

## 121 - PECULIARITIES TYPOLOGICAL OF THE NERVOUS SYSTEM OF ACADEMICS OF PHYSICAL EDUCATION OF BOTH SEXES OF UEPG - PR

MATIOSKI, SILVIA DE LIMA.

Universidade Estadual de Ponta Grossa - UEPG, Ponta Grossa-PR-BR

[E-mail: silk78\\_3@hotmail.com](mailto:silk78_3@hotmail.com)

### INTRODUCTION

To study and to know the individuality of a person consists of placing in relation to all the other individuals in group. Only of this it sorts out this person can be known in their aptitudes, character lines and attitudes. Personality is a scientific construction, elaborated by the psychologists, with the purpose of defining, in the level of the scientific theory, the personality and of working that it characterizes the psychophysiological organism the one that is called human person. This theoretical reconstruction is made starting from the observed behaviors, of the dispositions or inferred lines and of the verified relationships, in way to arrive to a functional group that it explains the human person's different characteristic phenomena. NUTTIN (1969)

For ALLPORT (1966), the personality is the dynamic organization, in the individual, of the systems psychophysics that you determine your behavior and your characteristic thought. The Personality is the integral synthesis of the psychic activities, and it is the man's characteristic attribute. It is difficult to say that a newly born baby has personality, because he doesn't have the characteristic organization of systems psychophysics (the operation of the personality inseparable body and mind). For the author the personality begins in the birth, the baby has a potential personality: it is almost inevitable that right capacities grow. The physicist, temperament and intelligence, in other words, factors organic, psychic, social and cultural, are the matter excels of the personality, although with passing of the years, pass for slow maturation. Among the three, the physicist is it more visibly linked to the hereditariness, but many studies that prove exist that the bases of the temperament, and of the intelligence they are determined also genetically. The alert author that, the three factors, inside of certain limits, they are influenced, during the life, for nutrition, health, disease, ambient. In the structure of the personality, they stand out: the constitution, the temperament, the character and the Me.

The Theory of Pavlov's Temperament or of the Superior Nervous Activity, it tries to distinguish among the multiple diversities of the Human Behavior, similarities and peculiar differences that you/they define with more clarity temperament types. The four nervous systemtypes, identified for PAVLOV (1979), they were classified in agreement with the three basic peculiarities of the central nervous system: the intensity, in this case the nervous system can be Strong or Weak; the balance, which divided in balanced nervous system and unbalanced nervous system and the mobility or the inertia of their processes. In that way, it is possible saying that there are human beings with strong nervous system, piece of furniture, but unbalanced, us which the two processes are powerful, but the excitement prevails about the inhibition, that are the furious ones, according to Hipócrates, excitable and impulsive type. The individuals with the nervous system type strong, balanced, but inert, are the phlegmatic, calm and slow. Soon afterwards the type strong, balanced, skilled, very alive and movable, the sanguine ones. It is finally a type weak, sensitive, delicate, that it corresponds to the melancholic type of Hipócrates.

For KALININE (1994), through the Peculiarities Typological of the Nervous system, it can understand each other the operation of the human behavior. Studious like RODIONOV, IGNATIERRA, PORTNOV, apud OF SILVA (1999); VIATKIN (1978); KALININE & GIACOMINI (1998), they consider as the main Peculiarities of the Nervous system the Force of the Processes of Excitement (FPE), the Force of the Processes of Inhibition (FPI), the Balance of FPE and FPI (E) and the Mobility of the Nervous system (M). According to these authors, these Peculiarities Typological are decisive in the individuals' temperament.

The Force of the Nervous system is one of the basic peculiarities of the nervous system. She characterizes the limit of the capacity of work of the nervous cells of the cortex of the encephalon, in other words, your capacity to support without entering in an inhibition state, the very strong excitement, although not very fort, but with lingering action (PETROVSKI, 1985). System Nerves' Force was discovered and studied by PAVLOV, and one of the basic Peculiarities was considered for the classification of the types of superior activity. TEPLOV & NEBILITHIN (1966), they put that the force of the Nervous system is also characterized by the sensibility of the analyzers, where the weakest Nervous system is more sensitive. Therefore, she is capable to react on the lower intensity incentives than the strong Nervous system. In that way, each type of Nervous system has it positive and negative side (of the Biological point of view), not existing the good and bad types, as if thought formerly.

