

Research Articles

Empirical Study of Personality and Well-Being

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Abstract

Nowadays, in psychological science, health is regarded as a multidimensional construct, which comprises not only the negative aspects of human existence but also the positive mental functioning and well-being of human being. In this context, the article herein aims at exploring the interrelationship of temperament and character with the subjective well-being of Bulgarians. The results obtained in the presented study of 443 persons from Bulgaria (men and women aged 18 to 65 $M = 34.35$, $SD = 5.046$) indicated that there was a statistically significant influence of the predictors: Self-Direction, Self-Transcendence, Positive and Negative Affect on Life Satisfaction. A significant influence was found about some predictors as Novelty Seeking, Harm Avoidance, Persistence, Self-Directedness and Self-Transcendence on Positive Affect. Finally, a significant influence was found of the predictors: Harm Avoidance, Self-Directedness and Self-Transcendence on Negative Affect.

Keywords: Well-being, Mental health, Personality, Temperament, Character

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Well-being is at the heart of a lot of scientific studies about health, morbidity and life expectancy, like the ones conducted by [Cloninger and Zohar \(2011\)](#), [Zankova \(2015\)](#), [Stoyanova, \(2015\)](#), etc. Two reasons account for the great research interest in this area. Firstly, positive mental functioning at an early stage of life explains satisfactory old age and life expectancy ([Shmotkin, 1991](#)). Secondly, the assessment of one's own well-being preconditions the results which will follow and the development of one's life, regardless of any objective variables, such as income and absence of disease ([Shmotkin, 1991](#)).

Well-being is a diverse subject and the focus of study for many disciplines such as psychology, philosophy, sociology and theology. The notion of mental well-being originated in the 1950s in response to a demand for indicators to measure the healthy way of life, the need to trace social changes ([Löckenhoff et al., 2008](#)).

There are many definitions of subjective well-being. On the one hand, the notions of well-being, happiness and satisfaction are partially used as synonyms; on the other, the need for a strict distinction between them is pointed out ([Diener & Tov, 2012](#)).

As early as 1967, based on his studies of happiness, [Wilson \(1967, p. 294\)](#) defined the happy person as of younger age, without diseases, educated, married, paid, outgoing, positive, highly intelligent, who does not get upset, self-confident, diligent, medium ambitious, man or woman. Also, in the hedonic approach, high subjective well-being means high life satisfaction, the presence of a Positive Affect and the absence of a Negative Affect ([Diener 1984](#)).

The mental well-being of people is still a subject of acute topicality, attracting the attention of psychologists and psychiatrists. This is evoked by the obvious and alarming fact that reaching higher levels of material and social prosperity does not lead uniquely to internal well-being or, in other words, to happiness. A similar tendency indicates that well-being is related not only to external, contextual factors, but also to inner ones, such as temperament and character.

Aims and hypotheses

Aims:

to find interrelationship of temperament and character with subjective well-being in Bulgarians;

to refine the notion of subjective well-being;

to explore the theoretical and empirical factors for subjective well-being in Bulgarians.

H₁: It was assumed that significant differences will be found in subjective well-being, depending on the age of the studied persons.

H₂: It was assumed that temperament and character are related to subjective well-being.

Method

Participants

The sample comprised of 443 persons from Bulgaria - men and women aged 18 to 65. Women in this study were 68.7% and men were 31.3%. The mean age of the target group was equal to 34 years old ($M = 34.35$, $SD = 15.046$). The studied persons compiled three age groups (Figure 1) - 18-22 years old ($M = 20.08$, $SD = .989$) – form 30.90%, 23-40 ($M = 29.46$, $SD = 6.320$) – 36.50% and 41-65 years ($M = 53.40$, $SD = 8.116$) – 32.60%

