mental illness is still perceived as an indulgence and as a sign of weakness<sup>9</sup>.

Serious efforts have been made to address this misconception. The National Alliance of the Mentally Ill (NAMI), an influential advocacy group in the US, has harnessed the brain disease model to diminish stigma by incorporating attributional remodeling (from social to biological). This is thought to take the blame away from sufferers of schizophrenia and other mental disorders6. There is now increasing awareness that stigmatizing attitudes in doctors result in compromised patient care, with patients with mental illness being undertreated or undiagnosed10. In developed countries, steps are being taken by responsible medical bodies and non government associations to combat stigma amongst doctors. In the United Kingdom, joint efforts are being made by The Royal College of Physicians, the Royal College of Psychiatrists, The British Medical Association and the Royal College of General Practitioners in tackling stigmatization by doctors11. In 2001, the American National Institute of Mental Health, in partnership with other National Institutes of Health and international bodies, organised conferences on stigma and global health. The agenda was to find out how stigma prevented people from seeking and getting treatment for disease and to develop means of mitigating the impact of stigma on individuals and societies12.

In Malaysia, with limited resources for mental health, a potentially useful approach would be to target the attitudes of medical students as they train to be the next generation of physicians. The young medical student needs to struggle against his sociocultural upbringing to embrace a new scientific understanding of mental illness taught in medical school. In a recent Malaysian study done in the University of Malaya, a student, prior to contact with psychiatric patients, quoted 'black magic' as the cause of mental illness<sup>13</sup>. This is not surprising as students are known to bring to psychiatry the unfavourable and stigmatizing attitudes towards

patients, that are common in the general population<sup>14</sup>. The student needs to accept cognitively, socially and emotionally that the 'orang gila' (mad man) his parents taught him to fear as a child, has a brain disorder- a mental illness that manifests in disordered thinking, emotion and behaviour, and that this fear-inducing illness can be understood and treated successfully.

Such a paradigm shift, however does not come about merely by increasing one's knowledge about psychiatric disorders. A study conducted by the World Psychiatric Association's Global Campaign to Fight Stigma in Canada showed that negative attitudes towards people with schizophrenia persist despite public education<sup>15</sup>. Negative attitudes will compromise the future doctor's ability to detect and manage psychological problems regardless of knowledge of psychiatry acquired. If the situation is to improve, all future doctors must be sympathetic to patients with psychological problems and not have a tendency to stigmatize people with psychiatric disorders. In a developed country like the UK<sup>11</sup>, with community point prevalence rates of mental health problems being 14% and 1 in 3 general practitioner (GP) attendees describing psychological symptoms in primary care; these patients are described by the GP as the 'dreaded patients' who are not surprisingly untreated or under treated!

Psychiatry is an established and compulsory part of the syllabus in the medical school in Universiti Kebangsaan Malaysia. Although reduction in negative attitudes to mental illness and to psychiatry is not an explicit objective of the clinical posting in psychiatry, our aim in this study was to explore whether there was a change in the attitudes of medical students during the posting.

#### **Materials and Methods**

## Background

The medical course at the Universiti Kebangsaan Malaysia (UKM) is a five-year program, with students completing the clinical years (Year 4 and 5) in the Hospital Universiti Kebangsaan Malaysia (HUKM). All students undertake a compulsory 8-week posting in Psychiatry in the fourth year. During this period they receive theoretical and practical instruction in psychiatry from the bio-psycho-social perspective. They are also clinically exposed, for most students for the first time, to patients with psychiatric disorders and are required to clerk both inpatients and outpatients.

There is compulsory attendance at clinics, ward rounds and other clinical teaching sessions. The students are expected to present the patients they have clerked to psychiatrists who are their supervisors and discuss the management, in small groups of about three to eight students. There is also a day trip to a mental hospital where students get to see for themselves how patients with chronic mental illness are treated and rehabilitated.

#### Instruments

Two self-administered questionnaires were used.

1) The Attitudes towards Psychiatry Questionnaire (ATP 30) <sup>16</sup>. This is a 30-item, Likert-type scale looking at related attitudes to Psychiatry. These are 1) psychiatric patients, 2) psychiatric illness, 3) psychiatrists, 4) psychiatric career choice, 5) psychiatric drugs, 6) psychiatric treatment, 7) psychiatric institutions and 8) psychiatric teaching. Each statement makes explicit a certain attitude towards the object with half, a 'positive' and the other half a 'negative' form.

