ORIGINAL ARTICLE

Assessment of personality type and medical specialty choice among medical students from Karachi; using Myers-Briggs Type Indicator (MBTI) tool

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Abstract

Objective: To assess personality type of medical students and associate it with their choice of medical specialty.

Methods: This cross-sectional study was conducted in February 2014 at one public and one private medical university of Karachi, and comprised medical students. A self- administered questionnaire based on Myers-Briggs type indicator was used to collect data which was analysed using SPSS 20.

Results: Of the 400 participants, there were 200(50%) each from public and private universities. Of all, 201(50.3%) students were found to be extroverted and 199(49.8%) were introverted personality types. Clinical fields were the main preference of students after their medical degree as selected by 317(79.2%) students; of the, Extroverted-Sensing-Feeling-Perceptive was the most common type identified in39(7.2%) students. Extroverted-Sensing-Feeling-Perceptive 11(2.8%), Extroverted-Sensing-Thinking-Judging 12(3%), Extroverted-Sensing-Feeling-Judging 5(1.3%), Introverted-Sensing-Feeling-Judging 6(1.5%), Introverted-Sensing-Thinking-Perceptive 7(1.8%) had preference for surgery, medicine, gynaecology, paediatrics and cardiology, respectively.

Conclusion: Personality had significant impact on specialty and career choice.

Keywords: Myers-Briggs type indicator (MBTI), Personality types, Medical specialty choice, Medical students. (JPMA 67: 520; 2017)

Introduction

The Myers-Briggs Type Indicator (MBTI) is a tool identified as the world's most popular personality assessment tool and foundation for individual development.[1] It is applied to evaluate the psychological preferences of different people which help them to identify their strengths and preferences, interests and happiness to make right decisions.[1] MBTI was inspired by the work of a Swiss psychiatrist, Carl Gastav Jung, who proposed psychological types theories that described how people are innately different, both in terms of how they perceive and take in information and how they make decisions.[2]

MBTI is highly recommended for management, leadership and career development as its utilisation is very extensive from education to career counselling, self-awareness to personal development, problem-solving to decision-making, relationship management, etc.[2,3] Choosing a right career directs people's entire life as it is one of the most crucial and thoughtful decisions for any individual.

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MBTI theory classifies individual's personality into 16 different types on the basis of four dimensions of a personality that helps a person to think, feel, judge, perceive, sense and deal with the world.[3,4] Each MBTI personality type is associated with different types of characteristics.[3-5]

Selecting and planning a right career in which one can excel depends on various factors like personal interest, academic achievement and intellect, financial considerations, personality and values, opportunities, inspirations and guidance.[5,6] However, personality characteristics are one of the important foundations in deciding one's career.[3,6,7] In today's world of modern medicine, career choices for doctors are vast depending on the opportunities and circumstances which are one of the factors in setting goals for the future.[3,8-10] The goals can be achieved by understanding about oneself and exploring the opportunities before choosing a specialty of your interest and putting it into practice.[9,10]

In Pakistan, the concept of MBTI instrument is novel and is utilised by some career development organisations, especially in the field of management and administration.[5] However, not much work has been done on evaluating personality type of medical students which can help them in deciding their specialty choice

according to their personality type.[8-10] Literature is scarce in Pakistan on this topic. The current study was planned to make people understand their personality type and to open new research avenues for future researchers and medical students which will benefit them in making right career choices.

Subjects and Methods

This descriptive, cross-sectional study was conducted in February 2014 at a public and a private sector medical university in Karachi, as part of a postgraduate research project, and comprised medical students. The study was completed in 3 months after the approval of the institutional (Institute of Business Management - IoBM) ethics review board. Multistage sampling technique was used for data collection. In the first stage, public and private universities were selected through convenience sampling and in the second stage, students from both universities were selected through stratified sampling technique.

