Relationship between Personality Type and Academic Achievement of Korean Medical Students

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The purpose of this study is to examine the relationship between Myers-Briggs Type Indicator(MBTI) personality type and academic achievement of Korean medical students. A total of 97 (57 men, 40 women; ages 24 to 36) fourth-year Korean medical students participated in this study. The MBTI questionnaire was administered to all the students for identification of their personality type and academic performance. The results are as follows. First, the proportions of Personality type of Korean medical students were Extroversion (E) 33.0% - Introversion (I) 67.0%, Sensing (S) 70.1%- Intuition (N) 29.9%, Thinking (T) 58.8%- Feeling (F) 41.2%, and Judging (J) 54.6% - Perceiving (P) 45.3%. Second, the most common personality type was ISTJ (22.7%), followed by ISTP (13.4%), ISFJ (12.3%). Third, according to the analysis of this study, academic achievement was significantly related with their personality type in the preference : Sensing (S) - Intuition (N) and Judging (J)-Perceiving (P). In analysis of Sensing (S) - Intuition (N) and Judging (J)-Perceiving (P) index, Sensing (S) and Judging (J) type students had higher academic achievement than Intuition (N) and Perceiving (P) type students. This is the study to identify the characteristics of MBTI in Korean Medical students. The findings indicate that academic achievement was significantly related to their personality type in the preference. Using the results of MBTI in Korean medical students, is helpful in selection of appropriate teaching and learning strategies to provide better education.

keywords : Personality type, MBTI, Korean medical student, Academic achievement, Myers-Briggs Type Indicator

Introduction

Factors that associated with academic achievement and performance of Korean medical students have been a major concern in recent years.[1-3] It can be helpful to provide appropriate education. Accordingly, interest in psychological factors such as the learner's personality type is increasing significantly.[3] There are a number of different methods for understanding the nature of the learner.[1] Among many tools to determine the personality type, the Myers Briggs Type Indicator (MBTI) can be the considerable personality instrument.[1-3] Analysis of the relationship between academic achievement and personality types based on MBTI has been attempted in various fields including Medicine, dentistry, and nursing college.[4-8,10,12,13] However, no study examining the relationship between personality type and academic achievement of students majoring in Korean medicine has been reported. Therefore, using the MBTI personality type indicator, it is necessary to understand the distribution of the personality type and the difference in the academic achievement of Korean medical students.

According to the theories of C.G. Jung, four basic preferences are classified as energy direction, awareness feature , decision feature, and lifestyle to external world in the MBTI.[1-3,9] The MBTI instrument is helpful in determining an individual's preferences on four dichotomies. Each dichotomy has two contrasting preferences. Four Preferences Categories are as follows : Extraversion - Introversion, Sensing - Intuition , Thinking - Feeling, and Judging - Perceiving. Sixteen different personality types are made up of a possible combination of four preferences.

Personality typing is a useful tool for motivating and guiding students which can be helpful in enhancing their academic achievement.[3] Considering the above mentioned facts, the aim of the current study was to examine the personality type using the Myers-Briggs Type Indicator (MBTI) among the Korean medical students of Kyung Hee University, Seoul, Republic of Korea.

Materials and Methods

1. Subjects

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This study included 97 Korean medical students in their final year (11th semester) at Kyung Hee University, Seoul. Of 104 students, 7 students was excluded because they would not allow us access to their academic evaluation. For the comparison of the MBTI type and academic achievement, Neuropsychiatry academic evaluation of third grade was used to reflect academic achievement in Korean medicine courses on students' approval.

2. Methods

We used the Myers Briggs Type Indicator(MBTI) form GS, a 94-item self-report instrument, to classify personality type of the students. This inventory was administered during Clinical Clerkship of Neuropsychiatry. In addition, MBTI types were analyzed with information about their Neuropsychiatry evaluation.

3. Statistical analysis

Statistical analyses were performed by using SPSS 18.0. Descriptive statistics were determined for all variables, and the variables were expressed as mean and standard deviation (SD). Independent-Sample t Test was used for the analysis.