Positively phrased items were reversed by subtracting the score from 6. A total score was calculated by adding all item scores. A score of 90 was the neutral point of the scale. A higher score would indicate a positive attitude towards psychiatry. This questionnaire has been validated by Burra <sup>16</sup>.

2) The Attitudes to Mental illness Questionnaire (AMI)<sup>17</sup>. A 20-item questionnaire which focuses on attitudes towards the causes, treatment and consequences of mental illness and its impact on individuals and society. The AMI was constructed using feedback received from students. The items were constructed on a five-point Likert scale with a higher score suggesting a more favourable attitude. The scoring on some of the items is reversed to avoid response bias.

Both questionnaires are included in the appendix.

## **Materials and Methods**

This study was approved by the Faculty of Medicine Research Committee which scrutinized the technical and ethics aspects of the study. Medical students in their fourth year, from the class of 2001-2002, at HUKM undergoing their posting in Psychiatry were invited to participate. They were given 2 questionnaires which they answered voluntarily: 1) The Attitudes towards Psychiatry (ATP) <sup>16</sup> and 2) The Attitudes towards Mental Illness (AMI) <sup>17</sup>. Anonymity was preserved as names were not required. The students were reassured that

their participation had no influence whatsoever on their academic performance as the data was handled by research assistants and the analysis was only done after they had completed their posting and completed their examinations. Matriculation numbers, which were maintained throughout their medical student career, were written on the form to enable linking of pre- and post scores. However names of the medical students were not matched with their matriculation numbers at any point in time. The analysis was done by one of the authors, MTA, who was not involved in any way during the whole duration of their posting; thus the issue of their response affecting their performance in their posting did not arise. Once the data was paired (preand post-posting), the matriculation number was discarded thus the data was no longer traceable to the student. The data was stored in locked premises in the Department of Psychiatry.

The aims of this study were to answer two questions.

- Do medical students prior to the commencement of their psychiatric posting, have unfavourable attitudes towards mental illness and psychiatry?
- 2. Is the clinical posting in psychiatry in HUKM in the fourth year of the course associated with a reduction in medical students' negative attitudes towards mental illness and psychiatry?

#### **Data Analysis**

Statistical analysis was performed using the Statistical Package for Social Sciences Version 10<sup>18</sup>. As the data were not normally distributed, nonparametric methods were used.

Using the Wilcoxon matched-pairs signed ranks test, statements showing the significant change (p < 0.05) were identified.

#### Results

This study sample was drawn from the Year Four class of 2001-2002. Of the 83 students (approximately half the fourth year class) who were invited to participate in the study, 75 agreed to do so (90.4% response rate). Of the 75 participants, 48 completed the pre- and post-questionnaires (14 males, 33 females and 1 unknown). Twenty-seven questionnaires were incomplete and were excluded from analysis. Examining the whole group, we found that students had generally favourable attitudes towards psychiatry and mental illness at the start of their attachment with mean scores of 104.8 on

ATP (neutral score 90) and 63.4 on AMI (neutral score 60). There was a significant increase in the mean scores of both scales following the attachment (ATP: z=4.55, p<0.0005 (Table I); AMI: z=3.75, p<0.0005 (Table II)). Prior to the posting, males showed a significantly more positive attitude in the AMI scale than females (p=0.006) but there was no difference between male and female students for the post-attachment scores of both scales. For the sake of clarity, the 'strongly agree' response and 'agree' responses were combined as a single 'agree' response and the 'strongly disagree' and 'disagree' combined into a 'disagree' response.

Using the Wilcoxon matched-pairs signed ranks test, statements showing significant change (p < 0.05) were identified. Statements that showed significant change in scores and the level of students' agreement before and after the attachment are shown in Table III, IV and V. There appeared to be a greater appreciation of the genetic basis of mental illness after the 8 week posting as evidenced by question 15 of the AMI (p<0.001). The students also were more likely to believe after the posting, that effective treatment is available for psychiatric disorders (question 14 of the ATP, p<0.0005), and more likely to believe that the various specific modalities of treatment presently employed in the management of mental illness are effective. These included psychotherapy (question 8 of the ATP, p<0.001), psychiatric medication (question 11 of the AMI, p<0.002). They were also more receptive towards electroconvulsive therapy (ECT) and more felt it should not be banned. (Question 9 of the AMI, p<0.0005).

The students appeared to have a more positive attitude towards patients and did not think that they were violent in nature (AMI question 3, p=0.033). Their interest in working with patients also increased (ATP

question 29, p=0.015). They had a greater appreciation of the need to help patient lead independent lives (AMI question 18, p<0.003) and to be able to hold a responsible job (AMI question 4, p<0.025). They were less stigmatising in their attitude towards psychiatric hospitals and less likely to think that they were like prisons (ATP question 3, p=0.06).

