DIMENSIONS OF KARATE MAN PERSONALITY AS PREDICTORS OF LIFE SATISFACTION

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Abstract. The main goal of the research was to identify significant relations between dimensions of personality and life satisfaction. The representative sample of 137 examinees (65 female and 72 male juniors (seniors)) aged 11-17 was tested by International Personality Item Questionnaire (IPIP50) and Life Satisfaction Scale. Results of the coefficient of reliability (Cronbach α) point at satisfactory psychometric characteristics of applied tests. The results of t-test showed statistically significant gender differences in result distribution among the examinees at five variables of personality dimensions: extroversion, amiability, conscientiousness, neurotic behavior and intellect. Significant linear correlations of low intensity (positive direction) were defined between the variables of personal characteristics (extroversion, amiability, conscientiousness, and intellect) and the association of neurotic behavior variable (negative direction) and life satisfaction variable. The results of multiple regression analysis defined: I) statistically significant linear correlation of low intensity between the variables of personality dimensions and life satisfaction, II) predictory variable (dimensions of personality) explain 36% of the proportion of mutual variance of criterion variable (life satisfaction) and III) beta-coefficients of independent variable of extroversion (β=.24; p<.01) and conscientiousness (β=.19; p<.01), have positive significant influence on total variability of criterion, whereas beta-coefficient of neurotic behavior has significantly negative role in life satisfaction variable prediction (β=-.35; p<.01).

Key words: five-factor model of personality, questionnaires, karate player, predictor, life satisfaction.

INTRODUCTION

In recent decades, scientists have been exploring: a) hierarchical five dimensional structural personality model, or in other words its five basic "big" dimensions of extroversion, pleasance, conscientiousness, neuroticism and intellect (Goldberg, 1990;
McCrae and John, 1992) and b) life satisfaction, as integral part of subjective welfare concept, which considers general tracing of its cognitive and emotional components, i.e. its relations between individual differences of experience frequency of positive and negative emotions (Costa and McCrae, 1980). So, five dimensional personality theory considers five primary factors located in the highest abstraction level, which involves noticeable number of different characteristics, while the life satisfaction is achieved with the help of satisfaction of basic needs, which lead us to happiness, welfare, and vice versa since the continuous dissatisfaction of needs lead us to the feeling of discontent.

Whereas the sportmen are equal, considering the elements of sport preparation (condition, ethnic, tactic, etc.), the psychological factors more often have the dominant influence on the competition results. Therefore, in recent years the psychological sportmen components are of great importance, as the relevant factor of sport success. Taking into consideration the role of psychological factor for the sportmen success in the situational conditions, the writer of this research wanted to elucidate mutual relationship between the basic dimensions of karate man personality, as crucial predictory variable capacities of life satisfaction.

Previous researches proved that the interactions between personality and life satisfaction dimensions exist. According to the research of Costa and McCrae the basic personality features include the classification of normal and pathological cognitive, affective and behavioral personality traits, i.e. represent especially significant variation generator of welfare feeling.

According to Eysenck's research, the neuroticism dimension considers the steady shape of emotional (un)conformity and (in) stability. People, who have this dimension expressed, have the tendency to anxiety, negative emotional experience, soreness, feeling of guilt, fear, sadness, etc. This kind of behavior encumbers, or in other words prevents the accomplishment of normal relations with other people and causes unfruitful results while facing with the stressing situations. These people can be encumbered by illogical thoughts, they are inclined to impulsive excesses and minimal tolerance towards frustration.

Eysenk defines extroversion as dimension, which focuses on the direction of the sociability and warmth, and some characteristics of the temperament (activeness, seeking for excitement and positive sensitivity). Leadership, friendship and great energy are the characteristics of the extroverts.

Comfort dimension at certain point concurs with extroversion. But, compared to the extroversion, which includes sociability and desire for contacts, comfort includes the characteristic of communication between people, ranging from delight of someone's feelings to rejection. Positive dimensional comfort rate is identified in altruism (benevolence and effort to help others), moderation in demands, alertness and sincerity. Egocentrism, dislike and unfaithfulness to others are located on the negative side of comfort, by the open research of the cooperation unwillingness (Eysenk, 1994.).

