Investigation of Useful Revised Psychological Battery, Tokyo University Egogram (TEG)

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Article Info

Abstract

Among some transactional analysis (TA) studies, Tokyo University Egogram (TEG) has been a psychological personal test used for long. Authors and collaborators have continued TEG research for university students by TEG ver2, in which 29 personality traits were reported. Recently, TEG ver3 was developed with some revision. We have compared the results between ver2 vs ver3, where n=462 for 6 years vs n=148 for 3 years. Ver3 showed common 5 types as AC dominant, FC dominant, C dominant, CP inferior, and A dominant (totally 59.4%), while 25% in ver2. Comparing top 8 types resulted ver3 (70.9%) vs ver2 (54.3%).

Keywords: Transactional Analysis (TA); Tokyo University Egogram (TEG); TEG Version 3; Computerized Adaptive Testing (CAT); Big Five personality Traits

Introduction

In our social and medical circumstances, psychology, psychiatry and behavioral science have been important discipline [1]. They may include various stressful matters, that influences personality of each patient and subject [2]. Then, several perspectives will be necessary in the light of character traits, egogram, communication skill and others. From psychological point of view, Berne has proposed novel egogramtheory[3]. It was succeeded to Dusey, who completed the fundamental concept ofegogram, including parent, adult and child (PAC) factors [4]. Consequently,egogram study can contribute human daily life with smooth and adequate communication and relationship from various points of view [5].

Since transactional analysis (TA) was founded by Eric Berne in the 1950s, various psychometric batteries were tried to operationalize TA perspectives[6]. Many reports concerning TA was studied through Medline, PubMed, scholar google.com and others [7]. Out of 12 thousand search, 263 studies were investigated, associated with COnsensus-based Standards for the selection of health Measurement INstruments (COSMIN). Among these reports, Tokyo Egogram (TEG), Adjective Check List (ACL), Life Position Scale (LPS) and others were found to show satisfactory COSMIN quality. Furthermore, TEG, ACL and LPS seemed to be best validated questionnaires for schema mode inventory.

Tokyo University Egogram (TEG) is a personality test developed by the TEG Study Group, Department of Psychosomatic Medicine, Faculty of Medicine, and University of Tokyo[8]. It is based on the TA theory, associated with personality traits and behavioral patterns from the balance of five ego states. Since

TEG was published in the first edition in 1984, TEG has been revised several times [9]. New Edition TEG II was published in 2006, and it has been used for long. It can be used for an opportunity to notice the personality traits and behavioral patterns, which deepen self-understanding. Reliability and validity have been verified and standardized in large samples.

Authors have investigated egogram in various situation [10,11].TEG ver2 was used prevalently, that was presented by Tokyo University [9]. As to the research subjects, we selected mainly university students who were freshmen just after the admission to the university [12]. Recently, a new TEG ver3 was developed by Tokyo University [8](HP). Current version of TEG has some characteristics. It became rather easier to revise and more reliable, and computerized adaptive testing (CAT) was also applied as a new trial [13]. In previous version, the applicant must answer every item in every time, with same weighted item [14]. For characteristic aspect, higher accurate measurements may be performed with less number of items, which leads to decreased burden of respondents [15]. Consequently, TEG ver3 would have strong benefits.Using TEG ver3, we have tried to study university students, and compared the results between previous version and current version. The results and some perspectives are described in this article.

Subjects and Methods

The subjects enrolled for current research were late teenagers who are Tokushima University students. They admitted the Faculty of Science and Technology, Tokushima University, at spring for years. In Japan, annual year starts on early April in every school and company, and then the application of TEG ver3 was

conduceted within 3 months after admission. The cases were 148 cases during 2020-2022.

The methods included the workshop of TEG lectures, and the result of each student was analyzed. The battery used in this research was Tokyo University Egogram (TEG) ver3. TEG has been a reliable test method for egogram in the clinical research for years. TEG ver3 is the new version presented in 2019 [8]. It has totally 53 question, and takes within 10 minutes for answering and about 5 minutes for calculating [16]. When evaluationg the personality trait and character of each person, 29 specific representative patterns have been observed, that was responsive to those of Japanese peopole. TEG ver3 has been evaluated as useful psychological test in social, medical and educational areas.

For comparison with ver3, the characteristic data obtained in the previous study by ver2 was used [9]. TEG ver2 was also convenient similiary as ver3. The number of questions is the same as 53. During the evaluation, the Japanese character traits and personalities were classified into 29 patterns [9].

