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Faking good in personality and emotional intelligent tests: self-enhancement among a cohort of medical school applicants

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ABSTRACT

Introduction: There is lacking of evidence available in literatures on faking good in personality and emotional intelligent (EI) tests among medical school applicants. Thus more research is required to address the faking good issues in medical context specifically related to student admission. **Objective**: This study aimed to estimate the prevalence of faking good in personality and EI tests during a high stake situation which was during student selection process. Method: A one-year prospective study was carried out on a cohort of medical school applicants. Data collection was carried out at five different intervals; one measurement at pre-selection (Time 1) and four measurements at post-selection (Time 2 to Time 5). The USMaP-i and USMEQ-i were used to measure personality and EI. Faking good was positive if the scores at Time 1 beyond the 95% CI of average scores of Time 2 to Time 5. Result: The highest prevalence of faking good among personality traits was in conscientiousness (83.1%) and the lowest was in openness (74.1%). The highest prevalence of faking good among EI constructs was in emotional conscientiousness (77%) and the lowest was in emotional awareness (51.7%). About 1.7% of applicants were not faking good at any of the personality dimensions while 11.5% of them were not faking good at any of the EI constructs. About 47.4% faked good at all the personality dimensions and 33.9% faked good at all the EI constructs. Conclusion: The prevalence of faking good in the self-reporting personality and EI tests was high. Certain personality traits and EI constructs were more susceptible to faking good. The personality test was more susceptible to faking good than the EI test. Considering the potential positive impacts of personality and EI on individual performance, alternative ways should be designed to address the faking good issues.

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Introduction

Student selection is a vital and integral component to medical schools because the kind of students recruited at the beginning determine the kind of doctors produced at the end (1, 2). Therefore the accurate selection of those who will perform well either as medical student or later as doctors is a challenging task for medical schools (3). Up to date, most of medical schools make selection of prospective medical students based on cognitive method such as previous academic achievement, cognitive ability and interview performance (1, 3). However, attention recently has turned to the potential of noncognitive methods such as personality and emotional intelligent in medical education. Substantial amount of research has suggested the existent of favourable associations between personality and emotional intelligent with medical students future performance either academically or psychologically (4-6). Such promising facts attract medical schools to include personality and emotional intelligent as criteria for selecting medical students.

In non-medical setting, the use of personality and emotional intelligent testing for selection is widespread and is based on the large body of literature showing that personality and emotional intelligent predict job performance, individual personal wellbeing and career success (4, 5, 7, 8). Furthermore, evidence has shown that such measures do not have an unfavourable impact on employees, thus can improve fairness and acceptability in personal decision making (9). Research in medical setting is rarer, but studies have found that emotional intelligent positively associated with doctor-patient relationship, increased empathy, empathy and communication skills, academic performance in specific component such as clinical diagnostic and ability, and improved stress prognostic management skills (4, 5). Likewise, personality positively associated with psychological health, career success, academic performance, learning approach and working approach (4, 6, 8, 10-12). Despite the encouraging facts, personality and emotional intelligent are largely relied on selfreport measures that make them vulnerable to faking good and this has been the subject of much concerns and ongoing debates (3, 13, 14). In general, faking good is broadly referred to a purposeful attempt to distort or manipulate responses to psychological test items to make a desirable impression (3, 13-16). A recent study found that 62.7% of medical school applicants had self-enhanced their responses to personality items (3). Likewise, a study done on job applicants reported that emotional intelligent items were also susceptible to faking good either trait based or ability based tests, however the trait based test was more susceptible to faking good than the ability based test (14). So far none of articles reported faking good in emotional intelligent test among medical school applicants. In a nutshell, these facts suggest that there is lacking of evidence available in literatures on faking good in personality and emotional intelligent tests among medical school applicants. Thus more research is required to address the faking good issues in medical context specifically related to student admission. It is worthy highlighting that faking good to the psychological tests depends on multiple factors whereby most of them are related to the context of the tests were used, for example faking good is expected to be high during a high stake context such as the selection process (3, 13, 14).

This study aimed to estimate prevalence of faking good to personality and emotional intelligent tests during a high stake situation which was the final stage of medical student selection (i.e. interview) in a medical school. This study was designed to address several questions which include 1) what is the prevalence of faking good to personality test among medical school applicants? 2) What is the prevalence of faking good to emotional intelligent test among medical school applicants? 3) Which personality constructs are more susceptible to faking good? 4) Which emotional intelligent constructs are more susceptible to faking good? 5) Which test is more susceptible to faking good? Based on the literature the author anticipated that prevalence of faking good for the tests were high. In addition, personality and emotional intelligent items were equally susceptible to faking good.