After 8 weeks, the medical students felt that psychiatry was a respectable branch of medicine (ATP question 11, p<0.0005), that psychiatrists were equal to other doctors (ATP question 22, p=0.009) and got as much work satisfaction as doctors in other fields (ATP question 17, p<0.0005). They were more likely to think that psychiatrists play an effective role in helping patients as shown in their response to question 19 of the ATP (p<0.0005). The students also had a greater appreciation of psychiatry and that it could be taught effectively (ATP question 30, p<0.0005), that their undergraduate training was valuable (ATP question 10, p=0.004) and that it increased their understanding of surgical and medical patients (ATP question 9, p=0.015). They had a more positive attitude towards doctors taking up psychiatry as also participating in 'real medicine' as illustrated by ATP question 6 (p = 0.04).

In this pilot study the medical students generally did not have unfavourable attitudes towards mental illness and psychiatry prior to the commencement of their psychiatric posting. The clinical posting in psychiatry in HUKM in the fourth year of the course appeared to significantly improve the already generally favourable attitudes the medical students' held towards psychiatry and mental illness. Clinical postings in psychiatry in HUKM in the fourth year of the course did appear to reduce medical students' negative attitudes towards mental illness and psychiatry.

lable 1: Mean scores on the AIP for all studen	scores on the ATP for all	students
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	Scale: ATP	Mean scores (SD)					
Group	Pre-attachment	Post-attachment	Mean Difference	p value			
All students	104.8 (8.0)	114.4 (11.4)	9.6	< 0.0005			
Males	103.93 (8.32)	116.66 (12.76)	12.73	0.030			
Females	105.01 (8.07)	114.11 (10.44)	9.11	< 0.0005			
	Mean difference (	95% CI)					
Males vs females	-1.1	2.6					
	(-6.3-4.2)	(-4.6-9.7)					
	p=0.295	p=0.470					

Table II: Mean scores on the AMI for all students

	Scale: AMI	Mean scores (SD)						
Group	Pre-attachment	Post-attachment	Mean Difference	p value				
All students	63.4 (5.0)	68.1 (7.1)	4.7	<0.005				
Males	66.4 (4.8)	70.4 (7.5)	4.0	0.64				
Females	61.9 (4.5)	67.3 (6.7)	5.4	0.01				
	Mean difference (	95% CI)						
Males vs females	4.5	3.0						
	(1.4-7.6)	(-1.8-7.8)						
	P=0.006	P=0.244						

Table III: Individual items from the AMI scale showing significant change (p < 0.05) following psychiatric attachment

No.	AMI Statement	Pre-atte	achment	Post-at	tachment	z value	Two-	
		%	%	%	%		tailed p	
		agree	disagree	agree	disagree		L	
3	Violence mostly results from mental illness.	60.5	25.1	43.8	47.9	2.129	0.033	
4	Those with a psychiatric history should					}	}	
	never be given a job with responsibility.	19.1	57.4	10.4	83.3	2.247	0.025	
9	ECT should be banned.	4.2	33.3	6.3	87.5	4.806	<0.0005	
11	Psychiatric drugs do more harm than good.	18.8	48.0	6.3	85.4	3.045	0.002	
15	Mental illnesses are genetic in origin.	37.5	29.2	73.0	27.1	3.41 <i>7</i>	0.001	
18	It is preferable that the mentally ill live							
	independently rather than in hospital.	31.3	45.8	45.8	27.1	3.01 <i>7</i>	0.003	

Table IV: Individual items from the ATP scale showing significant change (p < 0.05) following psychiatric attachment

No.	No. ATP Statement		achment	Post-att	achment	z value	Two-
		%	%	%	%		tailed p
		agree	disagree	agree	disagree		
3	Psychiatric hospitals are little more than						1
	(not very different from) prisons.	12.5	62.5	2.1	81.1	2.769	0.006
6	On the whole, people taking up psychiatric						
	training are running away from participation						
	in real medicine.	12.5	64.6	2.1	89.4	2.908	0.004
8	The practice of psychotherapy basically is						
	fraudulent (guilty of fraud) since there is no						
	strong evidence that it is effective.	2.1	53.2	0.0	<i>7</i> 6.5	3.232	0.001
9	Psychiatric teaching increases our						
	understanding of medical and surgical						
	patients.	66.7	10.4	81.3	8.4	2.430	0.015
10	The majority of students report that their						
	psychiatric undergraduate training has been						
	valuable.	55.3	4.3	76.6	4.3	2.895	0.004
11	Psychiatry is a respected branch of medicine.	73.0	2.1	91.7	0.0	3. <i>77</i> 1	<0.0005

Table V: Individual items from the ATP scale showing significant change (p < 0.05) following psychiatric attachment.