Sample size was calculated by World Health Organisation's (WHO) sample size estimation calculator.[14] For sample size calculation, anticipated population proportion about MBTI assessment among medical students was taken as 50%, at 95% confidence level and keeping 0.05 margin of error. The minimum number of participants required for inclusion in the sample was calculated at 385, but to avoid data wastage more participants were included in the study.

Both male and female students studying in first to final year of Bachelor of Medicine, Bachelor of Surgery (MBBS) programme were included irrespective of their race, caste, religion and culture. Those students who were absent or did not give consent were excluded. Incomplete questionnaires were also excluded from final data. A structured self-administrated questionnaire was used in this study. The questionnaire was distributed among medical students at the end of their study sessions after informing them about the purpose of study and taking their consent for participation. The questionnaire consisted of two parts. Part "A" covered demographic details of the respondents including age, gender, year of education, university type and their interest in a particular field of study. In part "B", statements were given which described four dimensions of their personality and arranged in four categories with two options for each. Respondents classified their personality into four MBTI dimensions represented by a single capital letter. These dimensions with two options are briefed as:[3]

Dimension I: flow and focus of energy with options extroversion (E) or introversion (I). Extroverts focus on the outer world of people and things, while introverts focus on the inner world of ideas and expressions.

Dimension II: Information learning with options sensing (S) or intuition (N). Sensors focus on the present and concrete information gained from senses while intuitive focus on the future with an emphasis on patterns and possibilities.

Dimension III: Decision-making with options thinking (T) or feeling (F). Thinkers base their decisions on logic and objective analysis while feelers base decisions primarily on values and subjective evaluations of person-centred concerns.

Dimension IV: Dealing with world with options judgement (J) or perception (P). Judgers prefer a planned and organised approach to life while preceptors enjoy a flexible and spontaneous approach to life.

Furthermore, on the basis of this information the type of personality was determined in the last part of the questionnaire. Consequently, each personality comprised of these four dimensions and 16 personality types were possible (Table-1).[11,12] Choice of medical specialty asked in 'Part A' of the questionnaire was assessed with personality type of students and outcome was compared in the light of information provided by Freeman B.[9] The article suggested preference of medical specialty according to personality types defined by MBTI (Table-1).[9,12]

Data was analysed using SPSS 20. Frequencies and percentages were used to present qualitative data while mean and standard deviation (SD) for quantitative data. Chi-square test was applied to find association between qualitative variables. $P<0.05$ was taken as significant.

Results

Of the 400 participants, there were 200(50%) each from the two universities. The overall mean age was 21.4±2 years. Moreover, 124(31%) participants were males and 276(69%) were females. There were 80(20%) students from each year of MBBS. About their interest in careers after MBBS, 317(79.2%) students stated clinical, 23(5.8%) administrative, 16(4%) academic while 44(11) were undecided.

MBTI was formulated from the four dimensions and each dimension showed varying statistics: (i) flow and focus of energy demonstrated that 201(50.3%) students were extrovert and 199(49.8%) were introvert, (ii) information learning showed sensing by 255(63.8%) and intuition by 145(36.3%) students, (iii) decision-making showed

Table-1: Medical specialties by temperament.