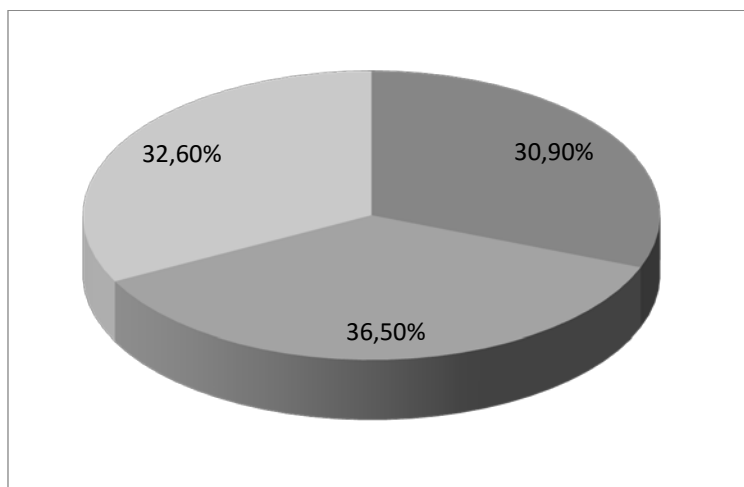


Figure 1 Distribution of the studied persons by age (in percentage)

Materials and Procedures

Statistical Analyses

For the purposes of the study, the following analyses / methods were applied in SPSS version 19:

Descriptive statistics, Frequency analysis;

Reliability analysis (Chronbach's alpha coefficient);

Correlation analysis;
One-factor dispersion analysis ANOVA;
Regression analysis.

Cloninger's Temperament and Character Inventory (TCI-R)

Cross-cultural linguistic variant of TCI-R, validated in Bulgaria and approved by the author, is used in the present study (Tilov et al., 2012). TCI is an instrument, which encompasses seven domains of personality. This instrument has been devised to identify the differences between people - both in normal and abnormal / unnatural patterns of behavior in seven main domains / dimensions of temperament and character. That is, the proposed questionnaire differentiates between the emotional state of the person (i.e. temperament) and their ability to control themselves (i.e. character) (Stoyanova, 2015).

Application of the TCI questionnaire

The TCI questionnaire has been devised as a detailed analysis of personality and therefore it has wide applications. It is maintained that the dimensions of temperament, according to it, correspond to the genetic structure of personality, i. e. the four dimensions of temperament are genetically homogeneous and independent (Stoyanov, 2012).

The TCI questionnaire assesses all the seven domains of personality, which constitute part of Cloninger's biosocial personality theory. In addition to the four temperament scales measured in TPQ (Tridimensional Personality Questionnaire), TCI measures also the three domains of character (Cloninger & Zohar, 2011). In the course of developing the TCI questionnaire, 9 of the 98 items of temperament dropped out and were replaced by 19 new questions. Because of this change, presently, Novelty Seeking has 40 items, Harm Avoidance - 35 items, Reward Dependence – 24 items, and Persistence - 8 items in the TCI questionnaire. The five facet scales of Self-Directedness and Cooperativeness have 44 and 42 items, respectively, in total. Self-Transcendence consists of three facet scales with a total of 33 items. In addition to these 226 items, version 9 of the TCI questionnaire consisting of 240 items is compatible with the previous TPQ questionnaire; in other words, it covers the 9 items of TPQ, which are absent from the TCI scales, plus five more items that are indicative of the presence of personality disorder (Cloninger & Zohar, 2011).

Unless otherwise stated, the TCI questionnaire proposes the full version of 240 items (Stoyanov, 2012). The TCI 125 questionnaire is a shorter version designed to provide a convenient instrument for diagnosing personality disorders. The TCI 125 measures only the

seven main personality traits and does not provide highly reliable results for the facet scales of the main traits as it contains only five items from each facet scale (Stoyanov, 2012). The indicators of validity have been developed only for the full TCI questionnaire (Stoyanov, 2012).

According to Stoyanov (2012), Cloninger has formulated an abridged version consisting of 140 items, which is considered more suitable for research purposes, and it has been applied for the goals of this research. There is a possibility for answers on a 5-point Likert scale, which is a prerequisite for high information gain, although it presents a certain difficulty in collecting the primary information (Stoyanov, 2012). Table 1 shows the values of the Cronbach's alpha of the TCI-R scales.

Table 1

Cronbach's alpha - TCI-R scales

Temperament – TCI-R	Cronbach's alpha
Novelty Seeking (NS)	.642
Harm Avoidance (HA)	.837
Reward Dependence (RD)	.754
Persistence (P)	.886
Character – TCI-R	
Self-Directedness (SD)	.859
Cooperativeness (C)	.807
Self-Transcendence (ST)	.813

The analysis of internal consistency conducted in Bulgaria of TCI-R showed that it should not be necessary to exclude from the analysis any scales as long as there were not any unacceptable levels for Cronbach's alpha < .06 see Table 1.