PAVLOV (1979) and KALININE (1998), they observed and they showed three important characteristics of the Nervous system, that are:

1 - **I** - forces of the Nervous system (characterized by **FPE: Forces of the Processes of Excitement** and **FPI: Forces of the Processes of Inhibition of the Nervous system**). FPE is one of the basic peculiarities of the nervous system. She characterizes the limit of the capacity of work of the nervous cells of the cortex and of the encephalon, in other words, its capacity to support high incentives, without entering in the inhibition state PETROVSKI, (1985). The Force of the Processes of Excitement of the human being's Nervous system is a peculiarity that influences on all the other ones, and it is decisive factor in the process of development of the behavior. For instance, people whose nervous system has high level of the force of the excitement processes are formed, in most of the cases, courageous people, active, been outgoing and self-confident. On the other hand, people that have low level of the force of the processes of excitement of the nervous system, in most of the cases, if they turn introverted, sensitive, little active and little confident MERLIN, (1973).

FPI influences on the human being's behavior and, it characterizes its capacity to be discreet in emotions, conducts, actions and relationships. The inhibition according to PAVLOV apud PETROVSKI (1985), it is a necessary component in the integral activity and of coordination of the nervous system. The inhibition processes together with the excitement processes they assure the adaptation of the organism for the atmosphere, that it is in constant change.

2 - **E: Balance** of the Processes of Excitement and Inhibition (the balance degree between FPE and FPI), E the Balance of the Processes of Excitement and Inhibition that happen in the man's nervous system, is a peculiarity that is revealed by the proportion amongthe excitement processes and of the inhibition processes PETROVSKI, (1985). The notion of balance of the nervous processes was introduced by PAVLOV (1979), and it was considered by him, as one of the independent peculiarities of the nervous system, that forms together with other peculiarities of the nervous system (it forces and mobility of the nervous system) the type of superior nervous activity.

3 - **M: Mobility** of the Processes of Excitement and Inhibition (the speed of changes / substitution of the processes of the excitement for processes of the inhibition and vice turns), M is one of the primary properties of the nervous system, that consists of the capacity to react to the changes of the atmosphere quickly PETROVSKI, (1985). The level of mobility of the excitement processes and inhibition that it happens in the nervous system characterize the easiness to pass of an activity for the other with adaptation speed to the new conditions. People with high level of mobility of the nervous system possess the capacity to change their activities quickly without they lose the reasoning, they manage to do two or more tasks to same PAIM, (2002)

In the last searching years of the area of Differential Psycho-physiology they are trying to analyze the different types of temperaments and lines of personalities, through the "Type of Nervous system", which were nominated and outstanding for PAVLOV (1979) in 4 basic types of Nervous system:

1 - **sanguine**: cheerful; energy and enterprising; it assimilates the new quickly; it supports the defeats easily; it assumes new tasks passionately, speaks loudly, fast and clear; it conserves the self-control in unexpected and complex, sociable situations, and has good resistance and work capacity, if this it interests him/her;

2 - **furious**: impatient; I possessed initiative; sloping to the danger; stubborn; has speech fast, passionate and with accentuated gestures; it is sometimes aggressive; capable to act quickly; it suffers humor change suddenly and doesn't keep bitterness;

3 - **phlegmatic**: passive; careful and controlled; responsible in the enterprises; speech calms and without gestures; constant in their relationships with the people and I possessed difficulties of adapting to new situations;

4 - **melancholic**: shy and retracted; sad and tempered evil; pessimist; gets lost easily in new situations; it doesn't believe in their potentialities; reserved and unsociable; sensitive, gets hurt with easiness, it is sloping to you suspect and doubts.

**METHODOLOGY**

They were part of the sample 118 academics, being 61 subjects female and 57 subject male, with average of 22 year-old age.

As methodological instrument was used the "Questionnaire of Strelau", with the purpose of diagnosing the Peculiarities Typological of the Nervous system (PTSN), measures through the Force of the Processes of Excitement (FPE), it Forces of the Processes of Inhibition (FPI), Mobility (M) and Balance (E).