Personality Types and Recommended Medical Specialty	
1. Introverted–Sensing–Thinking–Judging (ISTJ)	**9. Introverted–Intuitive–Thinking–Judging (INTJ)**
Dermatology	Psychiatry
Obstetrics?gynaecology	Pathology
Family practice	Neurology
Urology	Internal medicine
Orthopaedic surgery	Anaesthesiology
2. Introverted–Sensing–Feeling–Judging (ISFJ)	**10. Introverted–Intuitive–Feeling–Perceptive (INFP)**
Anaesthesiology	Psychiatry
Ophthalmology	Cardiology
General practice	Neurology
Family practice	Dermatology
Paediatrics	Pathology
3. Introverted–Sensing–Thinking–Perceptive (ISTP)	**11. Introverted–Intuitive–Thinking–Perceptive (INTP)**
Otolaryngology	Neurology
Anaesthesiology	Pathology
Radiology	Psychiatry
Ophthalmology	Cardiology
General practice	Thoracic surgery
4. Introverted–Sensing–Feeling–Perceptive (ISFP)	**12. Extroverted–Sensing–Thinking–Perceptive (ESTP)**
Anaesthesiology	Orthopaedic surgery
Urology	Dermatology
Family practice	Family practice
Thoracic surgery	Radiology
General practice	General surgery
5. Introverted–Intuitive–Feeling–Judging (INFJ)	**13. Extroverted–Sensing–Feeling–Perceptive (ESFP)**
Psychiatry	Ophthalmology
Internal medicine	Thoracic surgery
Thoracic surgery	Obstetrics?gynaecology
General surgery	Orthopaedic surgery
Pathology	General surgery
6. Extroverted–Sensing–Thinking–Judging (ESTJ)	**14. Extroverted–Intuitive–Thinking–Perceptive (ENTP)**
Obstetrics?gynaecology	Otolaryngology
General practice	Psychiatry
General surgery	Radiology
Orthopaedic surgery	Paediatrics
Paediatrics	Pathology
7. Extroverted–Sensing–Feeling–Judging (ESFJ)	**15. Extroverted–Intuitive–Feeling–Judging (ENFJ)**
Paediatrics	Thoracic surgery
Orthopaedic surgery	Dermatology
Otolaryngology	Psychiatry
General practice	Ophthalmology
Internal medicine	Radiology
8. Extroverted–Intuitive–Feeling–Perceptive (ENFP)	**16. Extroverted–Intuitive–Thinking–Judging (ENTJ)**
Psychiatry	Neurology
Dermatology	Cardiology
Otolaryngology	Urology
Psychiatry	Thoracic surgery
Paediatrics	Internal medicine

Table-2: Future career options, Specialty preference with its reasons and Personality types of Medical Students.

Profile		Public University (N=200)		Private University (N=200)		P-value
		n	%	n	%	
Future Career Options after MBBS	Clinical (n=317)	165	41.2	152	38.0	0.004
	Administrative (n=23)	3	0.8	20	5.0	
	Academic (n=16)	8	2.0	8	2.0	
	Undecided (n=44)	24	6.0	20	5.0	
Medical Specialty Preference	Surgery (n=78)	24	6.0	54	13.5	0.001
	Medicine(n=56)	33	8.2	23	5.8	
	Gynaecology/Obstetrics (n=43)	29	7.2	14	3.5	
	Paediatrics (n=29)	18	4.5	11	2.8	
	Cardiology (n=37)	24	6.0	13	3.2	
	Neurology (n=21)	9	2.2	12	3.0	
	Dermatology (n=19)	14	3.5	5	1.2	
	Oncology (n=6)	4	1.0	2	0.5	
	Others (n=6)	2	0.5	4	1.0	
	Undecided (n=66)	32	8.0	34	8.5	
	Non Clinical**(n=39)	11	2.8	28	7.0	
Reasons for Selecting this Career	Personal Interest (n=113)	77	19.2	36	9.0	0.001
	To serve humanity (n=10)	6	1.5	4	1.0	
	High demand (n=6)	5	1.2	1	0.2	
	Monitory benefits (n=6)	4	1.0	2	0.5	
	Family pressure (n=5)	3	0.8	2	0.5	
	Love kids (n=4)	4	1.0	-	-	
	Not mentioned (n=256)	101	25.2	155	38.8	
MBTI Dimension I	Extrovert (E) (n=201)	98	24.5	103	25.8	0.617
	Introvert (I) (n=199)	102	25.5	97	24.2	
MBTI Dimension II	Sensing (S) (n=255)	141	35.2	114	28.5	0.005
	Intuition (N) (n=145)	59	14.8	86	21.5	
MBTI Dimension III	Thinking (T) (n=178)	86	21.5	92	23.0	0.546
	Feeling (F)(n=222)	114	28.5	108	27	
MBTI Dimension IV	Judging (J)(n=175)	89	22.2	86	21.5	0.762
	Perceiving (P) (n=225)	111	27.8	14	28.5	
Personality Types on the basis of MBTI	ENFJ (n=11)	2	0.5	9	2.2	0.052
	ENFP (n=26)	8	2.0	18	4.5	
	ENTJ (n=16)	6	1.5	10	2.5	
	ENTP (n=17)	5	1.2	12	3.0	
	ESFJ (n=26)	15	3.8	11	2.8	
	ESFP (n=52)	32	8.0	20	5.0	
	ESTJ (n=37)	22	5.5	15	3.8	
	ESTP (n=16)	8	2.0	8	2.0	
	INFJ (n=17)	6	1.5	11	2.8	
	INFP (n=27)	18	4.5	9	2.2	
	INTJ (n=11)	6	1.5	5	1.2	
	INTP (n=19)	8	2.0	11	2.8	
	ISFJ (n=28)	15	3.8	13	3.2	
	ISFP (n=34)	18	4.5	16	4.0	
	ISTJ (n=28)	17	4.2	11	2.8	
	ISTP (n=35)	14	3.5	21	5.2	

