

An Investigation of the Influence of MBTI Personality on College Students' Procrastination

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Abstract. Procrastination is the act of delaying essential tasks. It involves avoiding immediate action on a task by engaging in unrelated activities, leading to delays. Recognized as a detrimental habit, procrastination significantly impacts college students' lives. Prior research has primarily focused on physiological and environmental factors influencing procrastination. This study investigates the correlation between MBTI personality types and procrastination among college students. Data from 621 university students, collected through a questionnaire, were analyzed using SPSS. The findings indicate a tendency for individuals with NP-type personalities to procrastinate more, whereas those with J-type personalities are less inclined to do so. The complex relationship between personality and procrastination is highlighted, enhancing our understanding of its influence. This research provides valuable insights for both students and educators in addressing procrastination.

Keywords: College Students; Procrastination; MBTI; Personality; Psychological Traits.

1. Introduction

Procrastination is a prevalent issue, particularly among college students, and requires attention during their transition to independent living and personal growth. It gained significant research interest in the 1990s. Initial studies primarily examined procrastination from a psychological standpoint, linking it to individual psychological traits, emotions, and thought processes. Over time, research expanded to include physiological and neurological perspectives to uncover its underlying mechanisms. Researchers have thoroughly investigated its characteristics through experimental studies, identified its causes and effects on individuals, and proposed various coping strategies (Solomon, 1984; McCrae and Costa 2008). These strategies, including time management and cognitive behavioral therapy, have been shown to help individuals combat procrastination, thereby enhancing productivity and life quality. Procrastination is influenced by multiple elements, including social, cultural, psychological, and physiological aspects, as well as personal personality and behavioral habits. A more holistic approach is needed to deepen understanding and address postponement issues. This study aims to explore the connection between procrastination and personality traits, specifically examining whether different MBTI types are associated with various levels of procrastination behaviors.

2. Literature Review

Procrastination is common among college students. A majority of college students procrastinate more or less in their life (Yang, 2023). In China, universities require students to live on campus so most college students leave home and live on campus to spend their college time. Without the supervision of parents and teachers, some undergraduates may feel lost and struggle to balance their study and life. Unlike their past learning experiences in secondary and high schools where they were often compelled to study, college students need to learn independently with strong self-control (Korstange, 2019). If students can't manage their studies effectively, it can also affect other aspects of their lives, such as social networking, scholarships, and postgraduate opportunities. Therefore, understanding and addressing procrastination in college students is crucial (Liu, 2003). Procrastination is influenced

by various factors, including social, cultural, psychological, and physiological aspects, as well as personal personality and behavioral habits(Flett, 1992).

MBTI (Myers-Briggs Type Indicator), a personality model developed by Isabel Briggs Myers and her mother Katherine Cook Briggs in the 1940s, is based on Carl Jung's eight psychological types. After more than twenty years of development, the Myers-Briggs Type Indicator was finalized (Isabelle, 2008). Within the MBTI framework, personality traits are categorized into four dimensions: the way in which energy is obtained (Extraversion or Introversion), how to receive information (Sensing or Intuition), how decisions are made(Thinking or Feeling)and ways of coping with the outside world (Judging or Perceiving)(Zeng, 2006). This classification helps people understand themselves and others better, making decisions that align with their personality traits in work, study, and life. Studies have shown that personality significantly affects college students' academic procrastination (Zhang, 2016).

This study aims to explore the relationship between MBTI dimensions and procrastination. Currently, both domestic and international research on this relationship is limited, with only 186 related articles identified in China. Common causes of procrastination include evaluation anxiety, perfectionism, difficulty in decision-making, lack of dependence, reluctance to seek help, task aversion(Solomon,1984), and deficits in self-efficacy and self-esteem (Marina,2019). Researchers like Costa and McCrae (2008) have explored the relationship between the Big Five personality traits and procrastination through stepwise regression analysis, finding links to low conscientiousness and neuroticism. Chinese scholars such as Yang (2022) have investigated the connection between perfectionism and procrastination, suggesting that self-control plays a partial mediating role between positive perfectionism and academic procrastination. Steel (2007) posits that Extraversion is a contributing factor to procrastination, indicating that E-type individuals may be more prone to procrastination due to their impulsive and social nature. Additionally, S-type individuals, who seek sensations, may also be more prone to procrastination, delaying tasks for the thrill of last-minute pressure(Steel, 2007). Conversely, J-type individuals, who value time management, are less likely to procrastinate(Yang, 2022).