According to the Eysenck's research, conscientiousness dimension contains three components: 1) the lack of impulsiveness and spontaneity, as well as alertness and acuteness, 2) tidiness and organization, 3) studiousness and perseverance. The positive aspect of this dimension is educational and business success, while its negative aspect is manifested through the compulsive behavior.
According to the Simic, S.’s and Saric I.’s (2004.) research, *intellect* or *experience openness* includes intellectual and artistic interest, active imagination, need for appliance, dependency of judgment and inner feelings steer. Fantasies, ethic, feelings, actions, ideas and values are parts of this factor.

The most intensive and solid linear personality correlations and welfare components are located in the extroversion and neuroticism dimension (Costa and McCrae, 1980), or in pleasance dimension (DeNeve and Cooper, 1998; McCrae and Costa, 1991) and in conscientiousness dimension (McCrae and Costa, 1991). Neuroticism is connected to anxiety, nervousness, and extroversion with the positive affect (Izard, 1993).

Costa and McCrae (1980) assume that extroversion and neuroticism influence subjective welfare through positive or negative emotions, i.e. that extroverts compared to introverts experience positive emotions with greatest probability. According to research of these authors, if we compare emotionally stable personalities with emotionally unstable individuals it is more likely that latter experience negative emotions.

According to the De Neve's and Cooper's (1998.), and McRae's and Costa's (1991.) research, conscientiousness is connected to the subjective welfare, for example, through the stress decrease, which is caused by the undone tasks.

Shimack and collaborators (2004.) researched the influence of the personality model to the life satisfaction indicator since the life satisfaction involves different positive and negative emotions, throughout which every individual evaluates its own life. They deduced that the neuroticism is in the correlation with the anxiety, nervousness, sadness displeasing emotions, etc, so the extroverts have positive emotional component of the introverts. On the contrary, compared to the emotionally stable people, for whom the gusto and satisfactions are the basic principles and meaning of their life, neurotics have more negative hedonistic component. Therefore, ones who are emotionally stable evaluate their life as more satisfying.

Subjective authentic welfare was subject of Diener's, Lucas' and Socollon's (2006.) psychology research. Current literature implies that the feeling of happiness is not stable but changeable depending on the concrete objective conditions, such as life satisfaction, pleasant and unpleasant emotions and suchlike (Easterlin, 2001; 2005.).

According to King's, Napa's (1998.) and Shimack and collaborators' (2004.) research, today we have relatively little information about people's happiness, which consider positive experience, such as life satisfaction and positive feelings. Previous research of this psychological feature determined that the principal life satisfaction evaluation, tested on the scale of satisfaction, has relatively positive connection, and negative correlation with negative emotional component (Pavot and Diener, 1993.). In addition to this, the same authors also deduced that health and marital status, on the highest level, positively correlate with *life satisfaction* variable. Furthermore, using the regression model algorithm, we came to the conclusion that demographic factors, sex, income, race, level of education and marital status, interpret about 20% of personal welfare variance and thus the personality dimensions symbol the most significant life satisfaction determinant (Eddington, 2004.).

Most of the previous research, according to the different samples and age of the examinees, showed the results of the disagreeable relation findings of personality characteristics and life satisfaction.

It is of great importance that this phenomenon should be examined for the correlation-regression relations between the personality dimensions and cognitive *life satisfac*
tion component in sport population haven't been located in the previous research. So, the basic problem of this research can be reduced to the question of connection existence, structure relation personality sportsmen (younger senior) dimensions and self-evaluation life satisfaction in karate, the popular fighting sport.

**Method**

**Aims and study hypotheses**

According to the problem of the research and insight into the referent literature, the general aim, directed to the statistically significant validation of relation (intensity and direction) between predictory variable groups of personality dimensions (extraversion, conscientiousness, pleasure, neuroticism and intellect) and criterium life satisfaction variable of karate population (younger seniors), was identified in this empirical research.