**Selected non clinical options

MBBS: Bachelor of Medicine, Bachelor of Surgery. MBTI: Myers-Briggs Type Indicator. ENFJ: Extroverted-Intuitive-Feeling-Judging. ENFP: Extroverted-Intuitive-Feeling-Perceptive. ENTJ: Extroverted-Intuitive-Thinking-Judging. ENTP: Extroverted-Intuitive-Thinking-Perceptive. ESFJ: Extroverted-Sensing-Feeling-Judging. ESFP: Extroverted-Sensing-Feeling- Perceptive. ESTJ: Extroverted-Sensing-Thinking-Judging. ESTP: Extroverted-Sensing-Thinking-Perceptive. INFJ: Introverted-Intuitive-Feeling-Judging. INFP: Introverted-Intuitive-Feeling-Perceptive. INTJ: Introverted-Intuitive-Thinking-Judging. INTP: Introverted-Intuitive-Thinking-Perceptive. ISFJ: Introverted-Sensing-Feeling-Judging. ISFP: Introverted-Sensing-Feeling-Perceptive. ISTJ: Introverted-Sensing-Thinking-Judging. ISTP: Introverted-Sensing-Thinking-Perceptive.

Table-3: Association of MBTI Personality Dimensions with choice of future career and medical specialty among medical students.

Profile	Dimension I n(%)		Dimension II n(%)		Dimension III n(%)		Dimension IV n(%)	
	Extrovert	Introvert	Sensor	Intuitive	Thinker	Feeler	Judger	Preceptor
Future Career Options after MBBS								
Clinical	163 (40.8)	154 (38.5)	196 (49.0)	121(30.2)	142(35.5)	175(43.8)	141(35.2)	176(44.0)
Administrative	15 (3.8)	8 (2.0)	17 (4.2)	6 (1.5)	12 (3.0)	11(2.8)	8(2.0)	15(3.8)
Academic	5 (1.2)	11 (2.8)	8 (2.0)	8 (2.0)	6 (15)	10(2.5)	11(2.8)	5(1.2)
Undecided	18 (4.5)	26 (6.5)	34 (8.5)	10 (2.5)	18 (4.5)	26(6.5)	15(3.8)	29(7.2)
P- value	0.108	0.097	0.775	0.088				
Medical Specialty Preference								
Surgery	45 (11.2)	33 (8.2)	45 (11.2)	33 (8.2)	34 (8.5)	44 (11.0)	31 (7.8)	47 (11.8)
Medicine	29 (7.2)	27(6.8)	44 (11.0)	12 (3.0)	27 (6.8)	29 (7.2)	31 (7.8)	25 (6.2)
Gynaecology/Obstetrics	20 (5.0)	23(5.8)	23 (5.8)	20 (5.0)	21 (5.2)	22 (5.5)	21 (5.2)	22 (5.5)
Paediatrics	10 (2.5)	19(4.8)	21 (5.2)	8 (2.0)	10 (2.5)	19 (4.8)	14 (3.5)	15 (3.8)
Cardiology	20 (5.0)	17(4.2)	28 (7.0)	9 (2.2)	21 (5.2)	16 (4.0)	13 (3.2)	24 (6.0)
Neurology	7 (1.8)	14(3.5)	11 (2.8)	10 (2.5)	9 (2.2)	12 (3.0)	9 (2.2)	12 (3.0)
Dermatology	13 (3.2)	6 (1.5)	12 (3.0)	7 (1.8)	9 (2.2)	10 (2.5)	11 (2.8)	8 (2.0)
Oncology	2 (0.5)	4 (1.0)	1 (0.2)	5 (1.2)	2 (0.5)	4 (1.0)	1 (0.2)	5 (1.2)
Others	2 (0.5)	4 (1.0)	4 (1.0)	2 (0.5)	3 (0.8)	3 (0.8)	1 (0.2)	5 (1.2)
Undecided	33 (8.2)	33 (8.2)	41 (10.2)	25 (6.2)	24 (6.0)	42 (10.5)	24 (6.0)	42 (10.5)
Non Clinical**	20 (5.0)	19 (4.8)	25 (6.2)	14 (3.5)	18 (4.5)	21 (5.2)	19 (4.8)	20 (5.0)
P- Value	0.325	0.043	0.783	0.261				