Results

The research data for TEG project for 1st-year students were summarized in Table 1, which were by ver2 for 6 years and by ver3 for 3 years. TEG ver2 was conducted for 462 cases in 2014-2019, in which the egogram pattern was categorized into 29 types. On the other hand, the ver3 was conducted for 148 cases in 2020-2022, in which the pattern had actually 33 categories. In ver3, four new types were categorized. Current results included additional 4 patterns were found, which were difficult to classify into previous representative pattenrs. Consequently,4 types were categorized separately in this report.

The corresponding types between ver2 and ver3 were shown in (Table 1).

Table 1: Comparion of the egogrampattens between TEG ver2 and ver3.

New Categories of TEG ver3	Ver 2 (No)	Ver2 (%)	Ver 3 (No)	Ver3 (%)	
AC dominant	48	10.40%	32	21.60%	↑
FC dominant	35	7.60%	23	15.50%	↑
C Dominant (FC, AC high)	4	0.90%	13	8.80%	↑
CP inferior	17	3.70%	12	8.10%	↑
A dominant	11	2.40%	8	5.40%	↑
A inferior	40	8.70%	7	4.70%	↓
NP inferior	79	17.10%	5	3.40%	↓
Flat II as middle level	16	3.50%	5	3.40%	
N type mixed I and II	-	-	5	3.40%	*
NP dominant	5	1.10%	4	2.70%	↑
FC inferior	14	3.00%	4	2.70%	
AC inferior	0	0.00%	4	2.70%	↑
N Type III (A High)	10	2.20%	4	2.70%	
M Type	9	1.90%	4	2.70%	
Trapezoidal III (A, FC High)	3	0.60%	3	2.00%	
CP dominant	5	1.10%	2	1.40%	
Trapezoidal I (NP, A, FC High)	2	0.40%	2	1.40%	
U Type I (NP, A, FC Low)	36	7.80%	2	1.40%	↓
U Type III (A, FC Low)	4	0.90%	2	1.40%	
N Type I (NP high, A Low)	26	5.60%	2	1.40%	↓
N Type II (NP High, FC Low)	8	1.70%	1	0.70%	
Inverse N I (NP low, A High)	5	1.10%	1	0.70%	
Inverse N III (A Low, FC High)	12	2.60%	1	0.70%	
N type mixed II and III	-	-	1	0.70%	*
Inverse N mixed II and III	-	-	1	0.70%	*
Trapezoidal II (NP, A, High)	1	0.20%	0	0.00%	
U Type II (NP, A, Low)	11	2.40%	0	0.00%	
Inverse N II (NP Low, FC High)	20	4.30%	0	0.00%	↓
W Type	26	5.60%	0	0.00%	↓
Flat I as low level	11	2.40%	0	0.00%	↓
Flat III as high level ype	4	0.90%	0	0.00%	
P Dominant (CP, NP high)	0	0.00%	0	0.00%	
Inverse N type mixed I and II	-	-	0	0.00%	*
Sum Total	462	100%	148	100%	
Research Years Period in Tokushima University	6 Years 2014-2019		3 years 2020-2022		
Prevalence change from ver2 to ver3	increased value from ver 2 to ver 3 ↑ decreased value from ver 2 to ver 3 ↓ no comparison for no item in ver 2*				

In current results of ver 3, common five types were AC dominant, FC dominant, C dominant, CP inferior, and A dominant. All of these were more frequent in ver3 than in ver2. The total frequency of most common five types in ver3 was 59.4%. In contrast, it showed 25% in ver2. When comparing the top 8 types, ver3 was 70.9% and ver2 was 54.3%. The three most frequent types were NP inferior, AC dominant, and A inferior (total 36.2%) in ver2. On the other hand, ver3 showed AC dominant, FC dominant, C dominant (total 45.9%).

The obtained numerical points of five egos in ver2 were summarized in (Table 2). They show the results of average and standard deviation (SD). The points of CP were under 8.0, and those of other 4 egos were more than 10. Similarly, the results of ver3 were summarized in (Table 3). NP in male was decreased from ver2, and CP in female seemed to be increased from ver2. Points difference may be present for male/female in the egos of CP and NP.

Table 2:Comparion of the egogrampattens between TEG ver2 and ver3.

	Male（n=399）		Female（n=36）	
	Average	St. Dev.	Average	St. Dev.
CP	7.6	3.7	7.8	3.9
NP	11.4	3.8	12.4	3.9
A	10.9	3.9	11.2	3.8
FC	12.0	4.2	12.6	4.1
AC	12.2	3.9	12.6	4.3

Table 3: Points of five egos for Univ.students by TEG ver3.