To measure subjective well-being, two scales were used – a scale to assess the Positive Affect and one to assess the Negative Affect (PANAS) (Andrews & Robinson, 1991).

PANAS Scale

The PANAS - Positive and Negative Affect Schedule Scale can be used to study the structure of Affect, by highlighting two dominant and relatively independent factors - the Positive and the Negative Affect. This instrument targets a wide range of emotional states (Watson, et al., 1988).

The abridged version of the questionnaire (used in this paper), containing 20 items was used and the studied persons assessed how they felt.

The Positive Affect is an indicator of satisfied engagement, high vigor, and full concentration as opposed to indolence and despondency – when the value is low (Watson et al., 1988).

The increased level of Negative Affect is viewed as a state of subjectively experienced suffering, unsatisfied engagement (different in terms of content – it may be anger, disgust, contempt, guilt, fear, irritability) as opposed to calmness and carelessness. The measured levels of Positive and Negative Affect reflect emotional states but relate to personality traits corresponding to stable individual differences in the tendency to emotional responses of one type or another (Watson et al., 1988).

An analysis of internal consistency conducted in Bulgaria on PANAS (Table 2).

Table 2

Internal consistency of PANAS

Affect – PANAS	Cronbach's alpha
Positive Affect (PA)	.852
Negative Affect (NA)	.877

The analysis of internal consistency of the scales of PANAS (Table 2) has shown that it is not necessary to exclude from the analysis any scales as long as there were not any unacceptable levels for Cronbach's alpha < .06.

Satisfaction With Life Scale (SWLS)

This instrument (Diener et al., 1985) contains 5 items. It measures satisfaction with life - the cognitive aspect of welfare. The reliability of the empirical SWLS is sufficiently high – $\alpha = .78$ (Garvanova, 2015).

An analysis of internal consistency conducted in Bulgaria for the purposes of this study on the SWLS has shown Cronbach's alpha = .83, which means that the scale can be used for the purposes of this study.

Results

Descriptive statistics

The descriptive statistics of the results TCI-R, PANAS and SWLS are shown in Table 3. In this table are presented the arithmetic means and standard deviations on the scales of TCI-R, PANAS and SWLS for 443 studied persons.

Table 3

Descriptive statistics of the raw scores from TCI-R, PANAS and SWLS for the whole representative sample

	N	Arithmetic mean (M)	St. error (SE)	Standard deviation (SD)	Minimum value	Median (Me)	Maximum value
Temperament – TCI-R							
NS	443	55.3	0.383	8.05	28.00	55	81.00
HA	443	56.06	0.590	12.40	24.00	56	97.00
RD	443	63.67	0.461	9.70	24.00	64	93.00
P	443	69.45	0.570	11.98	25.00	70	98.00
Character – TCI-R							
SD	443	71.28	0.555	11.68	29.00	72	99.00
C	443	72.40	0.514	10.82	33.00	74	95.00
ST	443	49.07	0.452	9.50	22.00	49	80.00
Affect – PANAS							
PA	443	34.38	0.298	6.27	13.00	35	50.00
NA	443	19.64	0.327	6.87	10.00	19	43.00
Life Satisfaction – SWLS							
Life Satisfaction (LS)	443	25.11	0.243	5.12	9.00	26	35.00

Standard indicators of raw score of the studied persons, according to TCI-R, PANAS and SWLS are shown in Table 4. The mean values presented in the table are within the norm, according to the standard values.

Table 4

Standard indicators for the whole representative sample of studied Bulgarians N = 443

	Z	HA	RD	P	SD	C	ST	PA	NA	LS
Below the norm	0-50.99	0-47.99	0-57.99	0-61.99	0-62.99	0-65.99	0-42.99	0-29.99	0-13.99	0-21.99
Norm	51-60	48-64	58-71	62-77	63-79	66-80	43-55	30-39	14-24	22-26
Above the norm	60.01 and more	64.01-	71.01-	77.01-	79.01-	80.01-	55.01-	39.01-	24.01-	26.01-

Table 4 presents the standard indicators (25th and 75th percentile) for the whole representative sample of studied Bulgarians (raw score on the scales of TCI-R, PANAS and SWLS).

Correlation analysis

The conducted analysis indicates that there were some statistically significant correlations between the phenomena studied (Table 5).