MBBS: Bachelor of Medicine, Bachelor of Surgery.
MBTI: Myers-Briggs Type Indicator.

Table-4: Association of personality types of medical students and their choice of future career and medical specialty by using Myers-Briggs Type Indicator (MBTI) tool.

Profile	MBTI Personality Types n (%)																
	ENFJ	ENFP	ENTJ	ENTP	ESFJ	ESFP	ESTJ	ESTP	INFJ	INFP	INTJ	INTP	ISFJ	ISFP	ISTJ	ISTP	TOTAL
Future Career Options after MBBS (p-value = 0.139)																	
Clinical	10(2.5)	26(6.5)	11(2.8)	13(3.2)	21(5.2)	39(9.8)	29(7.2)	14(3.5)	13(3.2)	21(5.2)	11(2.8)	15(3.8)	22(5.5)	22(5.5)	23(5.8)	27(6.8)	317(79.2)
Administrative	-	-	2(0.5)	2(0.5)	2(0.5)	4(1.0)	3(0.8)	2(0.5)	1(0.2)	-	-	1(0.2)	-	4(1.0)	-	2(0.5)	23(5.8)
Academic	1(0.2)	-	2(0.5)	-	-	1(0.2)	1(0.2)	-	3(0.8)	2(0.5)	-	-	2(0.5)	2(0.5)	3(0.8)	-	16(4.0)
Undecided	-	-	1(0.2)	2(0.5)	3(0.8)	8(2.0)	4(1.0)	-	-	4(1.0)	-	3(0.8)	5(1.2)	6(1.5)	2(0.5)	6(1.5)	44(11.0)
Medical Specialty Preference (p- value= 0.04)																	
Surgery	5(1.2)	10(2.5)	3(0.8)	2(0.5)	4(1.0)	11(2.8)	5(1.2)	5(1.2)	2(0.5)	2(0.5)	3(0.8)	6(1.5)	6(1.5)	4(1.0)	2(0.5)	8(2.0)	78(19.5)
Medicine	-	3(0.8)	1(0.2)	-	5(1.2)	5(1.2)	12(3.0)	3(0.8)	1(0.2)	5(1.2)	2(0.5)	-	2(0.5)	8(2.0)	8(2.0)	1(0.2)	56(14.0)
Gynaecology/Obstetrics		1(0.2)	4(1.0)	-	3(0.8)	5(1.2)	3(0.8)	3(0.8)	1(0.2)	3(0.8)	2(0.5)	4(1.0)	3(0.8)	2(0.5)	2(0.5)	3(0.8)	4(1.0)
43(10.8)																	
Paediatrics	2(0.5)	-	-	1(0.2)	1(0.2)	4(1.0)	1(0.2)	1(0.2)	1(0.2)	3(0.8)	-	1(0.2)	6(1.5)	2(0.5)	3(0.8)	3(0.8)	29(7.2)
Cardiology	1(0.2)	2(0.5)	1(0.2)	1(0.2)	1(0.2)	6(1.5)	5(1.2)	3(0.8)	1(0.2)	-	1(0.2)	2(0.5)	2(0.5)	3(0.8)	1(0.2)	7(1.8)	37(9.2)
Neurology	-	-	-	2(0.5)	2(0.5)	2(0.5)	1(0.2)	-	3(0.8)	3(0.8)	1(0.2)	1(0.2)	-	2(0.5)	2(0.5)	2(0.5)	21(5.2)
Dermatology	1(0.2)	1(0.2)	3(0.8)	1(0.2)	1(0.2)	4(1.0)	2(0.5)	-	-	1(0.2)	-	-	1(0.2)	1(0.2)	3(0.8)	-	19(4.8)
Oncology	-	1(0.2)	-	-	-	1(0.2)	-	-	1(0.2)	1(0.2)	-	2(0.5)	-	-	-	-	6(1.5)
Others	-	1(0.2)	-	-	-	1(0.2)	-	-	-	1(0.2)	-	-	-	-	1(0.2)	2(0.5)	6(1.5)
Undecided	-	4(1.0)	4(1.0)	5(1.2)	5(1.2)	10(2.5)	4(1.0)	1(0.2)	1(0.2)	7(1.8)	-	3(0.8)	8(2.0)	6(1.5)	2(0.5)	6(1.5)	66(16.5)
Non Clinical**	1(0.2)	-	4(1.0)	2(0.5)	2(0.5)	5(1.2)	4(1.0)	2(0.5)	4(1.0)	2(0.5)	-	1(0.2)	1(0.2)	6(1.5)	3(0.8)	2(0.5)	39(9.8)

