

COMPARISON OF PERSONALITY TRAITS ON HEALTH AND SOCIAL SCIENCES STUDY PROGRAMS IN OLD AGED GROUPS

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Abstract

Personality is most commonly divided into five big traits^{1,2,3,4} namely Agreeableness, Conscientiousness, Extraversion, Neuroticism, and Openness to Experience. Agreeableness refers to the tendency to get along well with others and is associated with altruism or modesty. Conscientiousness refers to the extent to which an individual is careful, reliable, and persevering. Extraversion refers to the tendency to experience positive emotions and to have a positive outlook on life. In general, extroverts are talkative, sociable, outgoing, enthusiastic, and energetic. Neuroticism refers to the tendency to experience negative emotional states including anxiety, depression, or anger. Openness to experience refers to the tendency to be open-minded, imaginative, and curious. This study was cross-sectional research with big five inventory (BFI) questionnaire. We used bahasa to validate translation of the BFI. The Participant N= 50 persons from health sciences and N= 116 persons from social science. All participant were lecturers and professors with aged interval 41-90 years. This questionnaire has 5 scale with 5 Likert scale mark with disagree strongly and agree strongly answer. The result showed all participant were included for three domain personality traits dimensions, which are agreeableness with 35, openness with 52, and conscientiousness with 29. Taken all together we concluded all lecturer and professors had tendency of agreeableness, openness, and conscientiousness for their personality traits dimensions.

Keywords: *big five-inventory (BFI), personality traits, aged*

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INTRODUCTION

Individual personality describing individual differences in characteristic patterns of thinking, feeling, and behaving.⁵ Individual personality affects health and lifespan is supported by growing evidence of its influence on health-related factors^{6,7} including obesity⁸ and smoking^{9,10}—two major determinants of morbidity and mortality.¹¹ Moreover, personality traits affect physiological responses to stressful events, which can negatively impact health.⁷ Neuroticism, extraversion, agreeableness, openness, and conscientiousness to experience are broad dimensions of personality and are related to mortality. Studies on the association between different personality traits and survival in older people have had inconsistent findings.¹²

Personality is a dynamic and organized system of characteristics, which uniquely influences individual's cognitions, motivations and behaviors in different situations.¹³ Personality is increasingly stable over time and reaches the highest level of stability in individuals' later life.¹⁴ Based on the personality trait theory, personality can be regarded as a collection of traits that are highly individualized and relatively stable throughout one's lifespan, which uniquely influence one's behaviors or responses to a situation.¹⁵

Personality is believed to influence the quality of life through the ways people react to stressful situations and cope with challenges.^{16,17,18,19} Personality traits are believed to influence individuals' interpretation of their environments and also affect individuals' behavioral choices about how to solve encountered problems.^{20,21} With different personality traits, people have different standards to evaluate the level of stress in each situation. One situation may be perceived as extremely stressful by some people, whereas other people may easily adapt to the same situation.²²

Most of the studies about the relations between personality traits and life satisfaction were based on the model of the Big Five. From the viewpoint of trait theory, the Five Factor Model (FFM) represents a classical structure of personality.²³ The Big Five personality traits

originated from lexical tradition²⁴ and include extraversion, agreeableness, openness to new experiences, conscientiousness, and neuroticism.^{25, 26} Extraversion refers to the quantity and intensity of a person's social communication, and the degree of energy and happiness a person feels during communication. Agreeableness reflects attitudes toward other people. Openness to new experiences explores whether a person has creativity and imagination, and is likely to try new things. Conscientiousness refers to self-control regarding conflicts or actions. Neuroticism reflects a person's emotional instability and inability to adapt to the environment.²⁵ The FFM has been confirmed in different cultures.^{27, 28, 29}

This study examined the comparison between personality and major study program in a cohort of cognitively healthy people aged 41-90 years. Specifically, we explored the extent to which neuroticism, extraversion, agreeableness, openness, and conscientiousness were independently associated with study program groups with different combinations of personality traits.

METHOD

This study was cross sectional research with big five inventory (BFI) questioner. We used bahasa to validate translation of the BFI. The Participant N= 50 persons from health sciences and N= 116 persons from social science. All participant were lecturers and professors with aged interval 41-90 years. This questionnaire has 5 scale with 5 Likert scale mark with disagree strongly and agree strongly answer.