Pearson's correlation analysis indicates that there was a statistically significant weak negative correlation between LS and HA $r(441) = -.29, p < .001$.

There was a weak positive correlation between LS and: RD $r(441) = .105, p < .05$, C $r(441) = .212, p < .001$ and ST $r(441) = .187, p < .001$.

There was a moderate positive correlation between LS and P $r(441) = .307, p < .001$ and SD $r(441) = .387, p < .001$.

NA showed a statistically significant positive moderate correlation with HA $r(441) = .419, p < .001$. There was a weak negative correlation between NA and: P $r(441) = -.146, p < .01$ and C $r(441) = -.248, p < .001$. There was a moderate negative correlation between NA and SD $r(441) = -.470, p < .001$.

PA showed a moderate negative correlation with HA $r(441) = .402, p < .001$. There was a weak positive correlation between PA and: RD $r(441) = .131, p < .01$, and C $r(441) = .268, p < .001$. There was a statistically significant moderate positive correlation between PA and:

SD $r(441) = .37, p < .001$ and ST $r(441) = .322, p < .001$. There was a significant positive correlation observed between PA and P $r(441) = .559, p < .001$.

Table 5
Pearson Correlation coefficients between the scales of TCI-R and those of PANAS and SWLS

		Positive Affect	Negative Affect	Life Satisfaction
NS	<i>r</i>	.043	.007	-.004
	<i>p</i>	.365	.882	.927
HA	<i>r</i>	-.402**	.419**	-.290**
	<i>p</i>	.001	.001	.001
RD	<i>r</i>	.131**	-.029	.105*
	<i>p</i>	.006	.547	.027
P	<i>r</i>	.559**	-.146**	.307**
	<i>p</i>	.001	.002	.001
SD	<i>r</i>	.370**	-.470**	.387**
	<i>p</i>	.001	.001	.001
C	<i>r</i>	.268**	-.248**	.212**
	<i>p</i>	.001	.001	.001
ST	<i>r</i>	.322**	.064	.187**
	<i>p</i>	.001	.180	.001

Pearson's correlation analysis indicated, as shown in Table 6, that there was a statistically significant moderate positive correlation between LS and PA $r(441) = .410, p < .001$. LS also showed a weak negative correlation with NA $r(441) = -.296, p < .001$.

Table 6
Pearson Correlation coefficients between the scales of PANAS and SWLS

		LS	NA
PA	<i>r</i>	.410**	.007
	<i>p</i>	.001	.878
NA	<i>r</i>	-.296**	
	<i>p</i>	.001	



Differences, according to age

The conducted one-factor dispersion analysis ANOVA revealed certain significant differences in the arithmetic average values on some scales of TCI-R, PANAS and SWLS depending on the age (Table 7).

With regard to Persistence $F(2, 424) = 3.505$, $p < .05$ the method of multiple comparisons with Sheffe's correction revealed certain statistically significant differences ($p < .05$) in the mean values between the persons aged 18 to 22 years ($M = 71.74$, $SD = 10.827$) and those aged 40 to 65 years ($M = 68.13$, $SD = 13.314$).

The result means that the persons aged 18 to 22 years were more persistent and diligent than those aged 40 to 65 years, but both arithmetic mean values were within the norm (see 2.3. *Standard indicators of raw score of the studied persons according to TCI-R, PANAS and SWLS*).

With regard to Positive Affect certain statistically significant differences $F(2, 424) = 6.081$, $p < .01$ (the method of multiple comparisons - Scheffé's revision showed $p < .01$) were found between the persons aged 18 to 22 years ($M = 35.31$, $SD = 5.652$) and those aged 40 to 65 years ($M = 32.85$, $SD = 7.198$), as well as between the persons aged 23 to 40 years ($M = 34.78$, $SD = 5.581$) and those aged 40 to 65 years. The result shows that the older studied persons were characterized by higher levels of vigor, satisfied engagement and concentration. The mean values of each of the groups were within the norm.

With regard to Negative Affect certain statistically significant differences $F(2, 424) = 3.281$, $p < .01$ (the method of multiple comparisons - Scheffé's revision showed $p < .05$) were found between the persons aged 18 to 22 years ($M = 18.49$, $SD = 6.025$) and those aged 40 to 65 years ($M = 20.56$, $SD = 6.801$). The result shows that the older studied persons aged 40 to 65 years were characterized by higher levels of subjectively experienced suffering and unsatisfied engagement, as compared to the younger persons aged 18 to 22 years. The mean values of each of the groups were within the norm.