	Male（n=132）		Female（n=15）	
	Average	St. Dev.	Average	St. Dev.
CP	9.3	4.2	12.7	3.1
NP	9.8	4.5	12.8	5.2
A	14.5	3.5	13.7	5.6
FC	12.4	4.3	12.7	3.7
AC	13.3	4.4	15.5	4.5

Discussion

Ego states represent the energies of the mind that underlie thoughts, feelings and actions psychologically. The egogram has five factors of ego states in the following. They are i) CP (Critical Parent): moral, ethical, dominant, overbearing, idealistic, ii) NP (Nurturing Parent): nurturing, protective, caring, warm, intrusive, iii) A (Adult): objective, realistic, rational, planned, callous, iv) FC (Free Child): active, curious, aggressive, free-spirited, self-centered, v) AC (Adapted Child): cooperative, obedient, dependent, obedient, passive [8].

A research was found, in which regular lifestyle is influenced by egogram situation. Among 5 egos, decreased adapted child (AC) may lead to poor compliance for improved lifestyle. Furthermore, AC may be used for an indicator for the actual efficacy of health education [17]. During studying egograms for years, we have paid attention to AC changes. Japanese people formerly showed common NP-dominant types, where this type would be characteristic for its balanced personality in any working association. After that, A-dominant type has been more prevalent, where social circumstance has changed into rather computerized lives. Furthermore, AC-dominant type as dependent type has been increasing especially for teenagers, which means stronger dependent trait for human-to-human communication.

For transcultural understanding and management, individual personality and character would be important [18]. Regarding this perspective, big fivepersonality traits have been known. They have been explained in the following: i) Extraversion (E): active, talkative, warmth, ii) Agreeableness (A): appreciative, not critical, trust, iii) Conscientiousness (C): efficient, dependable, responsible, competence, iv) Neuroticism (N): anxious, thin-skinned, anxiety, v) Openness (O): artistic, wide range of interests, fantasy. The perspective of egogram may be applied for TA therapy in addition to a monitor for judging therapeutic efficacy by psychosomatic medical practice. TEG has been widely used for a questionnaire. Five factors of TEG were analyzed and compared with big five using Japanese Adjective Check List (ACL)[19]. As a result, Japanese ACL was mutually responsive, but TEG scale lacked a personality trait as extraversion (E). Then, TEG has included not 5 factors but 4 factors, indicating not big five but big four.

Some perspectives and discussion are described. As to Table 1, five common egogram patterns were AC dominant, FC dominant, C dominant, CP inferior, and A dominant, which indicated dependent, free mind, childish, no-restraint and computer-like types. Former 3 types are characteristic for its higher child egos, where these prevalence showed increase from ver2 to ver3. We have continued the research on egogram for more than 10 years, in which general tendency has been changed slowly for years

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[20]. Consequently, these remarkable increase for common 5 types may be not from the acute changes of egogram types, but from the influence of changed TEG methodology from ver2 to ver3.

Regarding Tables 2 and 3, some difference in the average value were observed when comparing the new and old values for each ego. These comparisons are important to develop TEG research. Data are collected from a limited age group of university students who have just entered college at 18-19 years old. The target group is generally uniform and homogeneous group, because they are classmates of majoring in Advanced Technology and Science[10].When TEG ver3 was revised, the question content was changed and apparent rules were attached to the type diagnosis method, which was unlike TEG ver2. In this comparative study between ver2 and ver3, different results were found. Therefore, it is probably not appropriate to mix old and new egogram results. In the future, similar comparative studies on various subjects will be expected. Based on the daily habit situation, various influences of social changes will be involved.

Certain relationship exists between personality trait, character and some diseases, where mutual influence has been known for depression.From research for involvement among depression, asthma and smoking; smoking tends to be encouraged by depressive status [21]. It is because depressive smokers would be careless attitude for smoking problem than non-smokers. Positive attitude for problem solving will prevent depressive status and contribute quit smoking. Eachcharacter or personality would be strongly related with improvement of daily life style situation [22]. University students are in their teens and twenties. They are often waiting for their own turning points. It would be crucial to get an adequate stress-coping method in their student lives. However, it would be almost same because of using typical common method. It would be crucial to cope with such stressors for appropriate manner against each person. To consider each personality trait will bring better stress coping. Consequently, applying TEG would be beneficial for university student to have a satisfactory communication skill and recommended situation in their daily life [23].

This survey has limitations. In addition to the conventional 29 types, 4 types that are difficult to classify have been described. Originally, various factors are intricately intertwined in classification interpretation and cannot be clearly divided. Similar possibilities exist for other patterns in the future. It is expected that the appropriate classification will be gradually resolved as the number of cases accumulates.

In summary, this report showed the relationship of TEG ver2 and ver3 for university students. Several changes may be due to version difference, perspectives of students, lifestyle factors, social circumstances and so on [24]. Multi-factorial aspects will be investigated for further research of egogram. This article will become hopefully a useful reference contributing the development of psychological batteries.

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