

and other student groups with higher levels of training. Statistical significance was considered when  $P < 0.05$ .

### Results

The BMI Scale scores for the 4 study groups are presented in Table 1. For 12 of the 21 questions regarding the general nature of mental illness and the dangerousness of mentally ill persons, there was a significant difference in scores between the study groups ( $P < 0.05$ ). However, for 9 of the 21 questions regarding social/interpersonal skills and incurability of mental illness, there was no significant difference in the scores between the study groups.

The AMIQ scores among the study groups for the 4 vignettes, including substance abuse, depression, psychosis, and OCD, are presented in Table 2. For the 5 questions in all 4 vignettes, there was a significant

difference in the scores between the study groups ( $P < 0.05$ ).

Between-group comparisons of the year 3 group, who were at the beginning of their psychiatric training, and the other groups, who had more training, showed significant differences in the scores ( $P < 0.05$ ) for 11 items of the BMI Scale, while 10 items showed no significant difference (Table 3).

All questions in AMIQ in the 4 vignettes (substance abuse, depression, psychosis, and OCD) showed a significant difference between the year 3 and other groups that had more psychiatric training, particularly in interns ( $P < 0.05$ ) (Table 4).

### Discussion

In the present study, we used questionnaires to analyse the beliefs and attitudes of undergraduate medical stu-

**Table 1 Beliefs about Mental Illness Scale mean scores for the 4 study groups of 25 participants**

		Mean	Standard deviation	F	P
A mentally ill person is more likely to harm others than a normal person	Year 3	2.28	1.62	7.700	< 0.001
	Year 4	1.64	2.23		
	Year 5	1.04	2.03		
	Interns	0.04	0.20		
	Total	1.25	1.88		
Mental disorders would require a much longer period of time to be cured than other general diseases	Year 3	3.16	1.21	11.962	< 0.001
	Year 4	1.52	1.78		
	Year 5	1.88	2.30		
	Interns	0.44	0.768		
	Total	1.75	1.87		
It may be a good idea to stay away from people who have a psychological disorder because their behaviour is dangerous	Year 3	2.00	1.66	5.864	0.001
	Year 4	1.80	1.80		
	Year 5	1.04	1.79		
	Interns	0.36	0.64		
	Total	1.30	1.66		
The term psychological disorder makes me feel embarrassed	Year 3	1.88	1.86	2.303	0.082
	Year 4	1.72	1.67		
	Year 5	1.80	2.16		
	Interns	0.76	1.01		
	Total	1.54	1.76		
A person with a psychological disorder should have a job with only minor responsibility	Year 3	2.56	1.96	4.296	0.007
	Year 4	1.88	1.71		
	Year 5	1.48	1.98		
	Interns	0.84	1.18		
	Total	1.69	1.82		
Mentally ill people are more likely to be criminals	Year 3	2.92	1.19	7.450	< 0.001
	Year 4	1.76	1.64		
	Year 5	1.68	2.21		
	Interns	0.76	1.23		
	Total	1.78	1.77		

**Table 1** Beliefs about Mental Illness Scale mean scores for the 4 study groups of 25 participants (continued)

		Mean	Standard deviation	F	P
Psychological disorders are recurrent	Year 3	1.56	1.42	1.941	0.128
	Year 4	1.76	1.48		
	Year 5	1.20	1.87		
	Interns	0.80	1.22		
	Total	1.33	1.54		
I am afraid of what my boss, friends and others would think if I was diagnosed as having a psychological disorder	Year 3	1.48	.96	2.329	0.079
	Year 4	1.88	1.59		
	Year 5	1.80	2.14		
	Interns	0.84	1.25		
	Total	1.50	1.58		
Individuals diagnosed by mental illness suffer from its symptoms throughout their life	Year 3	2.32	1.55	3.390	0.021
	Year 4	1.72	1.72		
	Year 5	1.40	1.94		
	Interns	0.88	1.27		
	Total	1.58	1.69		
People who have once received psychological treatment are likely to need further treatment in the future	Year 3	2.44	1.53	3.865	0.012
	Year 4	1.96	2.09		
	Year 5	1.76	2.15		
	Interns	0.76	1.27		
	Total	1.73	1.87		
It might be difficult for mentally ill people to follow social rules such as being punctual or keeping promises	Year 3	1.28	1.31	1.954	0.126
	Year 4	1.40	2.00		
	Year 5	1.92	2.36		
	Interns	0.68	1.41		
	Total	1.32	1.85		
I would be embarrassed if people knew that I am in relationship with a person who once received psychological treatment	Year 3	2.16	1.65	1.604	0.194
	Year 4	1.80	1.94		
	Year 5	2.04	2.35		
	Interns	1.08	1.61		
	Total	1.77	1.93		
I am afraid of people who are suffering from a psychological disorder because they may harm me	Year 3	2.96	1.81	4.850	0.003
	Year 4	1.80	1.78		
	Year 5	1.84	2.29		
	Interns	0.96	1.49		
	Total	1.89	1.97		
A person with a psychological disorder is less likely to function well as a parent	Year 3	2.80	1.87	3.616	0.016
	Year 4	1.72	1.74		
	Year 5	2.20	2.40		
	Interns	1.08	1.55		
	Total	1.95	1.99		
I would be embarrassed if a person in my family became mentally ill	Year 3	2.16	1.72	2.543	0.061
	Year 4	1.64	1.68		
	Year 5	2.16	2.29		
	Interns	0.96	1.31		
	Total	1.73	1.82		