With regard to Life Satisfaction certain statistically significant differences $F(2, 424) = 6.688$; $p < .01$ (the method of multiple comparisons - Scheffé's revision showed $p < .01$) were found in the mean values of the persons aged 18 to 22 years ($M = 26.36$; $SD = 4.438$) and those aged 40 to 65 years ($M = 24.14$; $SD = 5.303$). The result shows that the younger studied persons aged 18 to 22 years were characterized by higher levels of Life Satisfaction than

those aged 40 to 65 years. The mean values of the second group were within the norm, whereas in the persons aged 18 to 22 years there was an increase observed.

Table 7

Differences in the arithmetic mean values on the scales of TCI-R, PANAS and SWLS, according to the age of the studied persons

	Age	N	Mean	Standard Deviation	F (df)	p
NS	18-22	132	54.94	9.605	0.805 (2, 424)	.448
	23-40	156	55.36	6.971		
	40-65	139	56.16	7.605		
HA	18-22	132	56.83	12.947	0.413 (2, 424)	.662
	23-40	156	56.33	12.782		
	40-65	139	55.47	11.676		
RD	18-22	132	63.83	11.068	0.748 (2, 424)	.474
	23-40	156	64.19	8.658		
	40-65	139	62.84	9.582		
P	18-22	132	71.74	10.827	3.505 (2, 424)	.031
	23-40	156	68.89	11.268		
	40-65	139	68.13	13.314		
C	18-22	132	72.85	10.252	2.263 (2, 424)	.105
	23-40	156	73.21	9.935		
	40-65	139	70.68	12.274		
ST	18-22	132	48.33	8.859	1.130 (2, 424)	.324
	23-40	156	48.94	9.687		
	40-65	139	50.01	9.425		
PA	18-22	132	35.31	5.652	6.081 (2, 424)	.002
	23-40	156	34.78	5.581		
	40-65	139	32.85	7.198		
NA	18-22	132	18.49	6.025	3.281 (2, 424)	.039
	23-40	156	19.94	7.481		
	40-65	139	20.56	6.801		
LS	18-22	132	26.36	4.438	6.688 (2, 424)	.001
	23-40	156	24.99	5.255		
	40-65	139	24.14	5.303		



Regression analysis

The results of multiple linear regression analysis are shown in Table 8 (method: enter). The results from the analysis indicated there is a statistically significant influence of the predictors SD, ST and P on LS $R^2 = .19$, $F(4, 438) = 36.401$, $p < .001$. These results also show that 20% of the dispersion in the dependent variable (the raw score of the persons studied for LS) could be forecast from the independent variables (ST, SD and P). SD $\beta = .346$; $p < .001$ was the strongest predictor; then came ST $\beta = .157$; $p < .05$ and P $\beta = .117$; $p < .05$. In addition, the size of the effect was “medium” $R = .446$ with reference to Cohen (Cohen, 1988, p. 413).

Table 8

Influence of Temperament and Character on LS

Model	B	SE	β	t	p	Tolerance	VIF
(Constant)	6.650	1.831		3.631	.001		
P	0.054	0.022	.117	2.334	.020	.720	1.389
SD	0.158	0.021	.346	7.314	.001	.816	1.225
ST	0.079	0.025	.157	3.394	.001	.849	1.177

Note: Dependent Variable: LS

SE – Standard Error

VIF - Variance Inflation Factor

The results obtained from the regression analysis (Table 9) indicated that there was a significant influence of the predictors NS, HA, P, SD, ST on the PA $R^2 = .388$, $F(5, 437) = 57.061$, $p < .001$. These results also show that 39% of the dispersion in the PA could be forecast from the independent variables. P $\beta = .404$, $p < .001$ was the strongest predictor; then came SD $\beta = .172$, $p < .01$, ST $\beta = .165$, $p < .001$ HA $\beta = -.121$; $p < .05$, and NS $\beta = .093$, $p < .05$. Also, the size of the effect is “large” $R = .63$ with reference to Cohen (Cohen, 1988, p. 414).