No.	ATP Statement	Pre-atto	achment	Post-att	achment	z value	Two-
		%	%	%	%		tailed p
		agree	disagree	agree	disagree		
14	With the forms of therapy now (available)						
	at hand most psychiatric patient improve.	57.4	0.0	83.8	2.1	3.953	<0.0005
15	Psychiatrists tend to be at least as stable as						
	the average doctor.	44.7	2.1	<i>7</i> 5.0	4.2	2.640	0.008
1 <i>7</i>	Psychiatrists get less satisfaction from their						
	work than other specialists.	18.8	39.6	23.0	<i>77</i> .1	3.720	<0.0005
19	There is very little that psychiatrists can do						J
	for their patients.	10.4	64.6	2.1	93.8	3.727	<0.0005
22	At times it is hard to think of psychiatrists as						
	equal to other doctors.	29.2	41 <i>.7</i>	18.8	66.7	2.616	0.009
29	Psychiatric patients are often more interesting						
	to work with than other patients.	31.9	27.7	48.9	17.0	2.441	0.015
30	Psychiatry is so amorphous (vague) that it						
	cannot really be taught effectively.	35.5	25.0	8.5	57.5	3.874	<0.0005

## Discussion

The medical students in this sample had generally favourable attitudes towards psychiatry at the commencement of their clinical posting (mean ATP score = 104.82, SD = 8.03). This was comparable with a study done by Al-Ansari A and Alsadadi A<sup>19</sup> using the same questionnaire. They found that the attitude towards psychiatry amongst Arabian Gulf University medical students was also moderately positive (mean ATP score = 105.79, SD = 13.34).

In a study by Mahli <sup>20</sup>, Australian medical students regarded psychiatry as interesting and intellectually challenging but psychiatry was thought to lack adequate scientific foundation. In contrast, this cohort of Malaysian students showed a greater appreciation of the scientific basis (in particular the genetic basis) of mental illness.

Unlike the Arabian Gulf University medical students, where females were found to have more positive attitudes than their male counterparts <sup>19</sup>, it was the opposite in this cohort of Malaysian medical students. There was a more positive attitude in males compared to females before the posting in the AMI scale but not after the posting.

This cohort of medical students showed significantly more positive attitudes towards mental illness and psychiatry after 8 weeks of clinical training. This was not found to be so by Tharyan <sup>21</sup> in his research amongst Indian medical students where he found that the overall attitude towards psychiatry did not differ between students before and after psychiatric education. He studied responses of 108 medical students from the first and fourth years who had not yet been exposed to psychiatry and compared them with the responses of 139 final year students and interns who had completed varying components of psychiatric training <sup>21</sup>.

In Al-Ansari's study <sup>19</sup>, 72.3% of the pre-clinical students agreed that teaching at the college was good or acceptable, compared to 44% from the clinical phase. In our pilot study, most of the students agreed that their psychiatric undergraduate training has been valuable (76.7%). In the same study, factors such as exposure to material related to psychiatry, having a close relation with psychiatric illness and having a romantic relationship with a psychiatric patient were significantly related to the ATP score. However, Roth <sup>22</sup> found that the medical students' experience with mental illness in general, either through personal or professional activities, was associated with more positive attitudes

towards the mentally ill. This appeared to be similar to what was found in our pilot study.

It is not possible to comment on what aspect of the psychiatric training may have contributed to the positive change in attitudes. Although there was an increase in positive attitudes over the course of the psychiatric posting, this change may not persist. The positive change in attitude may be enduring or transient 23. This necessitates further research in the form of a longitudinal study, which can monitor the medical student as they progress from fourth year to final year and after graduation. While the increase in positive attitudes was statistically significant, it was not possible to comment on the practical importance of the degree of change that was observed, either in terms of the ways in which students deal with patients with psychiatric illness or in terms of choice of specialization. Among questions that remain to be answered are the following: Do more positive attitudes to psychiatry influence choice of specialisation? Are more positive attitudes towards mental illness reflected in the quality of work that medical graduates do with patients who are suffering from mental illness?