**Special aims** of this research are:

1) reliability checking of applied Questionnaire for personality characteristics self-evaluation (IPIP50) and Scale for life satisfaction self-evaluation
2) on one side, determination of correlative relationship between personality characteristics variable and life satisfaction variable, on the other
3) establishment of group connection predictory personality characteristics variable and criterium life satisfaction variable, as well as relative contribution of some predictors to criterium.

Keeping in mind the aims of the research and the previous studies, the general hypothesis (H) was set, according to which statistically significant correlation between predictors (personality dimensions) and criterium (life satisfaction) is expected.

According to the general hypothesis, the three alternative hypotheses were determined and defined in this work in the following way:

- **h1** – According to the alpha coefficient, the high internal reliability of applied Questionnaire for personality characteristics self-evaluation (IPIP50) and Scale for life satisfaction self-evaluation, are expected.
- **h2** – The significant linear correlation between most of the personality characteristics variables and life satisfaction variable is expected
- **h3** – The group predictory personality characteristics variables connection with criterium life satisfaction variable, as well as partial significant influence of some predictors to criterium, is expected.

Hypotheses and coefficient testing will be determined by the help of critical values (p<0.01; p<0.05).

**Examinees sample and procedure**

Appropriate examinees sample consisted of 126 karate men (younger seniors), being 18-20 years-old and members of karate club "Shodan" from Valjevo (X=19.2 decimal years; σ=1.81).

The examination had been anonymously executed, and also had been conveyed in small groups (of 30 examinees), in sports hall, before the beginning of the training. Firstly the karate men were informed about the research, and then they were asked to
participate in it. Questionnaire and scale fulfillment was conducted during the February of 2009, and it lasted 45 minutes.

**Measuring instruments**

In this empirical research, the two measuring instruments were applied: a) particle version of International Personality Item Pool (IPIP) scale and b) Self-evaluation life satisfaction scale.

*Evaluation personality dimension questionnaire* consists of 50 determinants. Each of 5 personality dimensions (extraversion, pleasure, conscientiousness, neuroticism and intellect) has 10 items. Examinee was to mark the number, which responds to his self-description on the five degree scale (1-I do not agree; 5-I totally agree), for every assumption.

*Life satisfaction evaluation scale* was structured from 5 assumptions. On the seven degree scale of Linker's type (1- completely wrong; 7-completely true), examinee was to evaluate up to which point the given assumptions referred to him. For example, my life is very close to that, which I find ideal. The total result on the scale represents summation of all five assumptions results, which indicate to the level of his life satisfaction. Thereat, the higher values indicate to the higher life satisfaction. The questionnaire has acceptable metrical characteristics.

**RESULTS**

Measuring instrument-questionnaire reliability for personality self-evaluation (IPIP50) was determined by **Cronbach-alpha coefficient**, table 1. Using the statistical analysis we can perceive satisfying values, which vary in range of ($\alpha=.78$) to ($\alpha=.91$), and indicate high and equable internal measuring instrument reliability, or in other words to sign that each and every particle measures the same hypothetical construct, as well as the whole questionnaire.

Table 1 Arithmetic mean, standard deviation, alpha coefficient and Colgorm's-Simironov's normal distribution personality dimension z-value

<table>
<thead>
<tr>
<th>Variable</th>
<th>$\bar{X}$</th>
<th>$\sigma$</th>
<th>Cronbach-Alpha (A)</th>
<th>C-S</th>
<th>Z</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>31.4</td>
<td>5.92</td>
<td>0.91</td>
<td>.601</td>
<td>.814</td>
<td></td>
</tr>
<tr>
<td>Pleasure</td>
<td>35.4</td>
<td>6.24</td>
<td>0.87</td>
<td>3.66</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>Conscientious</td>
<td>37.2</td>
<td>6.23</td>
<td>0.85</td>
<td>2.93</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>Neuroticism</td>
<td>29.8</td>
<td>7.13</td>
<td>0.90</td>
<td>.524</td>
<td>.711</td>
<td></td>
</tr>
<tr>
<td>Intellect</td>
<td>37.5</td>
<td>4.96</td>
<td>0.78</td>
<td>.621</td>
<td>.677</td>
<td></td>
</tr>
</tbody>
</table>