Method

Study setting and sample

Ethical approval was obtained from the Human Ethical Committee of Universiti Sains Malaysia prior to study start.

This study conducted a one-year prospective study on the 2010 cohort of medical school applicants at the School of Medical Sciences, Universiti Sains Malaysia. The medical school selected medical students semi-independently from the Malaysian Ministry of Higher Education. Selection was based on previous academic performance (i.e. cumulative grade point average (CGPA)), psychometric assessment that was assessed by the Malaysian University Selection Yearly Inventory (MUnSYI), and interview performance (i.e. the final stage of student selection) (1). All applicants who were called for the final stage of selection (i.e. the interview) were invited to participate in this study. The Universiti Sains Malaysia Personality Inventory (USMaP-i) (16, 17) and Universiti Sains Malaysia Emotional Quotient Inventory (USMEQ-i) (15, 18, 19) were administered to the applicants who agreed and signed consent to participate in this study (n=333).

Data Collection

Data collection was carried out at five different intervals (i.e. time 1 was collected right after the interview completed and time 2 to time 5 were collected during medical training) through faceto-face guided self-administered questionnaire. Time 1 was considered as pre-selection measurements and Time 2 to Time 5 were considered as post-selection measurement. They were clearly informed that the results of this study would not have any influence on the interview or selection decision. Each participant was given an identity code for tracing purposes. Instructions and information about the study were given to them.

The successful applicants were then followed up and their personality and emotional intelligent were measured by the USMaP-i and USMEQ-i five respectively at different intervals; immediately after the interview (Time 1), and at 2 months (Time 2), 4 months (Time 3), 6 months (Time 4) and final examination (Time 5) of the first year medical training. Measurement at the interview session (Time 1) was considered as measurement under provocative condition (i.e. the highest tendency to faking good). The rest of measurements (Time 2 - Time 5) were considered as measurements under nonprovocative condition (i.e. the least tendency to faking good). Data collection was completed within one year from May 2010 until May 2011.

Instrument

Basic demographic profiles were obtained from the study subjects using a form (see table 1).

The USMaP-i measures personality traits of the study subjects. It was developed based the Big-Five personality traits that are available on the public domain of the International Personality Item Pool (IPIP)(20-23). The five personality traits were extroversion (Cronbach's alpha = (0.80), conscientiousness (Cronbach's alpha = (0.83), agreeableness (Cronbach's alpha = 0.63), neuroticism (Cronbach's alpha = 0.81) and openness (Cronbach's alpha = 0.70)(16, 17). Its validity and reliability among Malaysian medical students was established (16, 17, 24). It was found to be a stable tool to measure personality traits among Malaysia medical students at different time and occasions(24). It has 60 items to measure personality and 6 items to measure faking good (Cronbach's alpha = 0.83) (16, 17). Each personality trait consists of 12 items.

The USMEQ-i consists of 39 items to measure emotional intelligent and 7 items to measure faking good (Cronbach's alpha = 0.83) (15, 18). It measures seven domains of emotional intelligent which are emotional control (Cronbach's alpha = 0.89; 9 item), emotional maturity (Cronbach's alpha = 0.82; 8 items), emotional conscientiousness (Cronbach's alpha 0.83; 5 items), emotional awareness (Cronbach's alpha = 0.79; 5 items), emotional commitment (Cronbach's alpha = 0.77; 4 items), emotional fortitude (Cronbach's alpha = 0.66; 4 items), and emotional expression (Cronbach's alpha = 0.60; 4 items)(15, 18). It was found to be a stable tool to measure emotional intelligent at different time and occasions (19).

Faking good

Faking good was determined based on the average score of Time 2 to Time 5 measurements. The 95% confident interval (CI) of the average score was calculated for each personality dimension and emotional intelligent construct as well as faking index. Participants who achieved score at Time 1 beyond the 95% CI scores were considered as positive for faking good (3).

Statistical analysis

Data were analysed by the Statistical Packages for Social Sciences version 19 (SPSS 19).

Independent-t, paired-t and repeated measure ANOVA tests were applied to determine differences of personality trait and emotional intelligent scores between non-provocative (Time 2 - Time 5) and provocative (Time 1) conditions of the successful applicants. Two assumptions of the independent-t and paired-t tests were checked; 1) normal distribution, and 2) homogeneity of variances (25). Three assumptions of the repeated measured ANOVA

Table 1: Demographic profile

test were checked; 1) normality of residual, 2) homogeneity of variances, and 3) compound symmetry by Mauchly's test of sphericity (25).

Intra-class correlation (ICC) analysis was performed to determine level of agreement between measurements at different intervals. The ICC coefficient value less than 0.2 was considered as poor agreement, 0.21 to 0.40 was considered as fair agreement, 0.41 to 0.60 was considered as moderate agreement, 0.61 to 0.80 was considered as good agreement and 0.81 to 1.0 was considered as very good agreement (26-28).