However, some research methods, like self-proposed ideas, may result in biased and unstable results. For example, Han (2008) discussed his views on procrastination, linking it to personality, self-control, and learning abilities, but did not use empirical methods, which affects the reliability and validity of his conclusions. Therefore, a more comprehensive approach is needed to deeply understand and address procrastination. This study aims to investigate the correlation between the 16 MBTI personality types and procrastination, exploring whether different MBTI types relate to procrastination tendencies. Understanding one's MBTI type can aid in managing procrastination and related issues for college students.

3. Method

3.1. Participants

The study utilized convenience and snowball sampling strategy for data collection. After careful screening, a total of 599 valid responses were obtained. Of all the valid respondents, 452 were female, making up 75% of the sample, while only 147 were male. The distribution of respondents across academic years was 141 freshmen, 132 sophomores, 187 juniors, 134 seniors, and 2 graduate students.

3.2. Measurement

To measure college students' procrastination, the Chinese version of Aitken procrastination inventory is employed, which has been revised and validated by Chen et al. (2011) and comprises of 19 questions with a 5-point Likert scale (5=strongly agree, 4=agree, 3=neutral, 2=disagree, and 1=strongly disagree). It's important to note that except for reversely scored items 2, 4, 7, 11, 12, 14,

16, 17 and 18, the higher the total score on the item, the more severe the procrastination behavior is considered to be. The reliability coefficient was 0.802 (Liu,2011).

To measure personality type reflected by Myers–Briggs Type Indicator (MBTI), participants in the study will self-report their MBTI type. This is based on the fact that all sampled participants in the first author’s university, as part of their compulsory freshman courses, have already completed the MBTI test for career planning assessments. Therefore, it is presumed that respondents are well aware of their MBTI types. Consequently, the study does not include a full MBTI test as part of the survey.

3.3. Data Collection

The research questionnaires was designed and distributed online, the widely used QuestionStar app in China, and subsequently shared among student groups upon its completion. Individuals anonymously and voluntarily participated by filling out the online questionnaire.

3.4. Data Analysis

The survey data was processed using SPSS 17.0 for statistical analysis. The analysis focused on the total scores from the procrastination questionnaire and the report of 16 MBTI types to investigate the correlation between various MBTI types and procrastination levels. Additionally, the study examined the significance of different MBTI types in relation to the procrastination scores.

4. Results

In this study, MBTI is considered independent variable and procrastination score is treated as dependent variable. To analyze the differences in procrastination across various MBTI types, a one-way ANOVA was conducted to compare the mean (average) values of procrastination scores for each MBTI type to understand the significance of various differences.

4.1. Analysis of the Relationship between College Students’ MBTI Type and Procrastination Behavior

The one-way analysis of variance, as shown in Table 1, indicates that the F value for MBTI is 4.534, and the *p* value is less than 0.05. This suggests that there are significant differences in procrastination scores among the different MBTI types.

Table 1. The relationship between college students’ MBTI type and procrastination behavior

	ANOVA				
	Sum Of Squares	DF	MS	F	<i>p</i>
Between groups	2441.644	15	162.776	4.534	<0.001
Within groups	20930.968	593	35.902		
overall	23372.611	598			

As indicated in Table 2, the average procrastination score for the INTP type is the highest, suggesting that individuals with this type exhibit the most pronounced procrastination symptoms. Conversely, the ENFJ type has the lowest average score, indicating the least apparent procrastination symptoms. Analysis of the top six types reveals that five of them are N-type and P-type, suggesting that individuals with NP characteristics are more prone to procrastinate. Conversely, among the six types with the lowest procrastination scores, four are J-type, indicating that J-type individuals are less likely to procrastinate.

Table 2. The mean of procrastination in each MBTI type

	Mean	Standard Deviation	Min
INTP	55.75	12.959	39
ENTP	53.67	16.281	34
INFP	48.76	10.255	34
ISTP	48.27	6.596	41
INFJ	48.2	8.372	28
ENFP	46.8	10.958	28
ISTJ	45.56	3.935	38
ISFP	45.56	5.966	38
ESFJ	45.3	3.762	38
ESTP	44.97	3.966	39
INTJ	44.57	6.214	39
ESTJ	44.51	3.355	37
ENTJ	44.31	3.392	38
ESFP	44.21	4.393	37
ISFJ	43.98	5.8	30
ENFJ	43.97	3.882	37
Overall	45.71	6.252	28

4.2. Comparison of Procrastination Levels among Different MBTI Types

In this research, multiple comparisons were conducted among different MBTI types to identify which personality types exhibit significant differences in procrastination levels through pairwise comparisons.

