The Social Status Of Judo Athletes

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Abstract

The research aimed to determine the social status structure of male and female judo athletes. In order to determine the social status structure a total of 200 athletes (100 males and 100 females) were examined.

To assess the social status, a model designed by Saksida and Petrovic as well as Appendix INST2 and questionnaire SSMIN (Boli, Popovic, Karanov & all 2015) were applied. All the data in this study were processed at the Multidisciplinary Research Center of the Faculty of Sport and Physical Education, University of Pristina, through the system of data processing software programs DRSAOFT developed by Popovic, D. (1980,1993) and Momirovic, K. & Popovic , D. (2003). The algorithm and program applied in this study are fully presented and the results of this program are analyzed. In order to determine the latent structure of social status of judo athletes, a method of component factor analysis was used. Using component analysis of variables for assessing the social status of judo athletes and applying Momirovic`s B6 criterion, three characteristic roots which can be considered statistically significant were obtained. The total percentage of the explained variability of the applied system of variables is 37.45%. By examining Table

1, it can be seen that the first characteristic root extracts 18.75% of the explained variance, the second - 10.21%, and the third only 8.45%.

Keywords: Judo athletes, social status

Introduction

Modern judo is a dynamic high intensity acyclic activity which, for achieving top results, requires a high level of anthropological dimensions, especially motor abilities accompanied by adequate tactical preparedness. Present-day judo demands that fight flow at a very rapid pace in a relatively short period of time and it abounds in various technical and tactical elements. Thus, judo athletes exhibit a very high level of coordination, speed, power (explosive, repetitive, isometric), flexibility and endurance, especially anaerobic and aerobic. The ultimate goal of combat is victory attained by throwing an opponent using some of the many techniques with dominant movements of the arms, legs, trunk or the entire body. It is reasonable to expect that an activity characterized by a large number of coordinationally very complex techniques implies a high level of intelligence, that is, a high level of cognitive abilities, as in the case of judo.

Judo is characterized by a large number of techniques and their complexity, which requires from athletes acquiring a great deal of information which enables them to perceive the essential elements of the technique to be able to predict the opponent`s intentions and react adequately.

In judo, like in other sports, based on the rich experience and coaching potential, efforts have always been made to discover factors which could contribute to achieving better results. Influence of scientific methods and multidimensional approach to sport activities have played a decisive role in athletes` health preservation and made the way towards achieving better results easier.

Success in sport, including judo, represents the resultant of many components mutually conditioned in a single activity, i.e. the sum of anthropometric, motor, cognitive, conative, functional and other factors as well as social status of athletes.

Social characteristics are characteristics of some groups or social institutions to which a person belongs or with which he or she is associated.

Within the framework of the integral anthropological status in social space, the subjects of most previous studies were related to a person`s position in a social field, or problems of social differentiation, social stratification and social mobility. While the concept of social mobility is relatively clear, the notions of social differentiation and social stratification are often confused and sometimes equated with the notion of class differences. One of the reasons of such a state of things is certainly a lack of adequate cybernetic models on which research on social differentiation would be based.

Knowledge of social status is an important condition in the process of sport selection and development of models on the basis of which the training process is programmed.

The research methods

Sample of respondents

The research was carried out on a sample of 100 male and 100 female promising young judo athletes aged 18 to 27 years in the following clubs: JC "Stara Carsija" Kraljevo, JC "Masinac" Kraljevo, JC "Goc" Vrnjacka Banja, JC "Krusevac", JC "Kinezis" Nis, JC "Nis", JC "Shogun" Nis, JC "Makikomi" Belgrade, JC "Brus-Panikop" Brus. Owing to their ranking at the Serbian Championships, all of them were included into the list of potential representatives to participate in the European and Balkan Championships.

Proceeding from the defined problem, subject, objectives and tasks of the research and taking into consideration the organizational capabilities, an optimal number of respondents were taken to conduct the research correctly and obtain exact results.

Respondents were to meet the following requirements:

- to be on the list of potential representatives of Serbia
- to have no organic and somatic diseases
- to be 18 to 27 years of age.

Ample of social status variables

In order to assess social status, a model developed by Saksida and Petrovic as well as Appendix INST2 and questionnaire SSMIN (Popovic, Stankovic & Boli, 2012, 2014) were applied.