Pearson correlation was performed to determine the forms of correlation between the scores at Time 1 with the average scores of Time 2 to Time 5. In general, the correlation coefficient lesser than or equal to 0.20 was considered as weak correlation, more than 0.2 but lesser than 0.8 was considered as moderate correlation, and equal to or more than 0.8 was considered as strong correlation (29, 30).

Result

Majority of the successful applicants were female, non-Malay, from matriculation stream, originated from urban areas and aged around 19 (Table 1).

		Accepted applicants	Not accepted
		(N=177)	applicants, (N=156)
Sex, n (%)	Male	58 (32.8)	64 (41)
	Female	119 (67.2)	92 (59)
Race, n (%)	Malay	81 (45.8)	53 (34)
	Non-Malay	96 (54.2)	103 (66)
Entry qualification, n (%)	Matriculation	129 (72.9)	112 (71.8)
	High School Certificate	32 (18.1)	38 (24.4)
	Diploma	16 (9)	6 (3.8)
Residency status, n (%)	Urban	115 (65)	107 (68.6)
	Rural	62 (35)	49 (31.4)
Age, Mean (SD)		19.27 (0.89)	19.26 (0.61)

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Level of agreement between the measurements of personality dimensions obtained at Time 1 and those of the same dimensions at Time 2 to Time 5 are summarized in Table 2. Likewise, correlations between measurements of the dimensions at Time 1 and average score (i.e. Time 2 to Time 5) are summarized in Table 2. The ICC (i.e. ranged between 0.44 and 0.56) and Pearson correlation (i.e. ranged between 0.43 and 0.67) coefficient values showed that a degree of construct validity was stabled across multiple measurements (Table 2). The ICC coefficient values were relatively improved after removal of the Time 1 measurement in the ICC analysis (i.e. ranged between 0.54 and 0.66); indicating the construct validity becomes more stable after removal of Time 1 measurement.

Independent-t test was performed to assess the differences between accepted and not accepted applicants on each personality dimension as well as the FIP construct. None of the dimensions achieved significant differences except the openness dimension (Table 2). It appears that accepted applications significantly had higher level of openness trait than those who were not accepted.

Repeated measure ANOVA (within-subject) was performed to assess the differences on each personality dimension as well as the FIP construct across multiple measurements (Table 2). Results showed that all dimensions achieved significant differences. The post-hoc comparison tests showed pre-selection measurements (i.e. Time 1) were significantly higher than the postselection measurements (i.e. Time 2 to Time 5) except neuroticism dimension which was lower. These results indicated that there were significant discrepancies between measurements of personality dimensions at pre-selection (i.e. Time 1) and post-selection (i.e. Time 2 to Time 5).

Paired-t test was performed to assess differences between pre-selection (i.e. Time 1) and the average score of post-selection measurements (i.e. Time 2 to Time 5). Results showed that measurements of all personality dimensions as well as FIP construct at pre-selection were significantly higher than the average score except neuroticism construct which was lower (Table 2). These results support the significant discrepancies between measurements of personality dimensions at pre-selection and postselection.On further analysis, we found that 1.7% (n=3) of them were not self-enhanced (i.e. not faking good) at any of the personality dimensions, 50.9% (n=88) of them faked good at least at one of the personality dimensions but not all, and 47.4% (n=82) of them faked good at all of the personality dimensions (Table2). Overall prevalence of faking good for personality dimensions ranged between 74.1% and 83.1%. The highest prevalence was in conscientiousness dimension and the lowest was in openness dimension. Approximately 98.3% of the accepted applicants faked good on at least one of the personality dimensions.

Table 2: Pre- selection (Time 1) and post-selection (Time 2 to Time 5) mean scores of accepted applicants with independent-t, paired-t, one-way repeated measure ANOVA, intra-class correlation and Pearson correlation results. Time 1 scores of applicants who were not accepted are provided for comparison.