For the purpose of the approach to the appliance of parameter statistical usage in data processing in the further interpretation, it is inevitable to verify if variables are normally or at least symmetrically distributed. For that purpose, the applied normality distribution data **Colgorm's-Simironov's test** proves that for most of the self-evaluation personality characteristics Questionnaire values (IPIP50) do not exist the statistically significant difference between theoretical (ideal) surface, beyond the distribution function, and the one which was achieved according to the results of this measurement (table 1). On the other hand, scores of the Z-normality distribution coefficient of the two variables, pleasure
(Z=3, 66; p<.003) and conscientiousness (Z=2, 93; p<.002), indicate that their frequency (result's) distribution significantly differ from the standard Gauss' curve. Nevertheless, it can be established that the differences between theoretical and empirical surfaces beyond the function of Gauss' distribution are not big and thus, the parametrical analysis can be continued.

Table 2 Arithmetic mean and standard deviation on the life satisfaction Scale

<table>
<thead>
<tr>
<th>Variable</th>
<th>(\bar{X})</th>
<th>(\sigma)</th>
<th>K-S Z</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life satisfaction</td>
<td>25.14</td>
<td>5.97</td>
<td>2.52</td>
<td>.02</td>
</tr>
</tbody>
</table>

Table 2 consists of the Kolmogorov-Smirnov's normality distribution data test results. Insight of the matrix third cell shows that the frequency item distributions on the second measuring instrument, on the self-evaluation life satisfaction scale, do not significantly differ from the Gauss' theoretical frequency result's distribution (Z=2.52; p<.002). According to the Sable's (2005.) researches, the high value of Cronbach-alpha coefficient (\(\alpha=.79\)) was achieved for the reliability of this measuring instrument.

**Correlation analysis** results are given in the table 3. Algorithm of the linear model was calculated in the matrix correlation cells of the **statistically significant and positive linear correlation coefficients** (which differ from zero), between personality dimension variable (extraversion, pleasance, conscientiousness and intellect) and life satisfaction variable, by the level of statistical conclusion (p<.05). Insight into the matrix of the tested personality dimension model shows that statistically significant law intensity inter correlations are visible, as well as the fact that variables- which come from the domain of extraversion personality with its positive course (r=.29) on one hand, and neuroticism with its negative course (r=-.27) on the other- most contribute to the mutual dependence of criterion life satisfaction variable.

Table 3. Intercorrelations of personality and life satisfaction variable dimension

<table>
<thead>
<tr>
<th>Variable</th>
<th>Life satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>.29</td>
</tr>
<tr>
<td>Pleasance</td>
<td>.19</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>.20</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>-.27</td>
</tr>
<tr>
<td>Intellect</td>
<td>.25</td>
</tr>
</tbody>
</table>

*p<0.01*

Multiple regression analysis results of personality and life satisfaction dimensions are given in the table 4. According to the regression analysis, it is perceived that the regression model is statistically significant on the level of signification (p<.01). Level of the multiple correlation model (R=.66), between the predictory personality and life satisfaction criterium dimension variables, implies to the high intensity and positive correlation of criterium variable and predictory group. Analysis of the multiple determination coefficient value (R²=.37) highlights that predictory system emits sufficient significant information, according to which 37% of mutual criterium variable variability proportion can be explained.
Table 4. Multiple regression analysis of (predictory) variable personality characteristics and criterium "life satisfaction" variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>Beta–coefficients (ß)</th>
<th>P-level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>.37</td>
<td>&lt;.03</td>
</tr>
<tr>
<td>Pleasance</td>
<td>.21</td>
<td>.18</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>.21</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>-.31</td>
<td>&lt;.02</td>
</tr>
<tr>
<td>Intellect</td>
<td>.19</td>
<td>.17</td>
</tr>
</tbody>
</table>

