



## Recent Psychological Changes in Egogram for University Students by Tokyo University Egogram (TEG)

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### Abstract

As a reliable psychological test, Tokyo University Egogram (TEG) 2<sup>nd</sup> has been used widely. TEG was recently revised to TEG 3<sup>rd</sup>. Authors continued TEG research on university students for long, in which results of 2018 by TEG 2<sup>nd</sup> and results of 2019-2022 by TEG 3<sup>rd</sup> were compared. For the 3<sup>rd</sup> revision, FC dominant and AC dominant increased markedly, whereas CP dominant and NP dominant decreased. C dominant pattern showed remarkable increase, which is due to increase of AC dominant and FC dominant. This is a characteristic tendency for late teenagers. Further, mixed types of N-shaped and reverse N-shaped patterns were found.

### Keywords

Tokyo University Egogram, TEG 3<sup>rd</sup> Revision, C Dominant Pattern, Transactional Analysis, Self-Understanding, Mental Health

### Abbreviations

TEG: Tokyo University Egogram; TA: Transactional Analysis

### Introduction

In our medical, psychological and social circumstances, maintaining adequate mental health has been crucial for years [1]. In the light of historical development of psychological practice, the successful research would be transactional analysis (TA). TA was begun by Dr. Berne as one of the novel measures for personality trait theory [2]. It was the evaluation and treatment methods for favorable human communication, and has been called for the egogram. It includes three human egos, including PAC models for parent, adult, and child [3]. Thus, several egogram methods have been born and applied for various

situations so far [4].

Among several egogram methods, Tokyo University Egogram (TEG) has been highly evaluated and prevalent in Japan [5]. Authors and co-researchers have investigated university students for years by using TEG 2<sup>nd</sup> edition, and reported several TEG practices and research for teenagers [6]. TEG has traditionally been used in several fields such as medicine, industry, and education. For medical practice, nursing, welfare and counseling, it is useful for deciding treatment policies. Related patients and clients include various situations in psychosomatic

medicine, psychiatry, mental health, and so on. In the industrial field, it is used for leadership and management development as various training tools. When improving communication skills, it would be beneficial to analyze the current situation and to create an adequate measure that can solve the problems [7]. For the educational field, some purpose can be found, such as analyzing the present state of the class and creating an attractive class. It is useful for student, career, and vocational guidance. Further, it may facilitate mutual relationships with parents and staff at work [8].

It is important to deepen our self-understanding in order to improve our daily and working life. There are various ways to help self-understanding [9]. Among them, taking the most psychological tests would be recommended as an adequate measure [5,10]. The TEG 3<sup>rd</sup> has been highly evaluated for its usefulness with simple performance. It takes only 10-15 minutes to answer and calculate with a convenient method. It can be applied to all adolescents and adults. Recent versions can be also used by the internet [7].

As a reliable psychological test, TEG 2<sup>nd</sup> has been used widely until now. After applying for a longtime, TEG was revised and TEG 3<sup>rd</sup> was presented [7]. Its characteristic would be revision in response to social changes. Authors have already started the workshop on new revision for university students. We show the perspectives of current revisions in this article.

## Subjects and Methods

Authors and collaborators have presented annual lectures and workshops on egogram for students just after the admission of Tokushima University. We have continued this project for about 10 years. For our previous reports, TEG 2<sup>nd</sup> has been used for years, and TEG 3<sup>rd</sup> was applied as a new version during 2020-2022 [7].

The subjects were students who were 18-19 years old, who majored in Science and Technology. They have meaningful opportunities to come to know their own personality traits.

The methods included Tokyo University Egogram (TEG) 2<sup>nd</sup> from 2010-2019, and TEG 3<sup>rd</sup> from 2020 to 2022. For the 3 years of 2020-2022, the total applicants were 147 students. TEG 3<sup>rd</sup> was applied to these applicants, where the workshop for TEG class was smoothly conducted as before. The evaluation and calculation of each subject was performed in a satisfactory manner.

## Results

The results obtained with the previous TEG version TEG 2<sup>nd</sup> and the new version TEG 3<sup>rd</sup> were compared (Table-1). The horizontal axis shows five chronological periods. Data from Tokyo University represent the standard prevalence in Japan. For Tokushima Univ, TEG 2<sup>nd</sup> was applied in 2018, and TEG 3<sup>rd</sup> was applied in 2020-2022. For the vertical axis, 29 categories are observed that are standard egogram pattern of TEG 2<sup>nd</sup>, including dominant type, inferior type, and mixed type. In the current survey, 4 patterns were added to conventional 29 patterns. It was due to the difficulty for categorizing into previous patterns. This situation was found in N-shaped and also reverse N type (Table-1).

Obtained result from both versions of TEG was compared. As to the first five representative dominant patterns, CP dominant and NP dominant decreased, A dominant was to the same degree, and FC dominant and AC dominant increased markedly. For 5 inferior types, elevated prevalence of CP inferior and NP inferior was observed. On the other hand, C dominant pattern showed remarkable increase. It is due to recent increase of AC dominant and FC dominant patterns, that is one of the characteristic tendencies of younger generation.

In recent years, university students have showed some tendency on TEG. Single ego pattern of dominant or inferior type was increased or decreased. On the other hand, mixed types with multiple egos showed remarkably reduced prevalence. When judging the results for egogram, some cases are rather difficult to categorize into certain pattern. They include N-type I and II, N-type II and III, reverse N-type I and II, and reverse N-type II and III.