	E	С	Α	Ν	0	FIP	
	Mean (SD)						
ICC across Time 1 to	0.52	0.51	0.44	0.53	0.56	0.46	
Time 5							
ICC across Time 2 to	0.62	0.64	0.54	0.66	0.64	0.62	
Time 5							
Pearson correlation	0.58	0.58	0.45	0.55	0.67	0.43	
coefficient between							
Time 1 and Average							
scores (accepted)							
Time 1, not accepted	36.01 (7.42)	38.77 (6.19)	37.61 (5.05)	12.20 (7.05)	35.21 (6.35)	20.38 (3.17)	
Time 1, accepted	37.17 (5.95)	39.79 (5.52)	38.57 (4.34)	10.84 (6.18)	37.09 (5.61)	20.79 (2.49)	
Time 2, accepted	32.40 (6.55)	33.73 (6.52)	35.55 (5.36)	16.50 (7.25)	33.28 (6.86)	17.88 (3.43)	
Time 3, accepted	32.40 (6.55)	33.73 (6.52)	35.55 (5.36)	16.50 (7.25)	33.28 (6.86)	17.88 (3.44)	
Time 4, accepted	33.14 (7.10)	34.89 (6.86)	35.29 (6.30)	14.93 (7.51)	33.41 (7.35)	17.98 (3.36)	
Time 5, accepted	32.11 (7.24)	32.80 (7.44)	33.34 (6.75)	16.84 (7.67)	31.83 (6.90)	17.12 (4.03)	
Average score (Time 2	32.59 (5.88)	33.76 (5.92)	34.98 (4.91)	16.13 (6.42)	32.99 (6.01)	17.79 (2.94)	
to Time 5)							
t-statistics ^a	-1.57	-1.58	-1.84	1.87	-2.85	-1.30	
p-value ^a	0.116	0.114	0.067	0.063	0.005	0.194	
F-statistics ^b	36.35	66.19	34.77	48.89	30.19	54.19	
p-value ^b	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	
t-statistics ^c	10.68	14.02	9.95	-0.90	10.21	12.56	
p-value ^c	< 0.001	< 0.001	< 0.001	0.369	< 0.001	< 0.001	
Candidates with scores							
at Time 1 outsides the 95% CI of the average score, <i>n</i> (%)	131 (76.6)	143 (83.1)	132 (77.6)	140 (81.4)	126 (74.1)	142 (82.1)	

Time 1 was measured right after interview (i.e. provocative condition); Time 2 to Time 5 were considered as during the medical training (i.e. non-provocative condition)

 $E = extroversion, \ C = Conscientiousness, \ A = agreeableness, \ N = neuroticism, \ O = openness, \ FIP = faking \ index \ for \ personality, \ SD = agreeableness, \ N = neuroticism, \ O = openness, \ FIP = faking \ index \ for \ personality, \ SD = agreeableness, \ N = neuroticism, \ O = openness, \ FIP = faking \ index \ for \ personality, \ SD = agreeableness, \ N = neuroticism, \ O = openness, \ FIP = faking \ index \ for \ personality, \ SD = agreeableness, \ N = neuroticism, \ O = openness, \ FIP = faking \ index \ for \ personality, \ SD = agreeableness, \$

standard deviation, CI = confident interval, ICC = intra-class correlation coefficient

^a the independent-t test was performed at Time 1 between accepted and not accepted applicants

^b the one-way repeated measure ANOVA between Time 1 to Time 5. Corrected with Greenhouse-Geisser

^c the paired-t test between Time 1 accepted and Average (Time 2 to Time 5)

ICC: two-way mixed (absolute agreement), single measure.

95% CI for the average score (Time 2 to Time 5): E (31.68, 33.50; N = 162); C (32.85, 34.67; N = 162); A (34.22, 35.74; N = 162); N (15.14, 17.12; N = 161); O (32.06, 33.92; N = 161); FIP (17.33, 18.25; N = 159).

Each personality trait ranged from 0 to 48. The FID 16 - 0 + 24

The FIP score ranged from 0 to 24

Table 3: Pre- (Time 1) and post-selection (Time 2 to 5) mean scores of accepted applicants independent-t, paired-t, one-way repeated measure ANOVA, intra-class correlation and Pearson correlation results. Time 1 scores of applicants who were not accepted are provided for comparison