**Selected non clinical options
MBBS: Bachelor of Medicine, Bachelor of Surgery. MBTI: Myers-Briggs Type Indicator. ENFJ: Extroverted-Intuitive-Feeling-Judging.
ENFP: Extroverted-Intuitive-Feeling-Perceptive. ENTJ: Extroverted-Intuitive-Thinking-Judging. ENTP: Extroverted-Intuitive-Thinking-Perceptive.
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INTJ: Introverted-Intuitive-Thinking-Judging. INTP: Introverted-Intuitive-Thinking-Perceptive.
ISFJ: Introverted-Sensing-Feeling-Judging. ISFP: Introverted-Sensing-Feeling-Perceptive.
ISTJ: Introverted-Sensing-Thinking-Judging. ISTP: Introverted-Sensing-Thinking-Perceptive.

thinking by 178(44.5%) and feeling by 222(55.5%) students while (iv) dealing with world showed judging by 175(43.8%) and perceiving by 225(56.3%) students.

Except personality types, there was a significant difference ($p<0.05$) between public and private university students for all other factors, including future career choices, specialty preference and reasons for selecting their career (Table-2).

Significant association ($p=0.043$) was found only with dimension II while other dimensions showed no significant association with choice of career and specialty selection (Table-3).

The assessment of these 16 personality types with future career options and choice of medical specialty showed that there was significant association (p0.04) with the choice of medical specialty (Table-4).

Discussion

MBTI is a tool which helps in identifying different personality types of an individual by segregating their emotions, attitudes and behavioural responses into four areas. Each area comprises two opposites which makes 16 different personality styles based on the variations in the personality preferences.[10] The results of the current study showed that approximately half of the students were extroverted and half were introverted. In extroverts, the major identified types were extroverted-sensing-feeling-perceptive (ESFP), extroverted-sensing-thinking-judging (ESTJ), extroverted-intuitive-feeling-perceptive (ENFP) and extroverted-sensing-feeling-judging (ESFJ). Among introverts, introverted-sensing-thinking-perceptive (ISTP), introverted-sensing-feeling-judging (ISFJ), introverted-sensing-thinking-judging (ISTJ)and introverted-intuitive-feeling-perceptive (INFP) were the common types.