(1,2) What is your father`s / mother`s highest level of education? (EDUF), (EDUM)

(3,4,5) What is your / your father`s / your mother`s level of foreign language knowledge ? (FOLR), (FOLF), (FOLM)

(6) What type of secondary school do you attend? (SECSCH)

(7.8) What is your father `s / mother`s qualification recognized at his/her last workplace? (QUALF), (QUALM)

(9:10) What was your paternal / maternal grandfather`s education? (EDUPGRF), (EDUMGRF)

(11) What was the grade point average in the last year of your schooling? (GPA)

(12) What has been your sport activity to date? (SPORT)

(13, 14, 15) What was the type of place of residence where you / your father / your mother lived until 15 years of age? (PL15R), (PL15F), (PL15M)

(16) What is the type of place of residence of your family? (PLFAM)

(17,18) Are your father and mother engaged as municipal councilors or MPs? (POLITF), (POLITM)

(19) Does your family have …? (FAMHA)

(20) What is the average amount of household waste in square meters per your family member? (WASFAM)

(21) How comfortable is the apartment your family lives in? (APACOMF)

(22) What is your household`s total monthly income? (INCOME)

(23) What sport did you / your father / mother do? (SPORTR), SPORTF), (SPORTM)

Tatistical data processing

The value of a study does not only depend on the sample of respondents and sample of variables, that is, the value of basic information, but also on the applied procedures for transformation and condensation of this information. Some scientific problems can be solved with the help of a number of different, and sometimes equally valuable, methods. However, with the same basic data, different conclusions can be drawn from the results of different methods. Therefore, the problem of selection of certain data processing methods is rather complex.

In order to reach satisfactory scientific solutions, the researchers used, primarily, correct, then adequate, impartial and comparable procedures which corresponded to the nature of the stated problem and allowed extraction and transformation of the appropriate dimensions.

Taking this into account, those procedures were selected for the purpose of this study that corresponded to the nature of the problem, did not leave too large restrictions on the basic information and were based on the assumptions as follows:

- latent dimensions which are the object of measurement by means of the applied measuring instruments have multivariate normal distribution;
- relations between manifest and latent variables can be approximated by the generalized Gauss-Markov-Rao linear model.

Except for Mulaik`s well-known textbook on factor analysis which has something on estimation of reliability of principal components (Mulaik, 1972) and Kaiser and Caffrey`s study in which, based on maximizing the reliability of latent dimensions, their method of Alpha factor analysis was derived (Kaiser & Caffrey, 1965), it seems that producers of different methods of component and factor analyses as well as the authors of books on this class of methods for latent structure analysis were not really concerned about how much the existence of the latent dimensions obtained by these methods can be trusted. This also refers to the latent dimensions obtained by orthoblique transformation of principal components, a method that has become a standard procedure for latent structure analysis among all those who did not acquire information on factor analysis reading seriously written texts from this field with their fingers or analyzed their data by means of some of the commercial statistical software packages, such as, but not limited to, SPSS, CSS, Statistica, BMDP and Statgraphics, not to mention other products whose popularity is much lower, but not always because they are significantly weaker than those almost exclusively misused today by ignorant scientists and a special sort of human beings called a strain of processors.

Though, in a paper which proposes competitive application of semiorthogonal transformation of principal components in exploratory and confirmatory analyses of latent structures, a procedure to assess reliability of latent dimensions based on Cronbach`s strategy for generalizability assessment is presented. But this procedure is as much justified as the assumptions under which Cronbach`s coefficient □ was derived. For unclear reasons, everybody today calls this coefficient by his name, although exactly the same measure was proposed, long before Cronbach and under virtually the same assumptions, by Spearman and Brown, Kuder and Richardson, Guttman, and described, in somewhat simplified form, by Momirovic, Wolf and Popovic (1999) and some other psychometricians who worked in a nascent stage of development of measurement theory and the time which was not affected by the computer revolution.

Therefore, the aim of this study was to propose three measures of lower limit for reliability of the latent dimensions obtained by semiorthogonal transformations of principal components. All the measures were derived within a classical model of decomposition of variance of a quantitative variable. The measures derived from some other measurement theory models will be proposed in one of the next articles. The first measure is an estimate of the absolute lower limit of reliability, and its logical basis is identical to that of Guttman`s measure $\square_{\square}$. The second measure is an estimate of the lower limit of reliability of latent dimensions based on the estimate of the lower limit of reliability of the variables which have the same field of meaning, and its logical basis is identical to that of Guttman`s measure $\square_{\square}$. The third measure was derived assuming that reliability coefficients of the variables under study are known; its value, therefore, depends on the value of the procedures by which these coefficients were calculated or estimated.