It can be seen that different types of MBTI have significant differences in the personality of procrastination as follows:

To identify the high level procrastination college students, the statistical results show that INTP significantly higher than ENFJ,ISFJ,ESFP,ENTJ;INFP significantly higher than ENFJ, ISFJ, ENTJ; ISTP significantly higher than ENFJ,ISFJ,ESFP;INFJ significantly higher than ENFJ, ISFJ, ESFP; ENTP significantly higher than ENFJ,ISFJ,ENTJ;The study results showed that INTP, INFP, ISTP, INFJ and ENTP are significantly higher than ENFJ, ISFJ and ENTJ. It shows that NP-type is more likely to procrastinate.

To identify the low level procrastination college students, the statistical results show that ISTJ significantly lower than INTP,ENTP,INFP;INTJ significantly lower than INTP,ENTP;ISFP significantly lower than INTP,ENTP,INFP;ISFJ significantly lower than INTP,ENTP,INFP;ENFJ significantly lower than INTP,ENTP,INFP;ESFP significantly lower than INTP,ENTP,INFP;ESTP significantly lower than INTP,ENTP,INFP;ENTJ significantly lower than INTP,ENTP,INFP;ESTJ significantly lower than INTP,ENTP,INFP;The results of the experiment indicate that ISTJ, INTJ, ISFP, ISFJ, ENFJ, ESFP, ESTP, ENTJ, ESTJ are significantly lower than INTP, ENTP, INFP, but there is no significant difference between them. This result shows that J-type personality is less prone to procrastination symptoms.

5. Discussion

This study demonstrates an interesting correlation between MBTI type and procrastination. Analysis of MBTI rankings in procrastination reveals which personalities are more prone to this behavior. Single personality dimensions, like E-type (Extraversion) or S-type (Sensing), may indicate a higher likelihood of procrastination. However, human behavior is complex, and MBTI encompasses multiple dimensions. Therefore, considering these dimensions in their entirety is crucial as a single dimension does not solely determine procrastination.

