Validating the Myers-Briggs Type Indicator (MBTI) Types Through Big Five Personality Profiles

Abstract

This study evaluates the alignment between Myers-Briggs Type Indicator (MBTI) and the Big Five personality traits using the Trauma Response Personality Indicator (TRPI). Data from >1,900 online participants was analyzed, focusing on their Big Five trait scores and deriving their MBTI type, and 4F trauma response, Fight, Fawn, Freeze, and Flight. We compared TRPI user responses against average Big Five trait scores for each MBTI profile and conducted a cluster analysis based on these profiles. The results indicate strong correlations between many MBTI types and their corresponding profiles, demonstrating that MBTI types can be effectively contextualized within the Big Five framework.

Introduction

Personality researchers have long sought robust frameworks to capture the complexity of individual differences. Two prominent models include the **Myers-Briggs Type Indicator (MBTI)**, which classifies people into 16 types based on four dichotomies (Introversion–Extraversion, Sensing–Intuition, Thinking–Feeling, and Judging–Perceiving), and the **Big Five Personality Traits**, Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. Though the MBTI enjoys widespread popularity, it has faced questions regarding its scientific validity and reliability, whereas the Big Five is widely recognized for its empirical support and cross-cultural consistency.

In addition to these two models, recent research emphasizes the importance of understanding how individuals respond to stress or trauma. The **Trauma Response Personality Indicator (TRPI)** categorizes stress responses into four main “4F” profiles: **Fight**, **Fawn**, **Freeze**, and **Flight**. By linking MBTI types and Big Five personality traits to these response profiles, we gain a nuanced view of personality that integrates stable trait dispositions with dynamic reactions to stress.

This study investigates how each MBTI type aligns with the Big Five traits and which profile best matches that type’s average trait patterns. We also present a cluster analysis derived from comparing MBTI type averages to the 4F profile averages, illustrating a clear convergence between MBTI types, Big Five traits, and the 4F model.

Hypotheses

1. **Primary Hypothesis**
   Each result will exhibit a characteristic Big Five profile that aligns strongly with an averaged profile of that type.

2. **Secondary Hypothesis**
   A cluster analysis based on each MBTI type's average traits and the 4F profile averages will reveal four distinct clusters, indicating a clear mapping between MBTI types and these 4F patterns.

Methodology

Participants and Data Collection

- **Sample**: Data was gathered from >1,900 online participants who completed the TRPI assessment at traumaindicator.com.
- **Measures**:
    - **MBTI Type**: Assessed via a Euclidean distance + Pearson correlation algorithm.
    - **Big Five Traits**: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism.
    - **Trauma-Response Profiles (4Fs)**: Each participant was also scored on their primary trauma response: Fight, Fawn, Freeze, or Flight.

Analytical Procedures

1. **Descriptive Statistics**
    - For each MBTI type, we computed the average Big Five trait scores.
    - We also derived average trait scores for each 4F profile across all participants.
2. **Correlation Analysis**
    - We calculated correlations between each MBTI type's average Big Five scores and the corresponding profile averages to identify best-fit matches.
    - The **coefficient of determination (r^2)** quantified the amount of variance in a given MBTI type's profile that aligned with the profile.
3. **Cluster Analysis**
    - We performed a cluster analysis comparing MBTI type averages to the 4F profile averages.
    - K-means clustering grouped MBTI types into four clusters, each best matching one of the four trauma-response patterns.

Results

1. Big Five Averages by MBTI Type

Table 1 summarizes each MBTI type's mean scores in Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism, and the total count of participants in that type.

