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Dekan Fakultas Psikologi Universitas Katolik Soegijapranata Semarang memberikan tugas kepada yang tersebut di bawah ini:

Nama : LUCIA TRISNI WIDIANINGTANTI, S.Psi., M.Si.  
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Demikian surat tugas ini dibuat untuk diketahui dan dipergunakan sebagaimana mestinya.

Semarang, 22 Agustus 2019  
Dekan Fakultas Psikologi

Dr. Dra. MARGARETHA SIH SETIJA UTAMI, M.Kes.



Tembusan Yth :  
Ka. LPSDM



PROMS



# CERTIFICATE OF APPRECIATION

This Certificate is Presented to

*L. Trisni Widhianingtanti*

## AS PRESENTER OF

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"Applied Psychometrics and Rasch Model in Psychological Measurement and Educational Testing"

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Board PROMS

*Robert F. Cavanagh*

Prof. Robert F. Cavanagh, BEd., MScEd., PhD

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# Executive Functioning Test Battery: Normative Data among Indonesian healthy adults

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# ***Purpose of the study***

- The current research was aimed at developing normative data of neuropsychological tests (NPT), particularly executive functioning, among Indonesian healthy adults. These normative data were stratified by age, gender and level of education.



# Executive function

- Executive functions are involved in the control and direction (planning, monitoring, activating, switching, inhibiting) of lower level, more modular, or automatic functions. Working memory, a limited capacity process for the short-term storage, monitoring, and manipulation of information and inhibition (Cicerone et al. 2006) are fundamental, age-related processes that mediate EF (Miller & Cohen, 2001).

# Executive function (Powel & Voeller, 2004)

- Cognitive regulation :

- Working Memory
- Attention Regulation
- Planning
- Goal setting dan monitoring
- Time estimation
- Time management
- Organizational Strategies

- Cognitive regulation :

- Mental Flexibility
- Fluency
- Abstract reasoning
- Novel problem solving & judgement
- Self awareness

# Trail Making Test

- Trail Making Test (TMT) was first developed in 1944 as a visual–motor and visual–conceptual trail making test, as a part of Army Individual Test Battery, which was prepared by psychologists in the United States Army and released for public use in the following years.
- The first version of TMT was composed of two separate parts, as A and B. In the first part (Part A), the participant is required to combine the numerated circles with direct lines to provide correct alignment of numbers in an ascending order (as 1-2-3-4-...).
- In the second part (Part B), the participant is required to combine the circles, which are consisted of both letters and numbers with direct lines to provide correct alignment of both numbers and letters in an ascending order, as one number and one letter (1-A-2-B-3-C-...).

# Methods

- The current study comprised of participants who live in three big cities in Java (N= 492), age ranges from 16 – 80 years old.
- The neuropsychological tests (NPT) used in this study were Indonesian Boston Naming Test (I-BNT), Token Test (TT), Trail Making Test (TMT) A and Trail Making Test (TMT) B.
- We used descriptive analysis, t-tests, Pearson product moment correlation and multiple regression analysis to examine the correlation and effects of age, gender, education, and NPT.



# Results

- Age showed significant correlations with I-BNT, TT, TMT-A and TMT B ( $r = -.15, p < .01$ ;  $r = -.19, p < .01$ ;  $r = .42, p < .01$ ;  $r = .38, p < .01$ , respectively).
- Education also showed significant correlations with I-BNT, TT, TMT-A and TMT B ( $r = -.46, p < .01$ ;  $r = .32, p < .01$ ;  $r = -.34, p < .01$ ;  $r = -.42, p < .01$ , respectively).
- t-test analysis showed that only I-BNT revealed no evidence of difference ( $t(490) = -.66, p > .05, 95\% CI [-1.05, 0.52]$ ), while other tests, that are TT, TMT A, and TMT B showed gender-based differences with males outperformed females in all three latter tests.

# ***Conclusions***

- The current study explored on how age, education and gender effect the normative data of neuropsychological tests among Indonesian healthy adults who live in three big cities in Java.
- Results showed that age and education had significant correlations with the four executive functioning tests.
- t-test analysis showed that gender affect in three NPT (TT, TMT A and TMT B) and did not show any difference on I-BNT.