The data collection was made in the month of April of 2003, in the city of Ponta Grossa -

PR

The "Questionnaire of Strelau", stood out among other methodologies for his/her trustworthy degree  $r > 0,9$ , objectivity  $r > 0,9$  and validity  $r > 0,9$ . This instrument allows to the researcher to know the human beings with temperaments: Sanguine, Furious, Phlegmatic, Melancholic and Middlemen with  $p < 0,05$  (STRELAU, 1982; VIATKIN, 1973). The validation for the Portuguese language, of the "Questionnaire of Strelau", took place by the application of the Russian version and of the Portuguese version in 11 people that dominated both languages. The correlation coefficient was of  $r = 0,94$  with  $p < 0,001$ .

The questionnaire is composed of 134 questions, on several themes related to the daily of each person, always tends as answers for the inquiries the expressions "Yes" or "No."The statistical treatment of the results of the research was analyzed, with methods of the mathematics, parametric statistics (average and standard deviation).

**RESULTS AND DISCUSSION**

The academics' of Physical education of UEPG collected data in comparison with UFSM show us that there are different temperament types, so much for male subjects as for feminine, to follow the numbers for each type of peculiarity typological:

Table 1. Comparative analysis of the peculiarities typological among the academics of Physical education of UEPG - PR and of UFSM - RS, male.

Factors Fatores	UFSM Male Male asculino M		UEPG Male Masculino		~X = X m - X f	~X 100%
	X m	Sm	X f	Sf		
	n = 121		n = 57			
FPE	64,7	10,4	58,5	12,0	6,2**	10,6%**
FPI	64,5	10,8	54,8	12,7	9,7**	17,7%**
M	62,7	10,7	60,4	10,0	2,3	3,8%
E	1,01	0,2	1,09	0,23	- 0,08*	- 7,3%*

Table 2. Comparative analysis of the peculiarities typological among the academics of Physical education of UEPG - PR and of UFSM - RS, female.

Tore Factors	UFSM Female Feminino		UEPG Female Feminino		~X = X m - X f	~X 100%
	X m	Sm	X f	Sf		
	n = 119		n = 61			
FPE	58,7	11,1	53,2	11,1	5,5**	10,3%**
FPI	61,1	10,0	47,6	14,3	13,5**	28,4%**
M	61,6	10,5	59,6	12,8	2,0	3,4%
E	0,97	0,21	1,14	0,4	- 0,17**	- 14,9%**

Obs.: In the tables 1 and 2.

The data marked with (\*\*) they are reliable,  $p < 0,01$ ; The data marked with (\*) they are reliable,  $p < 0,05$ .

The data presented in the table 1 show that the male of UFSM-RS academics of Physical education, they have superior FPE in 10,6%, superior FPI in 17,7% and superior M in 3,8%, however the level of AND of the excitement processes and the academics' of UEPG inhibition is superior in 7,3%.

The data presented in the table 2 show that the female of UFSM-RS academics of Physical education, has superior FPE in 10,3%, superior FPI in 28,4% and superior M in 3,4%, however the level of E of the excitement processes and the students' of UEPG inhibition is superior in 14,9%.

**FINAL CONSIDERATIONS**

Starting from the proposed objectives of investigating, to analyze and to compare the peculiarities typological of academics of Physical education, of both sexes of UEPG - PR with UFSM - RS was ended that:

- The academics male of UEPG present the levels of FPE, FPI and larger M than the academics of the same sex of UFSM, and the E in the academics of UEPG it is larger in 7,3%, characterizing them as stable individuals in their emotions and

reactions.

- The academics female of UEPG present the levels of FPE, FPI and larger M than the academics of the same sex of UFSM, and the E in the academics of UEPG it is larger in 14,9%, characterizing them as stable individuals in their emotions and reactions.

- Is considered with that that can begin a program of aid for the individuals starting from the previous knowledge of the individuals' temperament, so much male as feminine, in the subjects that involve the psychological development of the same ones.

- The results in this study allow to the teachers to collaborate so that there is their students' psychological balance.

#### BIBLIOGRAPHICAL REFERENCES

ALLPORT, G.W. **Personalidade: padrões e desenvolvimento**. Herder. Editora da Universidade de São Paulo: São Paulo, 1966.