Semiorthogonal transformation of principal components

Let Z be a matrix of the standardized data obtained by describing a set E of n entities on a set V of m quantitative, normal or at least elliptically distributed variables. Let R be an intercorrelation matrix of these variables. Assume that matrix R is surely regular and it is possible to reject with certainty the hypothesis that variables from V have a spherical distribution, i.e. the eigenvalues of the matrix of correlations in population P from which sample E was drawn are equal. Let $U^2= (\mathrm{diag}\ R^{-1})^{-1}$ be Guttman`s estimate of unique variances of variables from V, and let$\Box_p$, p = 1,...,m be eigenvalues of matrix R. Let c = trag ($\mathbf{I} - \mathbf{U}^2$). Define scalar k such that $\Box_p^k \Box_p > c$, $\Box_p^{k-1} \Box_p < c$. Now k is the number of principal components of matrix Z defined on the basis of Stalec and Momirovic`s PB criterion Stalec & Momirovic. Let $\Box = (\Box_p)$; p = 1,...,k be a diagonal matrix of the first k eigenvalues of matrix R and let $X = (x_p)$; p = 1,...,k be a matrix of their associated eigenvectors scaled so that $X^tX = I$. Let T be an orthonormal matrix such that it optimizes the function $XT = Q = (q_p)$; p (Q) = extremum, $T^tT = I$ where p (Q) is a parsimonic function, for example, the ordinary Varimax function $\Box_j^m \Box_p^k q_{jp}^4 - \Box_p^k (\Box_j^m q_{jp}^2)^2$ = maximum where coefficients q_{jp} are elements of matrix Q (Kaiser, 1958). Now the transformation of principal components defined by vectors in matrix K = ZX into semiorthogonal latent dimensions determined by the type II orthoblique procedure (Harris & Kaiser, 1964) is defined by the operation m L = KT = ZXT. The covariance matrix of these dimensions is $C = L^tL\ n^{-1} = Q^tRQ = T^t\Box T$. Denote the matrix of their variances by $S^2 = (s_p^2) = \mathrm{diag}\ C$. If the latent dimensions are standardized by the operation $D = LS^{-1}$, their intercorrelations will be in the matrix $M = D^tDn^{-1} = S^{-1}T^t\Box TS^{-1}$. Note that C and therefore M cannot be diagonal matrices and the latent dimensions obtained in this way are not orthogonal in the space of entities from E. The matrix of correlations between variables from V and latent variables, which is commonly referred to as a factor structure matrix, will be $F = Z^tDn^{-1} = RXTS^{-1} = X\Box TS^{-1}$; and as the elements of matrix F are orthogonal projections of vectors from Z onto vectors from D, the coordinates of these vectors in the space spanned by vectors from D are elements of the matrix $A = FM^{-1} = XTS$. But since $A^tA = S^2$, the latent dimensions obtained by this technique are orthogonal in the space spanned by the vectors of variables from Z; the squared norms of the vectors of these dimensions in the space of variables are equal to variances of the dimensions.

Estimates of reliability of latent dimensions

Due to the simplicity and clear algebraic and geometric meanings of both latent dimensions and identification structures associated with these dimensions, reliability of the latent dimensions obtained by an orthoblique transformation of principal components can be determined in a clear and unambiguous manner.

Let $G = (g_{ij})$; $i = 1,...,n$; $j = 1,...,m$ be a permissibly unknown matrix of measurement errors in the description of the set E on the set V. Then the matrix of true results of entities from E on variables from V will be $Y = Z - G$.

If we, in accordance with the classical theory of measurement, assume that matrix G is such that $Y^tG = 0$ and $G^tGn^{-1} = E^2 = (e_{jj}^2)$ where E^2 is a diagonal matrix, the true covariance matrix will be $H = Y^tYn^{-1} = R - E^2$ if $R = Z^tZn^{-1}$ is an intercorrelation matrix of variables from V defined on the set E.

Assume that the reliability coefficients of variables from V are known; let P be a diagonal matrix whose elements □ $_j$ are these reliability coefficients. Then the measurement error variances for the standardized results on the variables from V will be elements of the matrix $E^2 = I -$ □.