**Table 1** Beliefs about Mental Illness Scale mean scores for the 4 study groups of 25 participants (concluded)

		Mean	Standard deviation	F	P
I believe that psychological disorders can never be completely cured	Year 3	1.40	1.83	2.315	0.081
	Year 4	1.68	1.77		
	Year 5	2.28	2.39		
	Interns	0.92	1.32		
	Total	1.57	1.90		
Mentally ill people are unlikely to be able to live by themselves because they are unable to assume responsibilities	Year 3	2.20	1.83	2.056	0.111
	Year 4	1.84	1.80		
	Year 5	2.40	2.31		
	Interns	1.16	1.60		
	Total	1.90	1.93		
Most people can be friends with a mentally ill person without knowing	Year 3	3.16	1.55	8.485	< 0.001
	Year 4	2.20	1.94		
	Year 5	2.24	2.42		
	Interns	0.60	1.15		
	Total	2.05	2.02		
The behaviour of people who have psychological disorders is unpredictable	Year 3	2.24	1.45		
	Year 4	2.16	1.93		
	Year 5	2.28	2.34		
	Interns	0.84	1.37		
	Total	1.88	1.89		
Psychological disorders are unlikely to be cured regardless of treatment	Year 3	1.64	1.82	2.749	0.047
	Year 4	2.36	2.08		
	Year 5	2.16	2.25		
	Interns	0.92	1.53		
	Total	1.77	1.99		
I do not trust the work of a mentally ill person assigned to my team	Year 3	2.08	1.73	2.443	0.069
	Year 4	2.16	2.06		
	Year 5	2.25	2.35		
	Interns	0.96	1.51		
	Total	1.86	1.97		

dents at Majmaah University towards mental illness. We also compared the beliefs and attitudes between medical students in year 3, who had started their psychiatric training, and students in years 4 and 5, as well as interns who had more psychiatric training. The present study demonstrated that there were significant differences in BMI Scale scores between the year 3 group and the other groups concerning the nature and dangerousness of mental illness, while no differences were found regarding social/interpersonal skills and incurability of mental illness. This gives a clear indication regarding the beliefs of medical students. Factors such as social customs, traditional beliefs, and religious beliefs are deeply imprinted in the mind and cannot be easily changed by modern education. Other factors such as economic factors and exposure to social media could also play a role. A similar result was reported by a study from Nigeria, which concluded that psychiatric training favourably changed

students' attitudes but could not change beliefs that were deeply rooted in their society (18). This was reflected in their response after training as they still believed that psychiatric patients were unpredictable and that mental illnesses were related to supernatural forces.

Regarding attitudes towards mental illness, interns showed a significant difference to year 3 students, as indicated by the AMIQ responses to the 4 vignettes of substance abuse, depression, psychosis, and OCD. This could be attributed to the duration of psychiatric training, which starts from year 3 and extends until internship, thereby positively influencing attitudes towards mental illness. Presently, at Majmaah University, students have a module about the basics of psychology and behaviour in year 3, accounting for 41 contact hours and 2 credit hours, as well as a module comprising lectures and clinical training regarding psychiatric illness in years 4 and 5, accounting for 142 contact hours