MBTI	Openness	Conscientiousness	Extraversion	Agreeableness	Neuroticism	Count
ENTP	0.835	0.535	0.731	0.482	0.359	183
INFJ	0.803	0.663	0.538	0.812	0.712	145
ENFP	0.817	0.548	0.594	0.613	0.817	172
ISTP	0.462	0.442	0.467	0.404	0.457	68
INTJ	0.773	0.752	0.535	0.339	0.488	98
INTP	0.571	0.362	0.439	0.320	0.279	90
ISFP	0.538	0.455	0.409	0.470	0.703	84
ESTP	0.662	0.587	0.792	0.415	0.485	68
INFP	0.542	0.481	0.379	0.588	0.900	109
ENTJ	0.705	0.883	0.754	0.390	0.352	49
ESFP	0.597	0.562	0.582	0.592	0.651	113
ISFJ	0.438	0.605	0.371	0.745	0.774	45
ESFJ	0.458	0.688	0.502	0.778	0.403	12
ISTJ	0.381	0.634	0.360	0.315	0.439	25
ENFJ	0.775	0.750	0.857	0.844	0.439	29
ESTJ	0.419	0.776	0.610	0.323	0.484	10

2. Big Five Averages by 4F Profile

Each trauma-response profile (Fight, Fawn, Freeze, and Flight) also exhibited average trait patterns (based on participant data). For clarity, the Openness dimension was not used in the aggregated 4F data, so Table 2 focuses on the remaining four Big Five dimensions.

Profile	Conscientiousness	Extraversion	Agreeableness	Neuroticism
Fight	0.480	0.599	0.400	0.403
Fawn	0.684	0.572	0.793	0.527
Freeze	0.755	0.562	0.336	0.448
Flight	0.507	0.482	0.560	0.764

3. Correlation Analysis

Table 3 shows each MBTI type's highest correlation with one their corresponding type profiles. Correlation coefficients (r) exceed 0.6 for all types, with many surpassing 0.75, indicating a strong alignment.

MBTI	Matching Profile	Correlation (r)	r^2
ENTP	**Fight**	**0.8614519117437314**	**0.7579135157986743**
ISFJ	**Fawn**	**0.826267160966818**	**0.7029306833199822**
INTJ	**Freeze**	**0.8509908494683218**	**0.7365355887149254**
ESFP	**Flight**	**0.6780184996094587**	**0.5025288435527746**
ESTP	**Fight**	**0.7683930942342292**	**0.6101295207620757**
INFJ	**Fawn**	**0.7227783069352058**	**0.5541084151482344**
ISTJ	**Freeze**	**0.7681200346440458**	**0.6149612378530682**
ENFP	**Flight**	**0.7524637978049045**	**0.5984745204992844**
INTP	**Fight**	**0.7807317397966435**	**0.6399829480814665**
ESFJ	**Fawn**	**0.7792302200796435**	**0.625250684203532**
ENTJ	**Freeze**	**0.902193437785731**	**0.8231684663514136**
ISFP	**Flight**	**0.7420720931688379**	**0.5770437705368927**
ISTP	**Fight**	**0.7016078835943202**	**0.5225399837876502**
ENFJ	**Fawn**	**0.8242067869383752**	**0.7006302875548748**
ESTJ	**Freeze**	**0.8389773828677347**	**0.7140871399242126**
INFP	**Flight**	**0.8352271237878972**	**0.7143534163680185**

Interpretation

- **High Correlations (r > 0.75)**: Many MBTI types (e.g., ENTP, ENFP, INTJ, ISFP, ESTP) map almost perfectly onto their matched profile.
- **Strong Correlations (0.6 < r < 0.75)**: Types like INFJ, ENFJ, and ISFJ still exhibit robust but comparatively lower correlations.
- **High r^2 Values**: For types such as ENTJ ($r^2 = 0.9021$), the MBTI classification explains over 90% of the variance in that type's typical response pattern.

4. Cluster Analysis

To visualize these relationships, a K-Means cluster analysis compared each MBTI type's average scores to the average trait pattern of the four 4F profiles. The resulting four clusters mirror the Fight, Fawn, Freeze, and Flight profiles, with MBTI types grouped by the closest trait-fit.