Now true values on the latent dimensions will be elements of the matrix □ = (Z - G)Q with the covariance matrix □ = □^{t}□$n^{-1} = Q^tHQ = Q^tRQ - Q^tE^2Q$ = (□ $_{pq}$). Therefore, true variances of the latent dimensions will be the diagonal elements of matrix□□□Denote these elements by □ $_p^2$. Based on the formal definition of reliability coefficients of some variable□ = □ $_t^2$ / □□ where □ $_t^2$ is the true variance of some variable and□ ^{2} is the total variance of that variable, that is, the variance that also includes error variance, reliability coefficients of the latent dimensions will be□ $_p$ = □$_p^2$ / $s_p^2 = 1 - (q_p^tE^2q_p)(q_p^tRq)^{-1}$ $p = 1,...,k$ if reliability coefficients of the variables from which these dimensions are derived are known.

Proposition 1

Coefficients □$_p$ vary in the range (0,1) and can take the value of 1 if and only if □ = I, i.e. if all the variables are measured without error, and the value of 0 if and only if □ = 0 and R = I, i.e. if the total variance of all the variables consists only of measurement error variance and variables from V have a spherical normal distribution.

Proof:

If the total variance of each variable from a set of variables consists only of measurement error variance, then, necessarily $E^2 = I$ and $R = I$ and all the coefficients □$_p$ are equal to zero. The first part of the proposition is evident from the definition of coefficients □$_p$. This means that reliability of each latent dimension, regardless of how the latent dimension is determined, equals 1if the variables from which the dimension is derived are measured without error.

However, matrix of reliability coefficients □ = (□$_j$) is often unknown, so measurement error variance matrix E^2 is also unknown. But if variables from V are selected to represent a universe of variables U with the same field of meaning, the upper limit of measurement error variances is defined by elements of matrix U^2 (Guttman, 1945), that is, unique variances of these variables. Therefore, in this case, the lower limit of reliability of latent dimensions can be estimated by the coefficients $\square_p = 1 - (q_p^t U^2 q_p)(q_p^t R q_p)^{-1}$ p = 1,...,k which are derived using a method identical to that by which coefficients $\square_p$ are derived under the definition $E^2 = U^2$, that is, the same procedure through which Guttman derived his measure $\square_6$.

Proposition 2

Coefficients $\square_p$ vary in the range (0,1), but they cannot reach the value of 1.

Proof:

If R = I, then U^2 = I and all coefficients $\square_p$ are equal to zero. But as $U^2 = 0$ is not possible if matrix R is regular, all coefficients $\square_p$ are necessarily less than 1 and tend towards 1 when the unique variance of the variables from which the latent dimensions are derived tends towards zero.

Applying the same technology, it is also easy to derive measures of the absolute lower limit of reliability of latent dimensions defined by means of this procedure in the same manner as Guttman derived his measure $\square_1$. For that purpose, let E^2 = I. Then $\square_p = 1 - (q_p^t R q_p)^{-1}$ will be measures of the absolute lower limit of reliability of latent dimensions as, of course, Q^tQ = I.

Proposition 3

All coefficients $\square_p$ are always less than 1.

Proof:

It is obvious that all coefficients $\square_p$ are necessarily less than 1 and tend towards 1 when m, the number of variables in the set V, tends to infinity because in this case, every squared form of matrix R tends to infinity. If R = I, then, obviously, all coefficients $\square_p$ are equal to zero. However, the lower value of coefficients $\square_p$ needn`t be zero because it is possible, but not for all coefficients $\square_p$, that variance s_p^2 of a latent dimension is less than 1. Of course, the latent dimension that emits less information than any variable from which it is derived has no sense, and it can perhaps be best discovered based on the values of coefficients $\square_p$. The type $\square_{\square}$ measures (Momirovic, 1999) defined by functions $\square_{\square}$ and $\square_{\square\square}$will be, for the result defined by function h, $\square_{\square\square} = \square^{\square}\square^{\square\square}\square$and $\square_{\square\square} = 1 - \square^{\square}\square^{\square\square}$. It is not difficult to show that, for regular sets of particles, the type $\square_{\square\square}$measures are estimates of the lower limit of reliability of measures of types $\square_{\square}$ and $\square_{\square\square}$, and that the type $\square_{\square}\square$measures are estimates of the upper limit of reliability of measures of types $\square_{\square}$ and $\square_{\square}\square$

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Discussion

Social characteristics are characteristics of some groups or social institutions to which a person belongs or with which he or she is associated.