Results

1. Gender

The included subjects consisted of 57(58.8%) males and 40(41.2%) females(Table 1). Controlling for age and MBTI personality type, there were no statistically significant differences in academic performance between male and female.

2. Age

The mean age of subjects was 26.06 years (Table 1). Controlling for gender and MBTI personality type, there were no statistically significant differences in age factor.

Table 1. Demographic data of participants

	N	Percent	Minimum	Maximum	Mean	Std. Deviation
Male	57	58.8%	.00	1.00	.4124	.49482
Female	40	41.2%				
Age	97	under 25 8.2 % 25.00 31.6 % 26.00 37.8 % 27.00 10.2 % 28.00 4.1 % over 29 6.1 %	24.00	36.00	26.0619	1.76667

3. Distribution of MBTI Personality type

According to the analysis of this study, the proportion of Personality type of Korean medical students was Extroversion (E) 33.0% -Introversion (I) 67.0%, Sensing (S) 70.1%- Intuition (N) 29.9%, Thinking (T) 58.8%-Feeling (F) 41.2%, and Judging (J) 54.6% -Perceiving (P) 45.3% i.e, I>E, S>N, T>F and J>P(Table 2). The most predominant personality type was ISTJ (22.7%), followed by ISTP (13.4%), ISFJ (12.3%), INFP (9.3%), and ESTJ (8.2%)(Table2). These personalities represent 66.0%. The rarest type among the students was INFJ (1.0%), INTJ (1.0%), and ENFJ (1.0%).

Table 2. Distribution by the four preferences

		Sensing (S) N=68(70.1%)		Intuition (N) N=29(29.9%)	
		Thinking (T)	Feeling (F)	Feeling (F)	Thinking (T)
Introvert (I) N=65 (67.0%)	Judging (J)	ISTJ N=22(22.7%)	ISFJ N=12(12.4%)	INFJ N=1(1.0%)	INTJ N=1(1.0%)
	Perceiving (P)	ISTP N=13(13.4%)	ISFP N=4(4.1%)	INFP N=9(9.3%)	INTP N=2(2.0%)
Extrovert (E) N=32 (33.0%)	Perceiving (P)	ESTP N=3(3.0%)	ESFP N=2(2.0%)	ENFP N=7(7.2%)	ENTP N=4(4.1%)
	Judging (J)	ESTJ N=8(8.2%)	ESFJ N=4(4.1%)	ENFJ N=1(1.0%)	ENTJ N=4(4.1%)

4. Academic performance

Controlling for gender and age, there was statistical significance in academic achievement according to MBTI preferences(Table 3). Sensing (S) type students (Academic

Table 3. Correlation of academic performance and personality type

Personality type	N	Mean	SD	Levene's Test for Equality of Variances		t-test for Equality of Means				
				F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Extroversion (E)	65	3.31	.484	.991	.322	-.529	95	.598	-.056	.107
Introversion (I)	32	3.36	.514			-.518	58.588	.607	-.056	.109
Sensing (S)	67	3.38	.519	16.054	.000**	1.688	95	.045*	.181	.107
Intuition (N)	30	3.20	.407			1.850	70.207	.039*	.181	.098
Thinking (T)	57	3.35	.502	1.217	.273	.581	95	.563	.059	.102
Feeling (F)	40	3.29	.481			.585	86.332	.560	.059	.101
Judging (J)	53	3.42	.535	23.074	.000**	2.238	95	.028*	.220	.098
Perceiving (P)	44	3.20	.408			2.295	94.364	.024*	.220	.096
Male	57	3.34	.505	.563	.455	-.288	95	.774	-.029	.102
Female	40	3.31	.478			-.291	86.922	.772	-.029	.101

*p<0.05, **p<0.01.

performance=3.38) had higher academic performance than Intuition (N) type students(Academic performance=3.20). Judging (J) type students (Academic performance=3.42) had higher academic performance than Perceiving (P) type students(Academic performance=3.20), but there were no statistically significant differences between Extroversion (E) and Introversion (I), as well as Thinking (T) and Feeling (F).