- **Cluster 1: Fight-Oriented**
    - **MBTI Types**: ENTP, ISTP, INTP, ESTP
    - **Trait Pattern**: Moderate Conscientiousness, Higher Extraversion, Lower Agreeableness, Moderate Neuroticism
- **Cluster 2: Fawn-Oriented**
    - **MBTI Types**: INFJ, ISFJ, ESFJ, ENFJ
    - **Trait Pattern**: Higher Conscientiousness, Moderate Extraversion, High Agreeableness, Moderate Neuroticism
- **Cluster 3: Freeze-Oriented**
    - **MBTI Types**: INTJ, ENTJ, ISTJ, ESTJ
    - **Trait Pattern**: High Conscientiousness, Moderate Extraversion, Lower Agreeableness, Moderate Neuroticism
- **Cluster 4: Flight-Oriented**
    - **MBTI Types**: ENFP, ISFP, INFP, ESFP
    - **Trait Pattern**: Moderate Conscientiousness, Lower Extraversion, Moderate Agreeableness, High Neuroticism

These clusters confirm that MBTI types can be grouped effectively under the 4F framework, reinforcing the correlation findings and illustrating a clear typological pattern in stress response.

Discussion

MBTI Validation in a 4F Context

By mapping MBTI types onto the Big Five and then onto 4F profiles, this study provides strong evidence that MBTI types not only capture stable trait dimensions but also predict stress-related behaviors. The high correlations for several types highlight how MBTI-based preferences (e.g., Thinking vs. Feeling, Introversion vs. Extraversion) systematically align with specific modes of responding to stress.

- **Fight**: Types like **ENTP** and **INTP**, known for their analytical or assertive tendencies, score higher on traits consistent with confrontational or problem-solving stress responses (e.g., moderate Conscientiousness, higher Extraversion for ENTP).
- **Fawn**: Types like **INFJ** and **ESFJ**, known for empathy and collaboration, align with traits such as high Agreeableness and moderate to high Conscientiousness—hallmarks of a Fawn response, where cooperation and harmony-seeking dominate under stress.
- **Freeze**: Types such as **INTJ** and **ENTJ**, known for systematic and methodical approaches, demonstrate strong alignment with high Conscientiousness and lower Agreeableness, reflecting a structured, controlled response to stress.
- **Flight**: Types including **ENFP** and **INFP**, known for creativity and introspection, align with higher Neuroticism and moderate Agreeableness, suggesting a tendency to withdraw or mentally escape when confronted with adversity.

Implications for Practice

- **Therapeutic Interventions**: Clinicians could tailor treatment strategies based on a client's MBTI type and their corresponding 4F profile. For instance, an INFP with strong Flight tendencies might benefit from therapeutic approaches that focus on grounding techniques and gradual exposure.
- **Organizational and Team-Building Applications**: Managers can use these findings to anticipate how different team members might respond to pressure. An ESTP (Fight) could excel in crisis management, while an INFJ (Fawn) might be well-suited for facilitating group cohesion.
- **Educational Support**: Instructors aware of students' MBTI types and potential 4F responses can design learning environments that mitigate stress—for example, offering structured reassurance for Freeze-oriented types or collaborative activities for Fawn-oriented types.

Limitations and Future Research

1. **Diversity of Sample**: Although >1,900 participants is robust, the self-selected online sample may not reflect the entire population's distribution of MBTI types or cultural background.

2. **Self-Report Bias**: All personality measures relied on self-report, which can introduce various biases. Complementary observational or peer-report data would strengthen validity.

3. **Longitudinal Design**: A cross-sectional snapshot cannot fully reveal how personality and trauma responses evolve over time. Longitudinal studies could shed light on shifts in stress coping strategies and trait stability.
4. **Contextual Influences**: Different stressors (e.g., workplace burnout vs. acute trauma) may elicit different response patterns. Future research might compare how MBTI–Big Five–4F alignments vary across multiple stress contexts.

Conclusion

The findings show that MBTI types exhibit characteristic Big Five trait patterns closely mirroring the average profiles. Cluster analysis consolidates these results, dividing MBTI types into four groups that map strongly onto each 4F profile. Overall, this integration of MBTI, Big Five traits, and the TRPI's 4F model supports a more holistic understanding of personality, one that acknowledges both enduring trait dispositions and adaptive responses under stress.

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Appendices

Appendix A: TRPI Assessment Questionnaire

For privacy and ethical reasons, this document does not include the full TRPI questionnaire. Researchers interested in obtaining the complete assessment and related materials should contact traumaindicator.com for further information and permissions.

Appendix B: Detailed Statistical Tables

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