	E1	E2	E3	E4	E5	E6	E7	FIE
	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
	(SD)	(SD)	(SD)	(SD)	(SD)	(SD)	(SD)	(SD)
ICC across Time 1 to	0.56	0.52	0.49	0.51	0.53	0.54	0.45	0.52
Time 5								
ICC across Time 2 to	0.60	0.58	0.57	0.59	0.59	0.56	0.51	0.57
Time 5								
Pearson correlation	0.62	0.57	0.52	0.48	0.52	0.66	0.51	0.58
coefficient between								
Time 1 and Average								
scores (accepted)								
Time 1, not accepted	28.72	27.01	17.34	15.72	12.48	12.85	14.50	22.48
	(5.18)	(4.08)	(2.51)	(2.99)	(2.46)	(2.28)	(1.83)	(4.00)
Time 1, accepted	29.28	27.80	17.82	16.38	13.10	13.34	14.69	23.27
	(4.73)	(3.41)	(2.21)	(2.76)	(2.15)	(2.03)	(1.50)	(3.41)
Time 2, accepted	26.82	26.34	16.75	15.74	12.36	12.61	14.21	21.50
	(5.48)	(3.91)	(2.66)	(3.01)	(2.49)	(2.41)	(1.94)	(3.72)
Time 3, accepted	26.82	26.34	16.75	15.74	12.36	12.61	14.21	21.50
	(5.48)	(3.91)	(2.66)	(3.01)	(2.49)	(2.41)	(1.94)	(3.72)
Time 4, accepted	28.85	26.68	16.60	16.30	12.96	12.88	13.77	22.68
	(5.34)	(4.25)	(2.78)	(2.96)	(2.40)	(2.38)	(2.05)	(3.90)
Time 5, accepted	27.92	25.55	15.98	15.82	12.60	12.62	13.17	21.89
	(6.05)	(4.91)	(3.27)	(3.27)	(2.70)	(2.60)	(2.42)	(4.39)
Average score (Time 2	27.51	26.18	16.50	15.89	12.56	12.63	13.81	21.81
to Time 5)	(4.77)	(3.57)	(2.38)	(2.57)	(2.15)	(2.05)	(1.70)	(3.31)
t-statistics ^a	-1.04	-1.91	-1.85	-2.12	-2.44	-2.11	-1.04	1.95
p-value ^a	0.300	0.057	0.065	0.035	0.015	0.035	0.300	0.052
F-statistics ^b	18.63	15.35	20.75	5.02	6.39	8.07	26.00	14.29
p-value ^b	< 0.001	< 0.001	< 0.001	0.001	0.001	< 0.001	< 0.001	< 0.001
t-statistics ^c	5.66	6.44	7.34	3.09	3.11	5.70	6.91	5.37
p-value ^c	< 0.001	< 0.001	< 0.001	0.002	0.002	< 0.001	< 0.001	< 0.001
Candidates with scores								
at Time 1 outsides the	102 (50.2)	112 ((4.0)	124 (77.0)	00(51.7)	110 ((2.2))	120 ((0))	114(65.5)	110 (62.2)
95% CI of the average	103 (39.2)	113 (64.9)	134 (77.0)	90 (31.7)	110 (03.2)	120 (69)	114 (03.3)	110 (63.2)
score, <i>n</i> (%)								

Time 1 was measured right after interview (i.e. provocative condition); Time 2 to Time 5 were considered as during the medical training (i.e. non-provocative condition)

E1 = emotional control, E2 = emotional maturity, E3 = emotional conscientiousness, E4 = emotional awareness, E5 = emotional commitment, E6 = emotional fortitude, E7 = emotional expression, TEI = total emotional intelligent, FIE = faking index for EI, SD = standard deviation, CI = confident interval, ICC = intra-class correlation coefficient

^a the independent-t test was performed at Time 1 between accepted and not accepted applicants

^b the one-way repeated measure ANOVA between Time 1 to Time 5. Corrected with Greenhouse-Geisser

^c the paired-t test between Time 1 accepted and Average (Time 2 to Time 5)

ICC: two-way mixed (absolute agreement), single measure.

95% CI for the average score (Time 2 to Time 5): E1 (26.76, 28.25; N = 159); E2 (25.62, 26.73; N = 159); E3 (16.13, 16.87; N = 163); E4 (15.49, 16.28; N = 163); E5 (12.22, 12.89; N = 159); E6 (12.31, 12.95; N = 159); E7 (13.55, 14.07; N = 163); FIE (21.29, 22.33; N = 157) Range of score: E1 = 0-36; E2 = 0-32; E3 = 0-20; E4 = 0-20; E5 = 0-16; E6 = 0-16; E7 = 0-16; TEI = 0-156; FIE = 0-28

Level of agreement between the measurements of emotional intelligent constructs measured at Time 1 and those of the same constructs at Time 2 to Time 5 are summarized in Table 3. Likewise, correlations between measurements of the personality constructs at Time 1 and average score (i.e. Time 2 to Time 5) are summarized in Table 3. The ICC (i.e. ranged between 0.45 and 0.56) and Pearson correlation (i.e. ranged between 0.48 and 0.66) coefficient values showed that its construct validity was stabled across multiple measurements (Table 3). The ICC coefficient values were relatively improved after removal of the Time 1 measurement in the ICC analysis (i.e. ranged between 0.51and 0.60); indicating the construct validity becomes relatively more stable after removal of Time 1 measurement.

Independent-t test was performed to assess the differences between accepted and not accepted applicants on each emotional intelligent construct as well as the FIE construct. None of the constructs achieved significant different except the E4 (emotional awareness), E5 (emotional commitment) and E6 (emotional fortitude) constructs (Table 3). It appears that accepted applications significantly had higher level of E4, E5 and E6 than those who were not accepted.