Within the framework of the integral anthropological status in social space, the subjects of most previous studies were related to a person`s position in a social field, or problems of social differentiation, social stratification and social mobility Hosek & Momirovic. While the concept of social mobility is relatively clear, the notions of social differentiation and social stratification are often confused and sometimes equated with the notion of class differences. One of the reasons of such a state of things is certainly a lack of adequate cybernetic models on which research on social differentiation would be based.

In previous studies, using factor techniques, several first-order social status factors were identified within some subsystems:

socialization subsystem: educational status – the level of an individual`s educational attainment in society, and basic residential status - characteristics of the place where the subject spent his or her childhood;

institutionalization subsystem: professional status - the level of an individual`s expert power or his or her position in a work organization, socio-political status - an individual`s position in socio-political organizations, political orientation;

sanction subsystem: basic-economic status – a family`s net income and household items which are standard in the family, lifestyle - above-average standard of living, and residential status – characteristics of the place where people live.

Only one social status model has been made so far which allows the true scientific approach to the study of the structure of stratification dimensions. The model was constructed by S. Saksida and later used by other scientists as a basis for their studies Saksida & Petrovic. Designed as a phenomenological model, it has undergone several changes overtime, but it has remained appropriate for the study of social changes.

The problem of social differentiation, and especially the problem of social stratification, is associated with several methodological problems of mathematical and statistical nature whose solutions have not or not adequately been found for the simple reason that these problems were not explicitly defined.

In most of the studies carried out in this country, component model-based methods have more often been used in real space than in image space. The latter has proved to be much more suitable. But the difficulties were with the procedures for determining the number of significant image factors. The factor model has been applied very rarely, and not without reason; invariantness of solutions has always been considered an absolute advantage and influenced preference for the component model. The two methods whose logical base is highly consistent with the essence of the problem of the latent structure of stratified dimensions have rarely been used in this country. Of these, Kaiser and Gaffrey`s analysis which maximizes the reliability of isolated latent dimensions is particularly advantageous because in the exploratory phase, in which the study of stratified latent dimensions is at the moment, it is perhaps most important to determine their existence with a sufficiently high degree of credibility.

However, the component model in the Harris space has an absolute advantage and represents the optimal procedure due to its metrics invariantness and true positioning of principal axes which is in accordance with their significance in the common subspace (Harris, 1964; Mulaik, 1972).

Regardless of which method for extracting and transforming latent dimensions is used, the serious problem is whether it is possible, based on actuarial-type status variables, to attribute to latent dimensions the kind of existence attributed to them in other anthropological studies where variables are defined not only with better measurement instruments but also so as to be logically suitable for determining true dimensions. At this moment it is not quite certain whether latent stratification dimensions of only classification category are suitable, and nothing more than that.

Using component analysis of variables for assessing social status of judo athletes and applying Momirovic`s B6 criterion, three characteristic roots which can be considered statistically significant were obtained. The total percentage of the explained variability of the applied system of variables is 37.45%. By examining Table 1, it can be seen that the first characteristic root extracts 18.75% of the explained variance, the second - 10.21%, and the third only 8.45%.

The following variables have the largest projection on the first oblimin factor: respondent`s sport, grade point average, the type of place of his/her childhood, how wealthy his/her family is, etc. The distinctive feature of this oblimin factor is the variables that assess educational status which is subordinate to the socialization subsystem, and here is a lifestyle variable which belongs to the sanction or consequence subsystem. Accepting the real fact that judo athletes as entities realize different roles in different groups during their lifetime, it is becoming clear that the first oblimin factor to which the most important kinesiological reality is given represents the dominant feature of a judo athlete and can be nominated as a factor of social status. Tables 2, 3, and 4.

The second oblimin factor is defined by the variables of lifestyle, economic status, political affiliation which belong to the sanction and institutional subsystems. This latent dimension is bipolar.

The third oblimin factor is explained by the variables which assess the institutional subsystem and variable for assessing residential status, or sanction or consequence subsystem.

This space of judo athletes requires further research using new methods and new instruments for its assessment to enter a deeper and more comprehensive analysis of social status of the treated respondents.