GOROJANIN, B. **Psicologia do Corredor de Sprint**. Moscou: Atletismo, 1970, nº 9, p. 17-19. LUNDIN, R.W. **Psicologia da Personalidade**. Rio de Janeiro: José Olímpio Ed., 1979.

KALININE, I. & GIACOMINI, L. C. **Pesquisa da Tipologia dos Atletas de Alto Rendimento no Brasil**. Santa Maria. *Kinesis*, nº 20, p. 69-76, 1998.

KALININE, I. **Polígrafo da Disciplina de Mestrado**. UFSM, 1999.

MARX, M. H. & HILLIX, W. **A Sistemas e Teorias em Psicologia**. São Paulo: Cultrix, 12a edição, 2000.

MERLIN, V.C. **O Esboço da Teoria de Temperamento**. Permh: PEU, 1973.

PAIM, M. C. C. & CANFIELD, J. T. **Relação entre habilidade de Tempo-Compartilhado e tipos de Temperamento de praticantes de futebol**. <http://www.efdeportes.com>, *Revista Digital - Buenos Aires* - Ano 8, N. 48, Mayo, 2002. PAVLOV, I.P. **Coletânea Completa VIII**. Moscou: Academia dos Cientistas, URSS, 1951. **Pavlov: Psicologia**. (Org. Isaías Pessotti). São Paulo: Ática, 1979. PETROVSKI, A. V. **Dicionário Psicológico Breve**. (Org. Karpenko L. A.) Moscou: Politisdat, 1985.

RODIONOV, A. V. **APsicologia das Capacidades Esportivas**. Moscou: Cultura Física e Esportes, 1973.

SAMULSKI, D. **Psicologia do Esporte: teoria e aplicação prática**. Belo Horizonte: Imprensa Universitária/UFMG, 1995.

**Psicologia do Esporte**. Baueri: Manole, 2002.

STRELAU, J. **O papel do temperamento no desenvolvimento psíquico**. Moscou: Progress, 1982.

VIATKIN, B.A. **O papel do Temperamento na atividade esportiva**. Moscou: Cultura Física e Esporte, 1978.

Street Gaspar Bertoni, 415

Rocio I

Palmeira-PR

ZIP CODE 84130-000

Phone: (42) 9982-8538 - (42) 3252-2995 [E-mail: silk78\\_3@hotmail.com](mailto:silk78_3@hotmail.com) Silvia de Lima Matioski

Universidade Estadual de Ponta Grossa-PR

#### PECULIARITIES TYPOLOGICAL OF THE NERVOUS SYSTEM OF ACADEMICS OF PHYSICAL EDUCATION OF BOTH SEXES OF UEPG - PR

##### SUMMARY

It was aimed at with this study to investigate, to analyze the Peculiarities Typological of the Central Nervous system: It forces of the Processes of Excitement (FPE), it Forces of the Processes of Inhibition (FPI), Mobility (M) and Balance (E), of students of both sexes of the degree course in Physical education of the State University of Ponta Grossa - Pr and to compare the characteristic fellow creatures with students of both sexes of the degree course in Physical education of Universidade Federal de Santa Maria - RS. The sample was composed by 118 academics, being 61 subjects female and 57 subjects male, with average of 22 year-old age. As methodological instrument was used the "Questionnaire of Strelau", composed by 134 questions on several themes related to the daily of each person tends always as answer for the inquiries the expressions YES or NOT. With the result of the study it was verified that FPE, FPI, M are superior so much in the male subjects as feminine (academics) of UFSM in comparison with academics of UEPG and the E it is inferior so much for male subjects as for feminine (academics) of UFSM in comparison with academics of UEPG.