Repeated measure ANOVA (within-subject) was performed to assess the differences on each personality construct as well as the FIE construct across multiple measurements (Table 3). Results showed that all constructs achieved significant differences. The post-hoc comparison tests showed measurements at Time 1 were significantly higher than the measurements at post-selection (i.e. Time 2 to Time 5). These results indicated that there were significant between measurements discrepancies of emotional intelligent constructs at Time 1 and post-selection (i.e. Time 2 to Time 5).

Paired-t test was performed to assess differences between Time 1 and the average score of Time 2 to Time 5. Results showed that measurement of all emotional intelligent constructs as well as FIP construct at Time 1 significantly higher than the average score of post-selection measurements (Table 2). These results support the significant discrepancy between measurements of emotional intelligent at Time 1 and post-selection.

On further analysis, we found that 11.5% (n=20) of them were not self-enhanced (i.e. not faking good) at any of the emotional intelligent dimensions, 54.6% (n=95) of them faked good at least at one of the emotional intelligent dimensions but not all, and 33.9% (n=59) of them faked good at all of the emotional intelligent dimensions (Table 3). Overall, the prevalence of faking good for emotional intelligent constructs ranged between 51.7% and 77%. The highest prevalence was in E3 (emotional conscientiousness) and the lowest was in E4 (emotional awareness). Approximately 88.5% of the accepted applicants faked good on at least one of the emotional intelligent constructs.

By looking at the faking index for both psychological tests, it appears that the percentage of positive faking index corresponded with the percentage of faking good of the personality dimensions and emotional intelligent constructs. In addition, prevalence of faking good in the personality dimensions (i.e. 74.1% to 83.1%) was higher than the emotional intelligent constructs (i.e. 51.7% to 77%).

In a nutshell, results showed that the prevalence of faking good in the self-reporting personality and emotional intelligent tests was high. It appears the personality test was more susceptible to faking than the emotional intelligent test.

Discussion

Data showed that the prevalence of faking good on at least one to personality dimensions (98.3%) and emotional intelligent constructs (88.5%) was high among the medical school applicants. In fact, the prevalence was far greater than the reported figure by a previous study which was 66.7% (3). One of possible reasons for the greater figure obtained in this study is due to the study design. This study repeatedly measured personality and emotional intelligent of the successful applicants for several times at different intervals, therefore would be more able and sensitive to detect faking good cases than the previous study (3) which only measured once at post-selection. One lesson learnt is that in a highly competitive setting, medical school applicants described themselves as having more favorable personality and emotional intelligent than they appeared to be throughout one year later during the first year medical training. In addition. this fact indicated that selfenhancement occurred despite the applicants were clearly informed that the tests would not affect their outcomes for entering medical school. The author strongly agrees with the view that self-enhancement or faking good among medical school applicants would be greater if the personality and emotional intelligent testing had been formal criteria of the selection process (3).

The prevalence of faking good between the big five personality dimensions appears to be varied that ranged between 74.1% and 83.1%. Whereas, the figure obtained in this study was far greater than the figured reported by a previous study which was between 14.5% and 33.7% (3). One common finding between this study and the previous study is that the highest prevalence of faking good was recorded by conscientiousness and the lowest was recorded by openness (3). These facts indicated that, among medical school applicants, conscientiousness was the most susceptible personality dimension to faking, while openness the least susceptible to faking. One possible reason for applicants described themselves as consciences person (i.e. characterized by responsible. organize, systematic and high integrity) because researches have shown that conscientiousness is a good predictor of job performance in various occupations (8, 31, 32). Thus, if they are seen as a consciences person, the odds to be selected as medical student are better.

Likewise, the prevalence of faking good between the emotional intelligent dimensions were varied that ranged between 51.7% and 77%. The prevalence was relatively lower than the personality dimensions found in this study, but far greater than the prevalence reported by a previous study based on the personality traits (i.e. 14.5% to 33.7%) (3). It seems that emotional conscientiousness was the most vulnerable to faking and emotional awareness was the least vulnerable to faking. Emotional conscientiousness is characterized by emotional ability of taking responsibility and maintaining integrity for personal performance, while emotional awareness is characterized by emotional ability of knowing and understanding one's own and other person feeling (15). Interestingly, even for emotional intelligent test, items that related to integrity and responsibility were susceptible to faking good. Perhaps, emotional intelligent as well as personality test should be designed based on ability-based rather than traits-based because ability-based test was reported to be less susceptible to manipulation (14).