Discussion

The aim of the study was to examine MBTI preferences and the distribution of personality types of students majoring in Korean medicine. More participants showed Introversion (67.0%) than Extraversion (33.0%), Sensing (70.1%) than Intuition (29.9%), Thinking (58.8%) than Feeling (41.2%) and Judging (54.6%) than Perception (45.3%). This result was similar with the former study on MBTI type distribution of general Korean university students.[9)]

Regarding E-I (Extraversion-Introversion, Focus of your attention), students majoring in Korean medicine showed higher distribution of Introversion (67.0%) compared with general university students (56.35%).[9)] Also, the ratio of Introversion (I) in Korean medical students is 67.0%, higher than medical students (46.8%) and dental students(41.0%).[5,6)] Introversion (I) type person prefers the inner world of concepts and ideas. One of the characteristics of Korean medicine is relative systemic medicine ; Nothing is absolute, but it is relative. This characteristic emphasizes on relative balances, concepts and ideas in Korean medicine. In Korean medicine, The metaphysical properties exist than any other medical fields. This would be more suitable for introverted people to understand the characteristics of Korean medicine. On the other hand, dental students and nursing students showed higher percentage of Extraversion type than Introversion type. Extraversion type person prefers the outer world of actions, objects and other people. These results imply that dental students and nursing students are more inclined to concentrate on concrete objects and people.

In terms of T-F (Thinking-Feeling, The way you make decisions), students majoring in Korean medicine had slightly higher preference for Thinking (58.8%) compared with general university students (56.84%).[9)] Thinking type person prefers to objectively and impersonally consider causes of events and where decisions may lead. On the other hand, nursing students had a preference for Feeling (58.7%) rather than Thinking (41.3%).[3,4)] Feeling type person prefers to subjectively and personally weigh values of choices and how they affect to others. The former study suggested that preference for Feeling is more suitable for the medical profession.[1)] In contrast to this, Korean medical, medical and dental students all together had more preference for Thinking than Feeling. It showed that Competition of academic achievement is necessary for admission in reality and students who valued much of ability and accomplishment have tended to enter dental, Korean medical and medical school.

Comparing with medical students, The Personality type of medical students were Extroversion (E) 53.2% -Introversion (I) 46.8%, Sensing (S) 63.2%- Intuition (N) 36.8%, Thinking (T) 59.7%-Feeling (F) 40.4%, and Judging (J) 56.1% -Perceiving (P) 43.9%(Fig. 1).[5)] The predominant MBTI personality types in medical students were ISTJ , ESTJ , and ESFJ(Fig. 2). Similar to Korean medical school students, medical school students showed much higher distribution of Thinking (68.6%).[5)] Overall, the distribution of preferences of medical school students was similar with Korean medical school students excluding Extroversion (E) - Introversion (I). It showed that medicine have something in common with Korean medicine to investigate the structure and function of the human body on the treatment and prevention of disease or injury for health.

Comparing with dental students, the personality types of dental students were Extroversion (E) 58.9% -Introversion (I) 41.0%, Sensing (S) 66.5%- Intuition (N) 33.5%, Thinking (T) 74.5%-Feeling (F) 25.5%, and Judging (J) 63.9% -Perceiving (P) 36.1%(Fig. 1).[6)] The predominant MBTI personality types in dental students were ESTJ, ISTJ and ISTP(Fig. 2). Extraversion type students prefers the outer world of actions, objects. Dental students are more inclined to concentrate on concrete objects and people. In this respect, dentistry tends to relate with more structural, practical, concrete object and spatial thinking than Korean medicine that have Perceiving features, preferring to live in a spontaneous, flexible way, aiming to understand life and adapting to it. Korean medical, medical and dental students all together had more preference for Thinking than Feeling. In particular, dental students showed much higher distribution of Thinking (74.5%) and Judging (J) 63.9%.[6)] Judging type person prefers a decisive, planned and orderly way, aiming to regulate and control events.