Table 9

Influence of Temperament and Character on PA and NA

Dependent variable	Model 1	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	Tolerance	<i>VIF</i>
PA	(Constant)	7.177	4.592		1.563	.119		
	NS	0.072	0.033	.093	2.184	.029	.763	1.310
	HA	-0.061	0.025	-.121	-2.400	.017	.545	1.833
	P	0.212	0.024	.404	8.978	.001	.684	1.462
	SD	0.092	0.027	.172	3.408	.001	.546	1.832
	ST	0.109	0.027	.165	4.046	.001	.835	1.198
Dependent variable	Model 2	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	Tolerance	<i>VIF</i>
NA	(Constant)	22.983	3.720		6.178	.001		
	HA	0.137	0.027	.247	4.978	.001	.682	1.467
	SD	-0.195	0.029	-.332	-6.739	.001	.690	1.449
	ST	0.059	0.030	.082	1.980	.048	.974	1.027

Note: *SE* – Standart Error

VIF - Variance Inflation Factor

The results obtained from the regression analysis indicate that there was a significant influence of the predictors HA, SD and ST on the Negative Affect $R^2 = .26$, $F(3, 439) = 52.661$, $p < .001$. These results also show that 26% of the dispersion in the NA could be forecast from the independent variables. SD $\beta = -.332$, $p < .001$ was the strongest predictor; then came HA $\beta = .247$, $p < .001$ and ST ce $\beta = .082$, $p < .05$. In addition, the size of the effect is “large” $R = .514$ with reference to Cohen (Cohen, 1988, p.414).

Discussion

The conducted study was aimed at examining the relationship of temperament and character with personal well-being. The analysis made revealed significant results related to the set aim, giving a reason to confirm the assumption in the second hypothesis, namely that significant differences in subjective well-being would be found depending on the age of the studied persons. According to Zankova (2015), gender, age, and socioeconomic status influence the subjective well-being of the studied persons, the highest influence being the



one of family status and subjective assessment of the material situation of the studied Bulgarians.

In this study, the result showed that the older studied persons aged 40 to 65 years were characterized by lower levels of Life Satisfaction than those aged 18-22 years. The results obtained can be accounted for by the influence of a number of socioeconomic factors (such as economic crises, family status, etc.) on life satisfaction, as well as human developmental tasks. Middle- and late-adult persons consider in retrospect what they have achieved in life, both professionally and personally, and their failure to live up to their expectations can affect their satisfaction with life. The persons over the age of 40 make a reassessment of what they have achieved in life and may be dissatisfied with that (Craig & Baucum, 1998).

With regard to Positive Affect certain statistically significant differences were found between the persons aged 18 to 22 years and those aged 40 to 65 years, as well as between the persons aged 23 to 40 years and those aged 40 to 56 years. The result showed that the older studied persons were characterized by higher levels of vigor, satisfied engagement and fuller concentration. With regard to Negative Affect, the result showed that the older studied persons aged 40 to 65 years were characterized by higher levels of subjectively experienced suffering and unsatisfied engagement, as compared to the younger persons aged 18 to 22 years. The mean values of each of the groups were within the norm.

The result obtained can be explained by the fact that Negative Affect correlates with the experience of stress, with the frequency of the unpleasant events in life (Watson et al., 1988), which unpleasant occasions (for example: the loss of beloved people, the deterioration of health) happen more frequently to the older people. In this context, previous studies showed that as people grew older, they felt happier in life (Diener et al., 1999): positive emotions in some people increased, while in others they decreased, whereas negative emotions remained stable or decreased, as opposed to the results obtained in the present study. Getting on in years did not necessarily mean a decrease in the level of mental well-being, as the majority of us expected (Pavot & Diener, 1993). Most people adapted to the process of aging by keeping the levels of experienced happiness and life satisfaction (Diener et al., 1999). They accepted the challenges that advanced age offered (Watson et al., 1988).

The first hypothesis, which supposed, that temperament and character should be related to subjective well-being, was confirmed. There was a significant negative correlation found

between Life Satisfaction and Harm Avoidance and a positive correlation found between Life Satisfaction and: Reward Dependence, Cooperativeness, Self-Transcendence, Persistence and Self-Directedness. Negative Affect showed a positive correlation with Harm Avoidance and a negative correlation with Persistence, Cooperativeness and Self-Directedness. Positive Affect showed a negative correlation with Harm Avoidance and a positive correlation with Reward Dependence, Cooperativeness, Self-Directedness and Self-Transcendence. There was also a significant positive correlation of Positive Affect and Persistence.