#### Conclusion

Psychiatric education appeared to positively influence the attitudes of medical students towards mental illness and some aspects of psychiatry as evidenced by changes in scores on the ATP and AMI. Before attachment the ATP scores were 104.8 and after attachment the scores improved to 114.4. The AMI scores before attachment were 63.4 and after attachment the scores similarly improved to 68.1. However, whether these changes are stable over time needs to be studied. We are in the process of conducting follow-up studies to elucidate this.

#### Limitations

The results of this study have to be interpreted with caution due to the small sample size. It is not known whether there was any difference in attitudes between the students who participated in the study and those who did not. There was also no control group to compare these results with.

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# Appendix 1: Attitudes to Mental Illness - (AMI) Singh

M	atric no:	Year:	Gro	oup:	Sex:	Ethnic	group		D	ate:	
I h	ereby agree to	o participate ii	n this su	rvey of r	ny own :	free will	& underst	and tha	at I ma	y withdraw	at any tim
	hout it	affecting	my	status	in	any	way	as	a	medical	student
Sig	ned:										
	A	В			С		1	D		Е	
	Strongly agree		е	Neutra	l (no opi	nion)		ıgree		Strongly disa	agree
1.	Psychiat	ric patients ger	nerally s	peaking a	ure diffici	ılt to like			<u> </u>	-	· <del></del>
	_ · · ·	ntally ill should	•								
		mostly results		_		,					
		with a psychiat				e given a	iob with	respons	sibility.		
		ric diagnoses s						1	,		
		llnesses are wr	_					rities.			
		who attempt su		_					l not b	e given trans	splants.
8.	Psychiat	ric drugs are n	nostly us	ed to cor	ntrol disru	uptive bel	naviour.			_	-
9.	ECT sho	uld be banned				-					
10.	People v	who take an o	verdose	are in ne	ed of cor	npassiona	ite treatm	ent.			
11.	Psychiati	ric drugs do m	ore harr	n than go	od.						
12.	Depressi	ion occurs in p	eople w	ith a wea	ak persor	nality.					
13.	Mental il	llness is the re	sult of a	dverse so	cial circu	mstances					
14.	Alcohol	abusers have r	no self-c	ontrol.							
15.	Mental il	llnesses are ge	netic in	origin.							
16.	People v	who had good	parentin	ng as chile	dren rare	ly suffer f	rom men	tal illne	ss.		
17.	Care in t	the community	for the	mentally	ill puts s	ociety at	risk.				
18.	It is pref	erable that the	mentall	y ill live i	independ	lently rath	er than ir	n hospit	al.		
19.	Not eno	ugh is being d	one for	the care o	of the me	entally ill.					
20.	Patients	with chronic s	chizophi	renia are	incapable	e of looki	ng after tl	nemselv	es.		

# Appendix 2: Attitudes Towards Psychiatry (ATP 30) Burra

A	В	С	D	E						
Strongly	agree Agree	Neutral '	Disagree	Strongly disagree						
		(no opinion)								
1.	Psychiatry is unappealing(	not interesting to me) because	se it makes so little us	e of medical training.						
	Psychiatrists talk a lot but			· ·						
	=	tle more than (not very diffe	rent from) prisons.							
	I would like to be a psychiatrist.									
		accept the efficacy(effectivene	ess) of psychotherapy.							
	•	ng up psychiatric training are		articipation in real medicin						
	Psychiatrists seem to talk a		0 , 1	1						
	•	apy basically is fraudulent (gr	uilty of fraud) since the	ere is no strong evidence th						
	it is effective.	1, ,	,							
9.		ses our understanding of me	dical and surgical pati	ents.						
	· ·	eport that their psychiatric un								
	Psychiatry is a respected b			*						
		s at least as much attention a	s physical illness.							
	•	cientific information to go on		h scientific evidence).						
		now (available) at hand mos								
		least as stable as the average		•						
		es patients to worry too mucl		is.						
		action from their work than c								
		nravel (discover)the cause of								
	- ·	chiatrists can do for their pa								
	• • •	a specific contribution to ma		ically in) the treatment of						
	the mentally ill.	•		•						
21	•	nsidered to be the three most	exciting medical spec	ialties, psychiatry would						
	be excluded.			•						
22.		of psychiatrists as equal to o	other doctors.							
		he most important part of the		al schools.						
		c that even psychiatrists can't								
		treatment has become quite	-	• •						
		in psychiatry are really just v								
		niatric patient's are just human								
		allows the development of re		nships with people.						
29		en more interesting to work								
30	•	s(vague) that it cannot really	=							