Table 3. The comparison results of different MBTI on levels of procrastination

LSD						
MBTI type (I)	MBTI type (J)	Mean difference (I-J)	Std.Error	p	95% Confidence Interval	
					Lower bound	Upper bound
INTP	ENFP	8.950*	2.434	0.000	4.17	13.73
	INFJ	7.550*	2.434	0.002	2.77	12.33
	ENFJ	11.783*	2.384	0.000	7.10	16.47
	ISFJ	11.771*	2.288	0.000	7.28	16.26
	ESFP	11.538*	2.361	0.000	6.90	16.18
	ENTJ	11.444*	2.285	0.000	6.96	15.93
	ESTJ	11.236*	2.348	0.000	6.62	15.85
	INTJ	11.179*	3.101	0.000	5.09	17.27
INFP	ESTP	10.780*	2.241	0.000	6.38	15.18
	INTP	-6.987*	2.331	0.003	-11.56	-2.41
	ENFJ	4.796*	1.463	0.001	1.92	7.67
	ISFJ	4.784*	1.301	0.000	2.23	7.34
	ESFP	4.551*	1.426	0.001	1.75	7.35
	ENTJ	4.457*	1.295	0.001	1.91	7.00
ISTP	ESTJ	4.249*	1.404	0.003	1.49	7.01
	ESTP	3.793*	1.217	0.002	1.40	6.18
	INTP	-7.483*	2.384	0.002	-12.17	-2.80
	ENTP	-5.400*	2.680	0.044	-10.66	-0.14
	ENFJ	4.300*	1.547	0.006	1.26	7.34
	ISFJ	4.288*	1.395	0.002	1.55	7.03
ISTJ	ESFP	4.055*	1.512	0.008	1.09	7.02
	ENTJ	3.961*	1.389	0.005	1.23	6.69
	ENTP	-8.104*	2.595	0.002	-13.20	-3.01
INTJ	INFP	-3.201*	1.301	0.014	-5.76	-0.65
	INTP	-10.187*	2.288	0.000	-14.68	-5.69
INFJ	ENTP	-9.095*	3.334	0.007	-15.64	-2.55
	INTP	-11.179*	3.101	0.000	-17.27	-5.09
	INTP	-7.550*	2.434	0.002	-12.33	-2.77
ISFP	ENTP	-5.467*	2.724	0.045	-10.82	-0.12
	ENFJ	4.233*	1.623	0.009	1.05	7.42
	ENTP	-8.107*	2.589	0.002	-13.19	-3.02
ISFJ	INFP	-3.203*	1.290	0.013	-5.74	-0.67
	INTP	-10.190*	2.282	0.000	-14.67	-5.71
	ENTP	-9.687*	2.595	0.000	-14.78	-4.59
	INFP	-4.784*	1.301	0.000	-7.34	-2.23
ENFJ	ISTP	-4.288*	1.395	0.002	-7.03	-1.55
	INTP	-11.771*	2.288	0.000	-16.26	-7.28
	ENTP	-9.700*	2.680	0.000	-14.96	-4.44
	INFP	-4.796*	1.463	0.001	-7.67	-1.92
ENFP	ISTP	-4.300*	1.547	0.006	-7.34	-1.26
	INTP	-11.783*	2.384	0.000	-16.47	-7.10
	INTP	-8.950*	2.434	0.000	-13.73	-4.17
	ENTP	-6.867*	2.724	0.012	-12.22	-1.52
ESFP	ENTP	-9.455*	2.659	0.000	-14.68	-4.23
	INFP	-4.551*	1.426	0.001	-7.35	-1.75
	ISTP	-4.055*	1.512	0.008	-7.02	-1.09
	INFJ	-3.988*	1.589	0.012	-7.11	-0.87
	INTP	-11.538*	2.361	0.000	-16.18	-6.90
ESFJ	ENTP	-8.367*	2.518	0.001	-13.31	-3.42
	INFP	-3.463*	1.142	0.003	-5.71	-1.22
	ISTP	-2.967*	1.247	0.018	-5.42	-0.52
	INFJ	-2.900*	1.340	0.031	-5.53	-0.27
	INTP	-10.450*	2.202	0.000	-14.77	-6.13
ENTP	ENFJ	9.700*	2.680	0.000	4.44	14.96
	ISFJ	9.688*	2.595	0.000	4.59	14.78
	ESFP	9.455*	2.659	0.000	4.23	14.68
	ESFJ	8.367*	2.518	0.001	3.42	13.31
ESTP	ENTP	-8.697*	2.553	0.001	-13.71	-3.68
	INFP	-3.793*	1.217	0.002	-6.18	-1.40
	INTP	-10.780*	2.241	0.000	-15.18	-6.38
ENTJ	ENTP	-9.361*	2.592	0.000	-14.45	-4.27
	INFJ	-3.894*	1.473	0.008	-6.79	-1.00
	INTP	-11.444*	2.285	0.000	-15.93	-6.96
ESTJ	ENTP	-9.152*	2.648	0.001	-14.35	-3.95
	INFP	-4.249*	1.404	0.003	-7.01	-1.49
	INTP	-11.236*	2.348	0.000	-15.85	-6.62

*. The mean difference is significant at the 0.05 level.

For instance, INTPs, ranking highest in procrastination, might delay tasks due to their creative nature and the stress of deadlines, whereas ENFJs, ranking lowest, are more plan-oriented and responsible, encountering less procrastination.

Piers (2007) posits that E and S types are more prone to procrastination. This study, however, finds a higher tendency in N (Intuition) types, which is possibly due to N type college students' focusing on abstract over practical aspects to prefer task avoidance. This difference in findings might stem from varied interpretations of these personality traits.

type (Judging) individuals are generally less likely to procrastinate, aligning with the initial hypothesis (Solomon, 1984). This group of college students prefer planning and certainty, which doesn't guarantee the absence of procrastination. Solomon (1984) suggests that fear of failure and lack of motivation are also significant contributors to procrastination.

To summarize the statistical results, INTP, ENTP, and INFP are most likely to procrastinate, while ESFP, ISFJ, and ENFJ are least likely. NP types may procrastinate due to overthinking, while J types' focus on efficiency reduces their tendency to delay tasks.

6. Conclusion

The study's limitation lies in sampling one university students in China, which could potentially affect the generalizability of the results. Future research with larger and diversified samples are suggested to provide further and wider understanding of college students' MBTI-procrastination relationship.

Despite the limitation, the study offers empirical evidence of the association between MBTI personality and procrastination in higher education context. For college students, understanding and overcoming procrastination is challenging. This study offers a new perspective for addressing this issue, suggesting that understanding one's MBTI type can aid in developing individualized learning strategies and reducing procrastination with deeper self-cognition. Teachers can also apply the research findings from this study to better recognize their more likely procrastinated students and offer more specific pedagogic guidance to overcome procrastination in higher education (Yang, 2023). College students with awareness of their MBTI types can communicate their needs to peers and professors, foster mutual understanding and support, further help each other to avoid procrastination as much as possible.

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