ESFP type was the most common type among all 16 types from both institutes. Comparing the perceiving and judging (P-J) dimension of the current study, the results revealed that perceiving style was preferred by those students who had selected surgery while judging style was preferred by those interested in medicine. However in a similar study conducted in the United States, a shift in trend was noticed initially from perceiving to judging type in later stages in all fields.[1]

Regarding interests after MBBS, the majority of the students selected clinical fields and a small percentage of students were interested in academic and administration fields. In addition, some students were undecided, i.e. not clear about their choices, and said that they would make a decision after completion of MBBS. It was found that in order of preference, ESFP, ESTJ, ESFJ, ISFJ and ISTP personality types carefully selected surgery, medicine, gynaecology, paediatrics and cardiology, respectively. It is interesting to note that the students who selected surgery as a medical specialty were more extroverts than introverts whereas those who selected medicine, paediatrics and gynaecology were mainly introverts and feeling types as reported by a study in the United States.[1,10]

In response to an additional question, personal interest was one of the main reasons given by medical students for selecting a particular specialty. Other less common reasons were: family pressure, love for kids, desire to serve and educate females, earning more money, etc. From results of this study it can be observed that besides personal interest of student itself, specialty choice was based on a number of factors. For instance, if family background and occupation of parents were related to a field of medicine, then interest in the medical field develops or sometimes students are under pressure from their parents to select a particular field. The subjects that are being taught to students in specific medical year was another good reason for the choice of sub-specialty because clinical subjects like paediatrics, gynaecology and obstetrics are covered in 4th and 5th years of MBBS.

Another study from the United States examined the association between personality and specialty choice of medical graduates of Tulane University School of Medicine classes (2003-2006), using 5 core personality characteristics. Significant differences were observed in specialty choice for neuroticism, openness and agreeableness but no differences were found for extroversion and conscientiousness.[13] A survey conducted in Chicago by Brian Freeman, a resident in anaesthesiology, on a group of medical students to study the association between personality and medical specialty showed that future surgeons were competitive and confident; those interested in paediatrics were most interactive and had strong social connections.[13] Future gynaecologists and obstetrician were emotionally weak and felt uncomfortable around other people and were conscious about their personality and looks. Introverted students were more likely to become psychiatrists in the future. It is important to understand that preferences could be more than one while choosing a medical specialty. For instance, a visually oriented student can make choices between pathology, dermatology and radiology. For those who want to enjoy a strong and long-term doctor-patient relationship should prefer family medicine. Likewise, those who prefer action-oriented instant results should consider surgery and

anaesthesiology.[10]

Preferences are inborn. It is important to identify your strengths and weaknesses and to understand yourself and your desires to make a best fit between personality and choice of medical specialty.[10] Literature has shown that human nature is very complex; personality doesn't explain everything at once, therefore, people should not limit themselves to one option but consider other possibilities in making appropriate career decisions.[10,11]

The current study had some limitations as well. The topic of MBTI is new and very few studies were found consistent with our objective. Although it is a novel idea, it was also a limitation to find enough research articles that help in analysing our study outcome. The results of this study are not generalisable as it was restricted to two medical institutes of Karachi because of convenience and accessibility. However, the study findings may indicate avenues for future research. There was difficulty in collecting data from students during their study time and information bias may be possible due to self-administered data collection technique. There is a need to develop a platform for career counselling for students where students can exchange ideas, interests and emotions and can get proper guidance from mentors regarding suitable career choices that relate to their personality type.

Conclusion

The majority of medical students were not aware of their personality style until it was solicited. Understanding the personality type remains useful for future career selection in the field of medicine. MBTI was found to be an efficient tool for personality assessment. However, the findings should not be assessed in isolation and other surrounding factors should be considered for specialty selection.

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