**WORD-KEY:** Peculiarities typological, nervous system and temperament.

#### PARTICULARITÉS TYPOLOGIQUE DU SYSTÈME NERVEUX D'UNIVERSITAIRE D'ÉDUCATION PHYSIQUE DE LES DEUX SEXES D'UEPG - PR

##### RÉSUMÉ

Il a été eu l'intention à avec cette étude d'enquêter sur, analyser les Particularités Typologique du système Nerveux Central,; Il force des Processus d'Excitation (FPE), il Force des Processus d'Inhibition (FPI), Mobilité (M) et Balance (E), d'étudiants de les deux sexes du degré courez en éducation Physique de l'Université de l'Etat de Ponta Grossa - Pr et comparer les créatures compagnon caractéristiques avec étudiants de les deux sexes du degré courent en éducation Physique d'Universidade Federal de Santa Maria - RS. L'échantillon a été composé par 118 universitaire, en étant 61 femme des sujets et 57 mâle des sujets, avec moyenne d'âge de 22 années. Comme l'instrument méthodologique a été utilisé le "Questionnaire de Strelau", a composé par 134 questions sur plusieurs thèmes en rapport avec le quotidien de chaque personne soigne toujours comme réponse pour les enquêtes les expressions OUI ou PAS. Avec le résultat de l'étude il a été vérifié que FPE, FPI, le M est si beaucoup supérieur dans les sujets virils comme féminin (universitaire) d'UFSM en comparaison d'universitaire d'UEPG et l'E c'est inférieur si beaucoup car sujets du mâle comme pour féminin (universitaire) d'UFSM en comparaison d'universitaire d'UEPG.

**MOT CLEF:** Particularités système typologique, nerveux et tempérament.

#### LAS PECULIARIDADES TYPOLOGICAL DEL SISTEMA NERVIOSO DE ACADÉMICOS DE EDUCACIÓN FÍSICA DE AMBOS SEXOS DE UEPG - PR

##### RESUMEN

Se apuntó a con este estudio investigar, analizar las Peculiaridades Typological del sistema Nervioso Central,; Fuerza de los Procesos de Excitación (FPE), Fuerza de los Procesos de Inhibición (FPI), Movilidad (M) y Balance (E), de estudiantes de ambos sexos del curso del grado en la educación Física de la Universidad del Estado de Ponta Grossa - Pr y para comparar las criaturas compañero características con los estudiantes de ambos sexos del curso del grado en la educación Física de Universidade Federal de Santa Maria - RS. La muestra estaba compuesta por 118 académicos, mientras siendo 61 hembra de los asuntos y 57 varón de los asuntos, con el promedio de 22 edad año-vieja. Cuando el instrumento metodológico se usó la "Encuesta de Strelau", compuso por 134 preguntas en varios temas relacionados al periódico de cada persona siempre tiende como la respuesta para las preguntas las expresiones SÍ o NO. Con el resultado del estudio se

verificó que FPE, FPI, M son superiores tanto en los asuntos masculinos como el femenino (académicos) es inferior tanto para los asuntos del varón en cuanto al femenino de UFSM comparado con académicos de UEPG y el E (académicos) de UFSM comparado con académicos de UEPG.

**PALABRA-IMPORTANTE:** El typological de peculiaridades, sistema nervioso y temperamento.

#### **PECULIARIDADES TIPOLÓGICAS DO SISTEMA NERVOSO DE ACADÊMICOS DE EDUCAÇÃO FÍSICA DE AMBOS OS SEXOS DA UEPG - PR**

##### **RESUMO**

Objetivou-se com este estudo investigar, analisar as Peculiaridades Tipológicas do Sistema Nervoso Central: Força dos Processos de Excitação (FPE), Força dos Processos de Inibição (FPI), Mobilidade (M) e Equilíbrio (E), de alunos de ambos os sexos do curso de graduação em Educação Física da Universidade Estadual de Ponta Grossa - Pr e comparar as semelhantes características com alunos de ambos os sexos do curso de graduação em Educação Física da Universidade Federal de Santa Maria - Rs. A amostra foi composta por 118

acadêmicos, sendo 61 sujeitos do sexo feminino e 57 sujeitos do sexo masculino, com média de idade de 22 anos. Como instrumento metodológico foi utilizado o "Questionário de Strelau", composto por 134 perguntas sobre vários temas relacionados ao cotidiano de cada pessoa tendo sempre como resposta para as indagações as expressões SIM ou NÃO. Com o resultado do estudo verificou-se que a FPE, a FPI, a M são superiores tanto nos sujeitos do sexo masculino como feminino (acadêmicos) da UFSM em comparação com acadêmicos da UEPG e o E é inferior tanto para sujeitos do sexo masculino como para feminino (acadêmicos) da UFSM em comparação com acadêmicos da UEPG.

**PALAVRAS-CHAVES:** Peculiaridades tipológicas, sistema nervoso e temperamento.