In a previous study on MBTI and Sasang Constitutions in the Korean medical students[15,16)], Soeumin students showed more preference for Introversion. Also another previous study reported that the Soeumin proportion in the Korean medical students was 66.6%[17)]. Similarly, the proportion of Introversion students in this study was 67%. It

can be inferred that Soeumin students are most common Sasang Constitutions type.

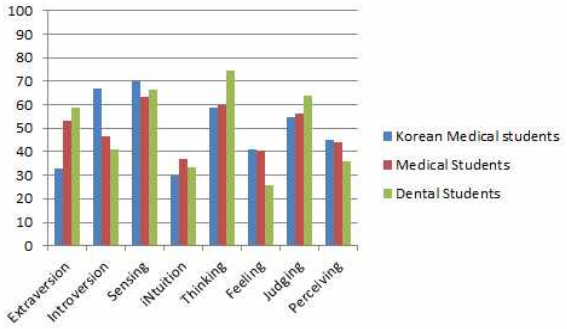

Fig. 1. Comparison of four preferences on Korean Medical, medical and dental students.

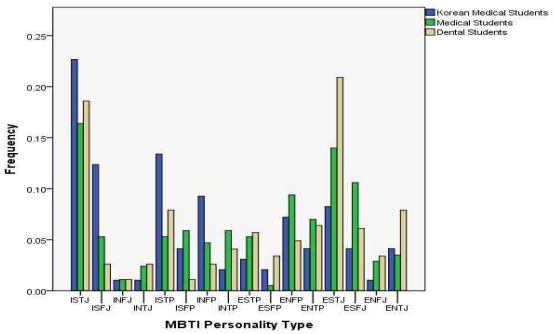

Fig. 2. Comparison of MBTI personality types on Korean Medical, medical and dental students.

In a previous study on medical students, conducted by Hur Y et al., the most common MBTI personality type was the Introversion-Sensing-Thinking-Judging (ISTJ) student.[5,6] Similarly, the most predominant type of Korean medical students are ISTJ students. The ISTJ personality type is thought to be precise, detailed, diligent, practical, logical and tireless.[1-3] They are dedicated to duty, as well as upholding traditions. The analysis of this study, showed that MBTI personality type of Korean medical students is significantly associated with their academic performance. The result showing that the MBTI Preferences, Sensing (S) and Judging (J), have a impact on academic achievement of students majoring in Korean medicine is an important finding. These results are consistent with the previous academic studies Lim et al.[13] suggested that the GPA of Judging type was significantly different from that of perceiving type students in various fields such as dentistry, medicine, engineering, etc. They reported that perceiving among personality type had inverse tendency to academic performance.

Judging (J) type students had higher academic performance than Perceiving (P) type students. Judging (J) type person tends to rush for their goal and achievement with organizational and structural features. Also they prefers to complete the work including studies step by step according to the plan. While Perceiving (P) type person prefers adapting to the outer world flexibly to making plans.[1-3] Also, Perceiving (P) type person tends to be open to the outer world and changes their behavior easily. In another aspect, they have difficulty to arrange several works simultaneously, work according to priority and prefer to procrastinate the items which they are reluctant to do to deadline. On the other hand, the traits of Judging (J) type, seeking to work as intended, and quick processing, enables the higher academic performance in their own field.

Generally Sensing and Judging type students have a high tendency to prefer the traditional type of lecture and instruction. Because the Korean medical educational system was the formal course, Sensing and Judging type students are appropriate for higher academic achievement.

Conclusion

Although It is dangerous idea to reach the general conclusion between MBTI and academic achievement, this is the study to identify the characteristics of MBTI in Korean Medical students. This finding indicates that academic achievement was significantly related to their personality type in the preference. There is a limit to generalize the results of this study because there are a lot of variables, affecting the academic achievement. Nevertheless, when the educational course structure, teaching format system and personality type do not match, we see poor performance and drop out of the school medical course. Therefore, these results suggest that effective teaching strategies should be considered for the personality type of each individual, which helps in counseling and guidance to learners in the Korean medical education. The results of MBTI can be helpful in selection of appropriate teaching and learning strategies to provide better education in Korean medical students.

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