Table-1: Results of the Egogram types

		Tokyo University	Tokushima University		Tokushima University		
		ver2	ver2		ver3		
		2000s	2018	2020	2021	2022	
Classification of types	Egogram Types	Standard (%)	Students (%)	Students (%)	Students (%)	Students (%)	
Dominant type	CP dominant	3.4	1.2	0.0	4.0	0.0	
	NP dominant	7.7	2.8	4.1	0.0	4.1	
	A dominant	8.1	5.6	4.1	4.0	8.2	
	FC dominant	6.8	6.8	14.3	6.0	26.5	
	AC dominant	6.1	10.0	28.6	24.0	12.2	
Inferior type	CP inferior	2.1	4.0	4.1	12.0	8.2	
	NP inferior	2.8	13.2	4.1	0.0	6.1	
	A inferior	4.8	6.0	8.2	4.0	2.0	
	FC inferior	4.7	1.2	4.1	0.0	4.1	
	AC inferior	3.1	0.8	2.0	4.0	2.0	
Mixed type	Trapezoid	Trapezoid (NP, A, FC High)	3.5	1.6	4.1	0.0	0.0
		Trapezoid (NP, A, High)	1.2	0.4	0.0	0.0	0.0
		Trapezoid (A, FC High)	1.8	2.0	4.1	0.0	2.0
	U-shaped	U Type (NP, A, FC Low)	2.6	6.0	4.1	0.0	0.0
		U Type (NP, A, Low)	1.1	0.8	0.0	0.0	0.0
		U Type (A, FC Low)	1.1	0.8	2.0	2.0	0.0
	N-shaped	N Type I (A Low)	4.1	6.8	0.0	4.0	0.0
		N Type II (NP High, FC Low)	4.1	3.6	0.0	0.0	2.0
		N Type III (A High)	1.8	2.0	0.0	6.0	2.0
	Reverse N	Reverse N I (A High)	4	3.2	0.0	0.0	2.0
		Reverse N II (NP Low, FC High)	3.2	4.4	0.0	0.0	0.0
		Reverse N III (A Low)	1.9	1.6	0.0	2.0	0.0
	M Type		5.5	2.4	2.0	2.0	4.1
	W Type		3.3	6.8	0.0	0.0	0.0
	Flat type	Flat low level Type	1.4	0.4	0.0	0.0	0.0
		Flat middle level Type	7.4	4.4	4.1	2.0	4.1
		Flat high level Type	0.3	0.8	0.0	0.0	0.0
P Dominant		0.9	0.8	0.0	0.0	0.0	
C Dominant		1.1	1.2	4.1	14.0	8.2	
New items for ver3	N-mixed I and II			2.0	6.0	2.0	
	N-mixed II and III			0.0	2.0	0.0	
	Rev-N-mixed I and II			0.0	0.0	0.0	
	Rev-N-mixed II and III			0.0	2.0	0.0	

## Discussion

For decades, mental health for people has been placed more importance associate with various social relationship [11]. Growing environment also influences much for younger generation and teenagers [12]. Furthermore, the development of Information and

Communication Technologies (ICT) may give a large impact for current situation [13]. For maintaining our optimal health, it would be necessary to obtain measure for the body and mind. In the light of bio-psycho-social aspects, self-efficacy and self-affirmation

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would become indispensable factors for psychology, psychiatry, psychosomatic medicine and so on [14]. These matters are involved in each personality trait as well as each egogram pattern [15,16].

A report is observed, where egogram state is related with the improvement of daily lifestyle [17]. As a result, lower Adapted Child (AC) scores may cause decreased coordination for regular activity every day. Consequently, ego functions may interfere with proper self-care behaviour. Egogram has been related to some psychosomatic disorder or diseases. For example, smoking, bronchial asthma and depression are famous factors that affect related pathophysiology among these factors [18]. Personality and character in each person would be one of the constituent important factors for refraining from depressive status [19].

As regards to AC factor, it would be influenced by social and educational environment in Japan [6]. For university students, AC and Free Child (FC) are crucial factors for evaluating egogram and feeling happy days in their lives. Factor C means child aspect. After graduating from high school, they enter university, college or working companies. At this period, they are 18-19 years old and still socially immature [20]. They have campus life and learn much that some selfish acts may disturb group activity leading to some criticism [21]. From these, students with average AC are accustomed to adaptation for personal communication in certain atmosphere. Factor C shows a strong influence to the character and personality trait.

Limitation was found in the current report. TEG 2<sup>nd</sup> and 3<sup>rd</sup> have 29 patterns. In this study, however, 4 additional patterns were described, where they cannot be apparently categorized to previous patterns. Such interpretation may be one of the challenges for future research. Furthermore, it may depend on situation for various subjects and patients with psychosomatic disorders.

In summary, recent topics for TA as psychotherapy were described in this article [4]. For the comparison of TEG 2<sup>nd</sup> and 3<sup>rd</sup>, university students showed stronger expression of AC and FC personality traits with C dominant pattern [17]. The characteristic traits

include dependent, loose, free-spirit and selfishness. Current commentary would become hopefully one of the useful references of egogram research in the future.

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## Conflict of Interest

The authors have read and approved the final version of the manuscript. The authors have no conflicts of interest to declare.

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