In this context, some authors believe that Positive and Negative Affects are related to the personality traits of extraversion and neuroticism (Watson et al., 1988). According to studies conducted by Bashkatov (2013, p. 5), “the traits of temperament correlated with all aspects of positive thinking”. For example, Positive Affect correlated with low neuroticism, extraversion, collaboration, openness to experience, wisdom and conscientiousness. Bashkatov also wrote that subjective well-being was associated not only with positive thinking, according to Seligman (2002), but also with peculiarities of temperament and with some basic personality traits. The scientist (Bashkatov, 2013) believed, the findings of his research indicated that the power of the processes of arousal, extraversion and conscientiousness influenced positively the components of positive thinking (wisdom, courage, spirituality), and together with that - subjective well-being. Neuroticism influenced negatively subjective well-being (Bashkatov, 2013).

The results obtained indicated that there was a statistically significant influence of the predictors Self-Directedness, Self-Transcendence and Persistence on Life Satisfaction. These results also showed that 20% of the dispersion in Life Satisfaction could be forecast from Self-Transcendence, Self-Directedness and Persistence. The result meant that the more responsible, persistent, creative and committed the studied persons, the higher their subjective mental well-being as a over-all valuation of life.

The results obtained indicated that there was a statistically significant influence of the predictors Novelty Seeking, Harm Avoidance, Persistence, Self-Directedness, and Self-Transcendence on Positive Affect. These results also showed that 39% of the dispersion in the Positive Affect could be forecast from Novelty Seeking, Harm Avoidance, Persistence, Self-Directedness and Self-Transcendence. The result meant that the more inquisitive, calm, self-confident, persistent, responsible, purposeful and creative the studied persons, the higher their vigor, concentration and satisfied commitment.



The results obtained from the regression analysis indicated that there was a statistically significant influence of the predictors Harm Avoidance, Self-Directedness and Self-Transcendence on Negative Affect. These results also showed that 26% of the dispersion in the Negative Affect could be forecast from Harm Avoidance, Self-Directedness and Self-Transcendence. The size of the effect was stronger or stronger than the typical one. The result meant that the more anxious, pessimistic, hesitant, ineffective, indecisive, putting the blame on the others and imaginative the studied persons, the higher their subjective experience of suffering and unsatisfied commitment.

The results obtained confirm previous studies, which also found that personality traits had an influence on both physical health, personal welfare and mental assessments (DeNeve & Cooper, 1998; Diener et al., 1985; Land, 1975; McCrae & Costa, 1991; Okun, 1995).

Conclusion

The theoretical analysis of the relationship of temperament and character with subjective well-being shows that the issue has not been sufficiently examined. In this context, the study is an attempt to fill in some knowledge gaps in the specific field and despite its limitations: time constraint - the study covers a relatively short period of time and the sample volume is limited, too - the study cannot cover all target groups).

It also offers results from a study conducted with Bulgarian citizens and provides valuable data about the presence of a relationship of temperament and character with subjective well-being in these people. In general, the following conclusions can be drawn:

Temperament and character are related to the cognitive and affective components of subjective well-being.

There are significant differences in subjective well-being depending on the age of the studied Bulgarians;

There is a statistically significant effect of Self-Transcendence, Self-Directedness, and Persistence found on Life Satisfaction.

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Competing Interests

The author has declared that no competing interests exist.

References

- Andrews, F., & Robinson, J. (1991). Measures of subjective well-being. In J. Robinson, P. Shaver & L. Wrightsman (Eds.), *Measures of personality and social psychological attitudes*. Vol. 1, 61-114. Academic Press.
- Bashkatov, S. A. (2013). Vlianie harakteristik temperamenta I bazovih svoistv lishnosti na komponenti pozitivnosti kak osnovi lishnostnogo blagopolushia [Influence of temperament characteristics and basic personality traits on the components of positive thinking as the basis of personal well-being]. SUSU (South Ural State University) Newspaper. *Psychological Bulletin*, 6(1), 4-13.
- Cloninger, C. R., & Zohar, A. H. (2011). Personality and the perception of health and happiness. *Journal of Affective Disorders*, 128(1-2), 24-32. [https:// doi:10.1016/j.jad.2010.06.012](https://doi.org/10.1016/j.jad.2010.06.012).
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences (2nd edition)*. Lawrence Erlbaum Associates.
- Craig, G., & Baucum, D. (1998). *Human Development (8th Edition)*. Prentice Hall.
- DeNeve, K., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective wellbeing. *Psychological Bulletin*, 124(2), 197-229. [https:// doi: 10.1037/0033-2909.124.2.197](https://doi.org/10.1037/0033-2909.124.2.197).
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95(3), 542–575
- Diener, E., Emmons, R. A., Larsen, R. J. & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71-75. [https:// doi: 10.1207/s15327752jpa4901_13](https://doi.org/10.1207/s15327752jpa4901_13).