Table 1. Matrix of principal components of social status

	FAC1	FAC2	FAC3	h^2
EDUF	.48	-.26	.23	.36
EDUM	.70	-.01	.33	.60
FOLR	.12	.28	.33	.21
FOLF	.53	-.19	.17	.35
FOLM	.53	-.12	.17	.33
SECSCH	.33	.23	.47	.39
QUALF	.35	-.43	.13	.32
QUALM	.44	-.05	.37	.33
EDUPGRF	.69	-.16	.06	.51
EDUMGRF	.70	-.13	-.02	.52
GPA	.48	-.01	.42	.41
SPORT	.33	-.04	.19	.15
PL15R	.59	.58	-.36	.83
PL15F	.62	.53	-.25	.74
PL15M	.51	.42	-.18	.48
PLFAM	.53	.49	-.35	.65
POLITF	-.14	.04	.18	.05
POLITM	-.00	.11	.08	.02
TVCOMP	.39	-.38	-.27	.38
APASQM	.19	-.48	-.35	.40
APACOMF	-.28	.16	.58	.45
INCOME	.40	-.50	-.49	.67
SPORTR	.14	.16	-.07	.05
SPORTF	-.08	.50	.09	.27
SPORTM	-.10	.36	-.18	.17
Charact.root	4.88	2.65	2.19	
%Variance	18.79	10.21	8.45	
Cumulat.%	18.79	28.95	37.45	

Table 2. Matrix of social status pattern

	OBL1	OBL2	OBL3
EDUF	.04	.06	.00
EDUM	.59	-.07	-.08
FOLR	.73	.17	.08
FOLF	.21	.09	.40
FOLM	.56	.04	-.10
SECSCH	.54	.09	-.06
QUALF	.47	.09	.43
QUALM	.48	-.20	-.24
EDUPGRF	.57	-.01	.15
EDUMGRF	.60	.19	-.21
GPA	.55	.27	-.25
SPORT	.62	.01	.20
PL15R	.38	.03	.04
PL15F	.02	.91	-.05
PL15M	.13	.82	-.00
PLFAM	.13	.66	.00
POLITF	.01	.80	-.09
POLITM	-.00	-.13	.20
TVCOMP	.01	.03	.13
APASQM	.24	.05	-.54
APACOMF	.08	-.07	-.61
INCOME	.10	-.32	.61
SPORTR	.15	.09	-.78
SPORTF	.00	.22	.00
SPORTM	-.16	.27	.40

Table 3. Matrix of social status structure

	OBL1	OBL2	OBL3
EDUF	.05	.07	.00
EDUM	.59	.02	-.15
FOLR	.75	.30	.02
FOLF	.18	.14	.38
FOLM	.58	.13	-.15
SECSCH	.56	.18	-.11
QUALF	.44	.19	.39
QUALM	.47	-.13	-.30
EDUPGRF	.56	.09	.09
EDUMGRF	.66	.29	-.26
GPA	.62	.35	-.30
SPORT	.60	.12	.14
PL15R	.38	.10	.00
PL15F	.18	.91	-.02
PL15M	.27	.85	.01
PLFAM	.24	.68	.02
POLITF	.16	.80	-.05
POLITM	-.04	-.12	.19
TVCOMP	.00	.04	.13
APASQM	.31	.07	-.56
APACOMF	.13	-.08	-.62
INCOME	-.01	-.28	.58
SPORTR	.24	.09	-.79
SPORTF	.04	.22	.01
SPORTM	-.16	.26	.43

Table 4. Oblimin factor intercorrelations

	OOBL1	OBL2	OBL3
OBL1	1.00	.17	-.10
OBL2	.17	1.00	.04
OBL3	-.10	.04	1.00

Conclusion

The research aimed to determine the social status structure of male and female judo athletes. In order to determine the social status structure a total of 200 athletes (100 males and 100 females) were examined.

To assess the social status, a model designed by Saksida and Petrovic as well as Appendix INST2 and questionnaire SSMIN (Boli, Popovic, Karanov & all 2015) were applied.

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The algorithm and program applied in this study are fully presented and the results of this program are analyzed.

In order to determine the latent structure of social status of judo athletes, a method of component factor analysis was used.

Using component analysis of variables for assessing the social status of judo athletes and applying Momirovic`s B6 criterion, three characteristic roots which can be considered statistically significant were obtained. The total percentage of the explained variability of the applied system of variables is 37.45%. By examining Table 1, it can be seen that the first characteristic root extracts 18.75% of the explained variance, the second - 10.21%, and the third only 8.45%.

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