R = .66     R² = .37   P < .01

Insight into the matrix of standard partial regression beta coefficient values and their statistically significant p-value, shows that two predictory variables: *extraversion* (ß=.37; p<.03) and *conscientiousness* (ß=.21; p<.01), have positive correlation course and statistically significant partial income compared to the total variability of criterium variable. Contrary to the achieved positive beta coefficient sign marks, the interesting statistically significant negative univariant income from the criterium calculation was noted with the predictory *neuroticism* variable (ß=-.31; p<.02).

**DISCUSSION**

Analysis of the both applied instruments, the self-evaluation personality Questionnaire (PIP50) and the self-evaluation life satisfaction Scale, show that both of the instruments have expectedly high interconsistency. On the metric aspect, the analyzed metric variable space from the personality domain has satisfactory high statistical reliability and exactness of measuring results. Therefore, the high Cronbach- alpha inter consistency coefficient, hypothetically indicates that with the help of a new research the identical results would be achieved.

Resuming the achieved values of Cronbach-alpha coefficient, the tested alternate hypothesis (h1) was confirmed.

Calculated Colgorm's-Simironov's personality characteristics z-values variables indicate that most of variable vectors (extraversion, neuroticism and intellect) statistically do not differ from Gauss' distribution. However, this normality distribution test stresses the fact that the distribution of frequency results on the scale of life satisfaction minimally varies from the Gauss' theoretical distribution, which, hypothetically, enables the further parametrical analysis.

Attempting to explore intercorrelation between personality characteristics and life satisfaction, the interesting results were achieved. According to the significant correlation coefficient sign marks and analyzed variable results, which are very similar in intensity, the characteristic adequacy extents were determined. Correspondingly, the highest positive values of calculated extraversion and life satisfaction correlates most probably highlight the following correlation aspects: the linear increment of extraversion variable values correspond to the proportionally higher value of life satisfaction variable. On the other hand, negative linear correlation between neuroticism and life satisfaction variables, indicates to the fact that neuroticism variable increment is followed with the value decrease of the life satisfaction variable, and vice versa. Achieved correlations between
personality (neuroticism) and life satisfaction dimension are similar to the results of former researches (Costa and McCrae, 1980; Shimack, 2004).

After the found analysis, the conclusion, that the applied correlation analysis confirmed that the tested alternative hypothesis (h2) can be accepted, was made.

Multivariate linear regression analysis deduced high, statistically positive, mutual relationship of predictory variable group and criterium life satisfaction variable. Hypothetically, that indicates to the higher predictory exactness of their mutual relationship, for the results are less scattered around the regression course. Moreover, the linear regression model also determined the fact that analyzed personality characteristics explain 36% of mutual life satisfaction variability proportion. In that context, residual sum of square exception to 64% of criterium proportion arithmetic average, probably also involves the other unrehearsed psychological co variables, which were not the object of this empirical research. Nevertheless, regression aspect of predictory personality characteristics income should be accepted only partly, for the explained variance percentage, although statistically significant, is relatively low.

The achieved linear regression model results confirmed tested general hypothesis (H) and tested alternative hypothesis (h3), which were installed in this research.

The interpretation of achieved nonzero and positive relevant standard partial regression beta coefficients draws attention to the fact that the dimensions of tested personality model (extraversion and conscientiousness) are the best positive predictors of life satisfaction variance, whereas the independent neuroticism variable is negative predictor of life satisfaction variable. The result of the most dominant extraversion predictor is in accordance with MacDonald's concept (1998.), who supposes that this personality characteristic is also the most important behavior base. The results of the standard partial regression beta coefficients obviously confirm the tested alternative hypothesis (h3).