The BFI is based on an established and well-validated model of personality. The well-validated 44-item BFI was used to assess five broad domains of personality traits.²³ The inventory comprised five scales with a variable number of items to be self-rated on a 5-point Likert scale ranging from strongly disagree to strongly agree.³⁰ All items were rated using a five-point scale (1 = Disagree Strongly, 5 = Agree Strongly). A nine-item scale was used to assess extraversion (e.g., "is outgoing, sociable"; $\alpha = 0.81$). An eight-item scale was

used to assess neuroticism (e.g., “gets nervous easily”; $\alpha = 0.85$). A ten-item scale was used to assess openness (e.g., “is curious about many different things”; $\alpha = 0.80$). A nine-item scale was used to assess conscientiousness (e.g., “does a thorough job”; $\alpha = 0.81$). An eight-item scale was used to assess agreeableness (e.g., “is helpful and unselfish with others”; $\alpha = 0.81$).^{30, 31}

RESULT

The distributed characteristics of research participants on **Table 1**, showed that the average amount of within social science

group which was 88 males and 28 females. From all the data, the amount of males is the most of all science groups which was 88 males. The most age interval of the sample which was on the interval of 61-70 years old and the amount of age interval of 71-80 years old within social science group was 40 and 38. Overall, the age interval of 61-70 years old within social science was the most of all science group, which was 40. Also, based on **Table 1**, it was identified that highest ratio of research sample based on sex and age interval was on social science group rather than health science group.

Table 1. Characteristic of research participants

		Health (Faculty of medicine, dentistry, Psychology, Pharmacy) n=50	Social N=116
Sex	Male	36	88
	Female	14	28
Age	41-50	2	6
	51-60	6	24
	61-70	19	40
	71-80	19	38
	81-90	4	8

Table 2. Personality traits scoring of samples based on science group.

	Health (Faculty of medicine, dentistry, Psychology, Pharmacy) n=50	Social N=116
Personality		
Neuroticism		
Extraversion		
Agreeableness	17	35
Openness	19	52
Conscientiousness	14	29

The result based on **Table 2**, showed that the samples consisted of three main traits of personality such as agreeableness, openness, and conscientiousness, according to scoring using BFI. The scores of agreeableness trait in the health and social science program group were 17 and 35. The scores of openness trait in both groups were 19 and 52. Lastly, the scores of conscientiousness trait in both groups were 14 and 29 respectively. Overall, the highest score was openness trait in the both groups which were 19 and 52. The lowest score was

conscientiousness trait in the both groups. Generally, the result based on **Table 2**, showed that the highest score of personality trait was social science group.

DISCUSSION

There are various ways how the individual in giving some response to the stress or problem from the environment.³² Emotion, memory, and self esteem are basically the essential components in building human personality. Personality is a complex behavior

pattern which produced from the interaction between personality characteristics and neurobehavior. During adulthood, the negative energy in which is stored under unconsciousness state will occur in the form of certain personality traits.

Big Five Personality is an approach which used to evaluate the human personality through traits which are divided into five personality traits that have been formed by using factor analysis. The five big traits are consisted of neuroticism, extraversion, agreeableness, openness, and conscientiousness.²³ Personality traits are defined as the traits from different individuals which tend to show the mindsets, feelings, and consistency. Traits can be divided into three main functions which are traits can be used to summarise, predict, and explain the individual behavior. The concept of traits provides economical way to summarise on how individual can be so different from the others. Traits also allows someone to create prediction on individual behavior continuously.

*Neuroticism (N)*³²

Individual with the highest score on this trait has a tendency to experience anxiety, temperament, self-pity, self-consciousness, emotional and vulnerable to experience the interruption due to stress. Individual who has the lowest on this trait will have an tendency to be more happy and grateful on his/her life, calm, not emotional, compared to the individual that has the highest score. Other than that, individual that has highest score on this trait will have an tendency to have negative effect and increase of impulsive behavior.

*Extraversion (E)*³²

Extraversion is mostly defined as surgency. Individual that has the highest score on this trait will have an tendency to have full of affection, cheerful, sociable. This individual will entirely remember all social interactions and enjoy the process of interaction with many people. This trait is characterised with positive tendency such as having high enthusiasm, sociable, energetic, interested in many things,

having positive emotion, ambitious, workholic, and so friendly to other people, having high motivation in gathering, building relationship among others and being dominant within some communities or environment. On the other hand, individual which has the lowest score will have a tendency to be more quiet, calm, passive, and unable to express his/her feeling.