Data showed that the accepted and not accepted applicants were equally manipulating their responses to most items in the personality and emotional intelligent dimensions. This finding is consistent with a previous study that reported no significant discrepancy scores at pre-selection measurement of the big five personality traits between accepted and not accepted applicants (3). This fact suggested that most of medical school applicants tend to portray themselves as desirable as possible during selection process. Interestingly, the faking index (i.e. FIE and FIP) appeared to correspond to the prevalence of faking good for both personality and emotional intelligent dimensions. One lesson learnt from this fact is that faking good might be uniform among the applicants; thus, the faking index (i.e. FIP and FIE) might play an important role for helping medical schools to make decision since it appeared to be a sensitive tool to detect faking good among the medical school applicants (Table 2 and Table 3). Nevertheless, more research is required to explore on ways to use the faking index as a tool for helping medical schools to make decision during selection process.

Based on this study data and the literatures there are several issues should be considered before using personality and emotional intelligent as formal criteria during selection process. The first issue is related to the predictive validity of preselection measurements on future performance of medical students either at personal level or professional level. Given that the findings of current study and a previous study (3) demonstrated that the tests are vulnerable to faking, even more there is lacking of evidence to support the predictive values of pre-selection measurements on future performance of medical students. Therefore, considering the current evidence state, medical schools are not recommended to use personality and emotional intelligent tests as formal criteria of selection process. Rather they should experiment the tests during the selection process to look for potential predictive values of such tests on medical students' performance. The second issue is related to the roles of faking index in assisting medical schools to make decision. Although, this study showed that the faking index appears to be a sensitive tool to detect faking good among medical school applicants, but in a high stake context the use of self-report test including faking index is not immune to faking problems (3, 14). Therefore, alternative ways such as ability-based test should be introduced to address this challenge. The last issue is related to whether faking good is likely to affect the validity of the personality and emotional intelligent tests particularly in predicting performance of those 'faked' and 'non-faked' applicants. Unfortunately there is no absolute answer to this challenge because literatures are in disagreement on this issue (3). Therefore the best way to address this issue is that every medical school should develop their own data on the predictive values of such psychological tests in their own setting through a continuous research.

This study has several limitations that should be highlighted for interpretation and future research. The first limitation, the followed up measurements (i.e. Time 2 to Time 5) was done on accepted applicants only. Therefore the researcher could not verify whether the same pattern of finding occurred in the not accepted applicants after the selection process. However, by looking at the feasibility aspect to follow up those who were not accepted is a very

challenging task because it requires a lot of participants coordination between and researcher. Second, this study was conducted on a cohort of medical school applicants which may not be generalized to other cohorts of medical school applicants as well as other educational settings. Therefore, similar follow up should be done on several cohorts of future medical school applicants to verify the current results. Third limitation, the emotional intelligent test used in this study is relatively new and its validity against other established instruments is yet to be established. Therefore, the results obtained may not be comparable with other studies that used more established instruments to measure emotional intelligent. Despite the limitations, this study had several strengths. First, this study measured personality and emotional intelligent for several times over one year of medical training. Therefore, the personality and emotional intelligent changes among the accepted applicants were captured accurately and therefore the detected faking good among them could be considered as a valid and reliable reflection of faking good during selection process. Second, the personality test was developed based on the established items provided by IPIP (23), therefore results obtained for the personality was comparable to other studies elsewhere. Last but not least, this study classify faking good based on the method used by a previous study (3), thus results obtained can be directly compared with the previous study. Considering these limitations and strengths, the findings in this study should be interpreted with caution within its context.

Conclusion

The prevalence of faking good in the selfreporting personality and emotional intelligent tests was high. Certain dimensions of personality and emotional intelligent were more vulnerable to faking than other dimensions. The personality test was more susceptible to faking good than the emotional intelligent test. Considering the potential positive impacts of personality and emotional intelligent on individual performance, alternative ways should be designed to address the faking good issues.

Reference

- 1. Yusoff MSB, Rahim AFA, Baba AA, Esa AR. Medical student selection process and its pre-admission scores associated with the new students' academic performance in Universiti Sains Malaysia. International Medical Journal. 2011;18(4):327-31.
- 2. Downie RS, Charlton B. The making of doctor: medical education in theory and practice. Oxford: Oxford University Press; 1992.
- 3. Griffin B, Wilson IG. Faking good: selfenhancement in medical school applicants. Medical education. 2012;46(5):485-90.
- 4. Yusoff MSB, Rahim AFA, Esa AR. EQ, Academic & Personality Traits: Do they correlate with medical students' future performance? Germany: Lambert Academic Publishing; 2012.
- Arora S, Ashrafian H, Davis R, Athanasiou T, Darzi A, Sevdalis N. Emotional intelligence in medicine: a systematic review through the context of the ACGME competencies. Medical education. 2010;44(8):749-64.
- McManus I, Keeling A, Paice E. Stress, burnout and doctors' attitudes to work are determined by personality and learning style: A twelve year longitudinal study of UK medical graduates. BMC medicine. 2004;2(1):29.
- Mayer JD, Roberts RD, Barsade SG. Human abilities: Emotional intelligence. Annu Rev Psychol. 2008;59:507-36.
- Barrick MR, Mount MK. The big five personality dimensions and job performance: a meta-analysis. Personnel psychology. 2006;44(1):1-26.
- Rothmann S, Coetzer E. The big five personality dimensions and job performance. SA Journal of Industrial Psychology. 2003;29(1).
- 10. Poropat AE. A meta-analysis of the fivefactor model of personality and academic performance. Psychological bulletin. 2009;135(2):322.
- 11. De Raad B, Schouwenburg HC. Personality in learning and education: A review. European Journal of personality. 1998;10(5):303-36.
- 12. Steel P. The nature of procrastination: a meta-analytic and theoretical review of quintessential self-regulatory failure. Psychological bulletin. 2007;133(1):65-94.
- 13. Viswesvaran C, Ones DS. Meta-analyses of fakability estimates: Implications for