* * *

The quantitative results of the research, which analyzes influence of the tested personality dimension model and life satisfaction indicator on the sample of both female and male non-sportsmen examinees, who are from 21 to 35 years old, draw attention to the fact that extraversion, conscientiousness and neuroticism outshines as life satisfaction variability predictors, which is in accordance with the results, presented as the problem of the previous research. Nevertheless, the disequilibrium of presented sample and former researches represents the deficiency, which disables the comparison, interpretation and generalization of researched results. This points out that the need for gender differences should be examined in details, in the further longitudinal researches on the bigger sportsmen sample, as well as cognitive, emotional and physiological mechanism, by which the personality karate men dimensions affect the life satisfaction variability. In that case, the competent answers to the complex theoretical and practical questions, posed in this study, will be given.

One of the basic limits, concerning the researched sample, is the fact that the research was conducted on just one sport discipline and one gender (karate men), so the results can not be generalized to the overall sportsmen population. So the reference is to include the both male and female examinees from other sports, in the further researches.
CONCLUSION

According to the applied methodology, in this empirical research, the following conclusions were drawn:

1. Self-evaluation personality dimensions Questionnaire (IPIP50) and the self-evaluation life satisfaction Scale presents the reliable measuring instruments, which means that their measuring subject is well defined.

2. Most of the personality dimensions and frequency distribution on the life satisfaction Scale do not statistically and significantly differ from the Gauss’ theoretical distribution.

3. The significant positive low intensity and positive course linear correlations between all applied variables of tested personality dimension model and life satisfaction variable, except the negative association neuroticism variable, were defined.

4. Statistically significant linear correlation of high intensity and positive course between the predictory variables, from the domain of personality and life satisfaction variable criterium, was identified, so the predictor explains 36% of mutual variability criterium proportion. Regression results suggest that independent extraversion and conscientiousness variables have significant positive partial contribution to the successful prediction of total criterium variability, while the neuroticism predictor has negative relevant share in dependant life satisfaction variable prediction.

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In the end, in spite of the relatively little sample of examinees, we can draw conclusion that this initial research identified up to now unexamined relations between the tested personality karate man (younger seniors) dimensions model and their life satisfaction self-evaluation, which enables the successful diagnose, programming and control of the given psychological components on the karate men population.

REFERENCES

Cilj ovoga istraživanja usmeren je na identifikovanje relacija između dimenzija ličnosti i indikatora zadovoljstva životom. Odgovarajući uzorak ispitanika od 126 karatista (mladi seniori), uzrasta od 18 do 20 godina, testiran je Upitnikom za samoprocenu ličnosti (McCrae i Costa, 1991) i Skalom zadovoljstva životom (Pavot i Diener, 1993). Rezultati Krombach–alfa koeficijenata ukazuju na zadovoljavajuću pouzdanost primjenjenih instrumenata. Utvrđene su značajne interkorelacije niskog intenziteta (pozitivnog smera) između varijabli crta ličnosti (ekstraverzija, prijatnost, savesnost i intelekt) i asocijacija varijable neuroticizam (negativnog smera), sa varijablom zadovoljstvo životom. Nalazi višestruke regresione analize ustanovili su: I) statistički značajan pozitivnu linearnu korelaciju, visokog intenziteta, između varijabli dimenzija ličnosti i zadovoljstva životom (R=,66; p<,01) , II) prediktorske varijable (dimenzije ličnosti) objašnjavaju 36% proporcije zajedničke varijanse kriterijuma zadovoljstva životom i III) značajan pozitivni doprinos u predviđanju zavisne varijable zadovoljstva životom ima dimenzija ličnosti neuroticizam (β=,.35; p<.01). Dobijeni rezultati upućuju na to da se na osnovu testiranog modela dimenzija ličnosti karatista može uspješno izvršiti predikcija zadovoljstva životom. Praktične implikacije dobijenih rezultata sastoje se u dijagnostifikovanju, planiranju, programiranju i kontroli navedenih psiholoških komponenti tokom trenućnih procesa.

Ključne reči: petofaktorski model ličnosti, biološki pol, karatisti, predиктор, zadovoljstvo životom.