*Openness (O)*²³

Based on **Table 2** show that this trait refers to how the individual being ready to do the adaptation towards some new situations and ideas (creative and imaginative). This individual has some characteristics such as easy to tolerate, having some capacity to absorb some informations, focus and able to be aware towards feeling, thought, and internal impuls. Individual with the highest score on this trait will have a tendency to achieve the harmony in their relationships with some things and all people they know. This individual keeps looking for the differences and various experiences. Meanwhile, individual that has the lowest score will have some characteristics such as narrow-minded, conservative, and dislike the change.

*Agreeableness (A)*³²

This trait distinguishes between soft-hearted and non-merciful individual. Individual that has higher score on this trait (**Table 2**) will have a tendency to have prosocial behavior, high confidence, generous, relenting person, well receiver, and kind-hearted. This kind of trait is mostly called as trait of social adaptability, likability, which is identified as friendly individual, having a relenting personality, and like to avoid the conflicts. Meanwhile, individual that has lower score will have a tendency to be more suspicious, stingy, unfriendly, easily offended, aggressive, like to criticise other people, and less cooperative.

Conscientiousness (C)

Individual that has high score is individual which is obedient, controlled, regular, ambitious, focus on the achievement, and

having a good self-disciplinary. This kind of trait also can be called as trait of dependability, impulse control and will to achieve.^{25,26} Based on **Table 2**, generally, individual that has high score will have some characteristics such as workholic, careful, punctual, and dilligent. Meanwhile, individual that has low score will have a tendency to be more messy, careless, lazy, having no life purposes, and easily giving up as facing some problems.

CONCLUSION

Based on the result of research, this can be concluded that lecturers and/or headmasters show the tendency of personality traits such as agreeableness, openness, and conscientiousness. These three personality traits basically describe the tendency as following: 1. Getting the comfort and

enjoyment within their relationships with things and other people they know, 2. Characterising the individual which is friendly, having personality of relenting and avoiding some conflicts, and 3. Individual which is obedient, controlled, regular, ambitious, focus on the achievements, and having a good self-disciplinary. All those things are the parts in which every academic person should have.

CONFLICT OF INTEREST

The authors have no conflict of interest: they have no financial or personal relationships with other people or organizations that could inappropriately influence their work.

REFERENCES

1. Paunonen SV, Haddock G, Forsterling F, Keinonen M. Broad versus narrow personality measures and the prediction of behaviour across cultures. *European Journal of Personality*. 2003;17(6):413–33.
2. Paunonen SV, Jackson DN. What is beyond the big five? Plenty! *J Pers*. 2000;68(5):821–35.
3. Costa PT, MacCrae RR. 1992. Revised NEO personality inventory (NEO PI-R) and NEO five-factor inventory (NEO FFI): Professional manual. Odessa, FL: Psychological Assessment Resources.
4. Goldberg LR. The structure of phenotypic personality traits. *AmP*. 1993;48(1):26.
5. Roberts BW, Kuncel NR, Shiner R, et al: The power of personality: the comparative validity of personality traits, socioeconomic status, and cognitive ability for predicting important life outcomes. *Perspect Psychol Sci* 2007; 2:313–345.
6. Booth-Kewley S, Vickers RR Jr: Associations between major domains of personality and health behavior. *J Pers* 1994; 62:281–298.
7. Smith TW, MacKenzie J: Personality and risk of physical illness. *Annu Rev Clin Psychol*. 2006; 2:435–467.
8. Jokela M, Hintsanen M, Hakulinen C, et al: Association of personality with the development and persistence of obesity: a metaanalysis based on individual-participant data. *Obes Rev*. 2013; 14: 315–323.
9. Terracciano A, Costa PT Jr: Smoking and the five-factor model of personality. *Addiction*. 2004; 99:472–481.
10. Parkes KR: Smoking and the Eysenck personality dimensions: an interactive model. *Psychol Med* 1984; 14:825–834.
11. Rizzuto D, Fratiglioni L: Lifestyle factors related to mortality and survival: a mini-review. *Gerontology* 2014; 60:327–335.
12. Rizzuto D, Mossello E, Fratiglioni L, Santoni G, Wang HX. Personality and Survival in Older Age: The Role of Lifestyle Behaviors and Health Status. *Am J Geriatr Psychiatry*. 2017 pii: S1064-7481(17)30352-4.
13. Ryckman R. 2004. Theories of Personality. Belmont, CA: Thomson/Wadsworth.
14. Roberts BW, DelVecchio WF. The rank-order consistency of personality traits from childhood to old age: a quantitative review of longitudinal studies. *Psychol Bull*. 2000; 126(1):3-25.
15. Suldo S. M., Minch D. R., Hearon B. V. Adolescent life satisfaction and personality characteristics: Investigating relationships using a five factor model. *J. Happ. Stud*. 2015;16: 965–983.