- Diener, E., Suh, E., Lucas, R., & Smith, H. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125(2), 276–302. <https://doi.org/10.1037/0033-2909.125.2.276>.
- Diener, E., & Tov, W. (2012). National accounts of well-being. In K. C. Land, A. C. Michalos, & M. J. Sirgy (Eds.), *Handbook of social indicators and quality of life research* (pp. 137-156). Springer.
- Garvanova M. (2015) *Izsledvane na ydovletvirenosta ot zhivota pri suvremennia bulgarin v perspektivata na cennostite* [A study of satisfaction with life at contemporary Bulgarian in the perspective of values].
https://www.researchgate.net/publication/282643575_Izsledvane_na_udovletvorenostta_ot_zivota_pri_svreemennia_blgarin_v_perspektivata_na_cennostite
- Land, K. (1975). Social indicators models: An overview. In K. C. Land & S. Spilerman (Eds.), *Social indicator models*. 5–36.
- Löckenhoff, C. E., Terracciano, A., Bienvenu, O. J., Patriciu, N. S., Nestadt, G., McCrae, R. R., Eaton, W. W., & Costa, P. T. Jr. (2008). Ethnicity, education, and the temporal stability of personality traits in the East Baltimore Epidemiologic Catchment Area Study. *Journal of Research in Personality*, 42(3), 577–598. <https://doi.org/10.1016/j.jrp.2007.09.004>.
- McCrae, R., & Costa, P. (1991). The NEO Personality Inventory: Using the Five-Factor Model in counseling. *Journal of Counseling & Development*, 69(4), 367-372.
- Okun, M. (1995). Subjective well-being. In G. L. Maddox (Ed.), *The encyclopedia of aging* 2nd ed., 909–912.
- Pavot, W., & Diener, E. (1993). Review of the Satisfaction With Life Scale. *Psychological Assessment*, 5(2), 164-172.
- Seligman, M. E. P. (2002). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment*. Free Press.
- Shmotkin, D. (1991). The role of time orientation in life satisfaction across the life-span. *Journal of Gerontology*, 46(5), 243–250.
- Stoyanov, D. (Ed.) (2012). *Lichnost, psihoklimat i sindrom na profesionalnoto izpepelivane: Rakovodstvo za diagnostika i preventsia na Burnout sindroma pri zdravni profesionalisti* [Personality, psycho-climate and professional burnout syndrome: A Guide to the diagnosis and prevention of burnout syndrome in health care professionals]. Iztok-Zapad.

- Stoyanova, M. (2015). *Upotreba na temperamentovia I harakterov vaprosnik (TCI) na Cloninger v Bulgarskata armia* [Use of Cloninger's Temperament and Character Inventory (TCI) in the Bulgarian Army]. Military Medical Academy.
- Tilov, B., Dimitrova, D., Stoykova, M., Tornjova, B., Foreva, G., & Stoyanov, D. (2012). Cross-cultural validation of the revised temperament and character inventory in the Bulgarian language. *Journal of Evaluation in Clinical Practice*, 18(6), 1180-1185.
- Watson, D., Clark, L., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063-1070.
- Wilson, W. (1967). Correlates of avowed happiness. *Psychological Bulletin*, 67(4), 294-306.
<https://doi.org/10.1037/h0024431>.
- Zankova, K. (2015). *Interaktivni efekti na protektivnite lichnostni resursi I depresivnata simptomatika vurhy psihichnoto zdrave*. Avtoreferat. [interactive effects of protective personal resources and depressive symptoms on mental health. Abstract]. Sofia University "St. Kliment Ohridski".

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