personality measurement. Educational and Psychological Measurement. 1999;59(2):197-210.

- 14. Day AL, Carroll SA. Faking emotional intelligence (EI): comparing response distortion on ability and traits based EI measures. Journal of Organizational Behavior. 2008;29(6):761-84.
- Yusoff MSB, Rahim AFA, Esa AR. The USM Emotional Quotient Inventory (USMEQ-i) Manual. Malaysia: KKMED Publications; 2010. Available from: <u>http://www.medic.usm.my/dme/images/stori</u> <u>es/staff/KKMED/2010/manual%20usmeqi.pdf.</u>
- Yusoff MSB, Rahim AFA, Esa AR. The Manual of USM Personality Inventory (USMaP-i). Malaysia: KKMED Publications; 2010.
- 17. Yusoff MSB, Rahim AFA, Abd Aziz R, Mat Pa MN, See CM, Ja'afar R, et al. The validity and reliability of the USM Personality Inventory (USMaP-i): Its use to identify personality of future medical students. International Medical Journal. 2011;18(4):283-7.
- 18. Yusoff MSB, Rahim AFA, Mat Pa MN, See CM, Ja'afar R, Esa AR. The validity and reliability of the USM Emotional Quotient Inventory (USMEQ-i): its use to measure Emotional Quotient (EQ) of future medical students. International Medical Journal. 2011;18(4):293-9.
- Yusoff MSB. Stability of USMEQ-i in measuring emotional intelligence in medical students. Asean Journal of Psychiatry. 2012;13(1):1-6.
- Goldberg LR. Language and individual differences: The search for universals in personality lexicons. In: Wheeler L, editor. Review of Personality and Social Psychology. Beverly Hills, CA: Sage; 1981.
- Goldberg LR. A broad-bandwidth, public domain, personality inventory measuring the lower-level facets of several five-factor models. In: Mervielde I, Deary I, De Fruyt F, Osterdorf F, editors. Personality Psychology in Europe. Tilburg, Netherland: Tilburg University Press; 1999. p. 7-28.
- 22. 22. Goldberg LR. What are the best ways to describe an individual's personality? Dialogue. 2008;23(9):35-9.
- 23. Goldberg LR, Johnson JA, Eber HW, Hogan R, Ashton MC, Cloninger CR, et al. The International Personality Item Pool and the future of public-domain personality

measures. Journal of Research in Personality. 2006;40:84-96.

- 24. Yusoff MSB. Stability of the USMaP-i in measuring the Big Five personality traits. International Medical Journal. in press.
- 25. Field A. Discovering statistics using SPSS. 2nd ed. London: Sage Publication; 2005.
- 26. Streiner LD, Norman GR. Health Measurement Scales: A Practical Guide to Their Development and Use. 4th ed. New York: Oxford University Press; 2008.
- 27. Landis JR, Koch GG. The measurement of observer agreement for categorical data. Biometrics. 1977:159-74.
- 28. Altman DG. Practical statistics for medical research. London: Chapman and Hall; 1991.

- 29. Zou KH, Tuncall K, Silverman SG. Correlation and simple linear regression. Radiology. 2003;227(3):617-22.
- 30. Yusoff MSB, Yaacob MJ, Naing NN, Esa AR. Psychometric properties of the Medical Student Well-Being Index among medical students in a Malaysian medical school. Asian J Psychiatry. 2012;in press.
- Barrick MR, Mount MK. The big five personality dimensions and job performance: A meta-analysis. Personnel Psychology. 1991;44:1-26.
- 32. Barrick MR, Mount MK, Strauss JP. Conscientiousness and performance of sales representatives: Test for the mediating effect of goal setting. Journal of Applied Psychology. 1993; 78: 715-722.