16. Vollrath M. Personality and stress. *Scand J Psychol.* 2001 Sep; 42(4):335-47.
17. Wrosch C, Scheier MF. Personality and quality of life: the importance of optimism and goal adjustment. *Qual Life Res.* 2003; 12 Suppl 1(2):59-72.
18. Vollrath M, Landolt MA. Personality predicts quality of life in pediatric patients with unintentional injuries: a 1-year follow-up study. *J Pediatr Psychol.* 2005 Sep; 30(6):481-91.
19. Aarstad AK, Aarstad HJ, Olofsson J. Personality and choice of coping predict quality of life in head and neck cancer patients during follow-up. *Acta Oncol.* 2008; 47(5):879-90.
20. James L. R., Mazerolle M. D. 2002. *Personality in Work Organizations.* Thousand Oaks, CA: Sage Publications.
21. Wayne J. H., Musisca N., Fleeson W. 2004. Considering the role of personality in the work-family experience: relationships of the big five to work-family conflict and facilitation. *J. Vocat. Behav.* 64 108–130.
22. Cüceloglu D. 1991. *Humans and Their Behavior.* Istanbul: Remzi Publishing.; Deniz M. E. 2006. *The relationships among coping with stress, life satisfaction, decision-making styles and decision self-esteem: an investigation with Turkish university students.* Soc. Behav. Pers. 34 1161–1170.
23. John O. P., Naumann L. P., Soto C. J. 2008. "Paradigm shift to the integrative Big Five trait taxonomy: history, measurement, and conceptual issues: theory and research," in *Handbook of Personality, 3rd Edn*, eds John O. P., Robins R. W., Pervin L. A., editors. (New York, NY: Guilford Press), 114–158.
24. Goldberg LR. An alternative "description of personality": the big-five factor structure. *J Pers Soc Psychol.* 1990; 59(6):1216-29.
25. McCrae RR, John OP. An introduction to the five-factor model and its applications. *J Pers.* 1992; 60(2):175-215.
26. McCrae R. R., Costa P. T. 2008. "The five-factor theory of personality," in *Handbook of Personality: Theory and Research, 3rd Edn*, eds John O. P., Robins R. W., Pervin L. A., editors. (New York, NY: Guilford Press), 159–181.
27. Rolland J. P. 2002. "The cross-cultural generalizability of the Five-Factor Model of personality," in *The Five-Factor Model of Personality Across Cultures*, eds McCrae R. R., Allik J., editors. (New York, NY: Kluwer Academic/Plenum Publishers), 7–28.
28. Terracciano A, Abdel-Khalek AM, Adám N, Adamovová L, Ahn CK, Ahn HN, Alansari BM, Alcalay L, Allik J, Angleitner A, Avia MD, et al. National character does not reflect mean personality trait levels in 49 cultures. *Science.* 2005; 310(5745):96-100.
29. Schmitt D. P., Allik J., McCrae R. R., Benet-Martinez V. (2007). The geographic distribution of Big Five personality traits: patterns and profiles of human self-description across 56 nations. *J. Cross Cult. Psychol.* 2007; 38 173–212.
30. O. John, S. Srivastava. *The Big Five trait taxonomy: History, measurement, and theoretical perspectives.* L. Pervin, O. John (Eds.), *Handbook of Personality: Theory and Research (2nd edn)*, Guilford Press, New York (1999), pp. 102-138.
31. Bogg T. Social Media Membership, Browsing, and Profile Updating in a Representative U.S. Sample: Independent and Interdependent Effects of Big Five Traits and Aging and Social Factors. *Front Psychol.* 2017; 8:1122.
32. Bibbey A, Carroll D, Roseboom TJ, Phillips AC, de Rooij SR. Personality and physiological reactions to acute psychological stress. *Internat J of Psychophysiol.* 2013;90(1):28-36.