

PRIMENJENA
PSIHOLOGIJA



No1, 2022

Contents

	The relevance of authenticity to clinical distress: Reaffirming the role of self-alienation
3	Katerina Naumova and Florijan Naumov
	Effect of the Dark Tetrad on Emotional Intelligence
28	Katarina Sokić
	"Attention please!": The dark side of dancers' personality
51	Maja S. Vukadinović
	Basic values as predictors of leisure-time activities among adolescents
87	Zoran Pavlović and Ivana Stepanović Ilić
	Validation of the Serbian Adaptation of the Self-Absorption Scale
121	Senka Kostić and Dragana Stanojević



Research Article

The relevance of authenticity to clinical distress: Reaffirming the role of self-alienation

Katerina Naumova ¹  and Florijan Naumov²

¹ *Department of Psychology, Faculty of Philosophy, Ss. Cyril and Methodius University in Skopje, North Macedonia*

² *University Clinic of Psychiatry, Medical Faculty, Ss. Cyril and Methodius University in Skopje, North Macedonia*

ABSTRACT

Several counselling psychology perspectives have argued that authenticity should be the primary goal of treatment, while defining alienation from the self as the root cause of distress and psychopathological suffering. Recent findings have provided evidence that the tripartite model of dispositional authenticity based on Rogers' person-centered theory can predict mental well-being. Considering the lack of research in clinical samples, this study examined the unique predictive utility of trait authenticity for distress in outpatients seeking counselling ($N=105$, 58% female; age range: 18-65) and demographically matched controls ($N=102$, 62% female; age range: 18-52 years). Most of the outpatients were diagnosed with anxiety and/or mood disorders, while the controls were screened for utilization of mental health services. Results revealed higher self-alienation and acceptance of external influence in the clinical sample, as well as higher neuroticism and symptomatic and overall distress relative to controls. Only self-alienation was able to account for unique variance in clinical distress in outpatients, above and beyond neuroticism, reaffirming the assumption that the greater the discrepancy between actual experiences and their symbolization, the greater the risk of psychological dysfunction. The findings further revealed a differentiated role of self-alienation relative to the severity of experienced distress and a need to examine causal links with neuroticism. Implications

regarding clinical practice and the measurement of authenticity as treatment outcome are discussed.

Keywords: authenticity, self-alienation, person-centered theory, psychological distress

UDC: 159.944:615.851

DOI: 10.19090/pp.2022.3-27

Received: 10.09.2021.

Revised: 26.11.2021.

Accepted: 02.12.2021.



Copyright © 2022 The Author(s).

This is an open access article distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

✉ Corresponding author email: knaumova@fzf.ukim.edu.mk

Introduction

Several counselling psychology perspectives have argued that authenticity should be the primary goal of treatment. For instance, authenticity is conceptualized as critical to psychological functioning in psychodynamic (Horney, 1951; Winnicott, 1965), humanistic (Rogers, 1954, 1961) and existential (May, 1981; Yalom, 1980) psychology. Accordingly, alienation from the self as its core component is at the root of distress and psychopathological suffering. The study of authenticity has undoubtedly provoked interest in other fields, such as developmental (Harter, 2002), social (Kernis & Goldman, 2006) and positive psychology (Smallenbroek et al., 2016), however, since the mid-2000s, the empirical interest in this topic in counselling psychology has revived as well. Although conceptual inconsistencies prevail in the literature and often obscure efforts to compare and interpret findings, in the context of counselling psychology, the humanistic model has provided the most comprehensive framework.

Within the person-centered approach (PCA), Rogers (1961, 1980) defined congruence (genuineness/realness) as accurate matching of experience, awareness, and communication. He conceptualized it both as a condition of therapeutic presence and as the upper end of the continuum of change that clients experience. According to the PCA all psychopathology stems from distorted conscious representations of experiences due to alienation from the self (Patterson, 2017). Based on Rogers' theory, Barrett-Lenard (1998, p.82) subsequently proposed a tripartite model of authenticity (congruence), defining it as the "consistency between the three levels of (a) a person's primary experience, (b) their symbolized awareness, and (c) their outward behavior and communication". In an effort to provide a psychometrically sound measure of dispositional authenticity, Wood et al. (2008) further specified this model, designating incongruence between the first two levels - the true self and cognitive awareness - as self-alienation; defining life in accordance with one's values and beliefs as authentic living; and denoting acceptance of external influence as the tendency to conform to expectations of others and allow influences of others to distort self-

perception or prevent authentic behavioral expression of one's self. Hence, authenticity is comprised of low self-alienation, i.e., having an identity consistent with beliefs, feelings and objective reality; high authentic living, that is living in accordance with one's identity, and low acceptance of external influences that are not in line with one's beliefs. Therefore, the greater the mismatch between actual experiences and their symbolization, the greater the risk of dysfunction or psychopathology. However, from a humanistic-experiential point of view, what is defined as alienation or maladjustment from an external frame of reference, is experienced as 'psychological suffering' from an internal frame of reference (Schmid, 2005).

Authenticity as core cause of mental well-being has recently been examined in various cultures, although, all studies have relied on college or community samples. Research that specifically utilized the authenticity scale by Wood et al. (2008) has shown negative associations with psychological distress, negative affect (depression and anxiety), perceived stress, psychological vulnerability, self-handicapping behavior, and aggression (Akin & Akin, 2014; Boyraz & Kuhl, 2015; Grijak, 2017; Pinto et al., 2012; Satıcı et al., 2013; Wood et al., 2008), as opposed to positive association with life satisfaction, positive affect, self-esteem, unconditional positive self-regard and general well-being (e.g., Grégoire et al., 2014; Pillow et al., 2017; Wood et al., 2008). Additionally, there is some evidence that trait authenticity is moderated by culture (Robinson et al., 2012; Slabu et al., 2014) and predicts positive mental health more strongly than context-specific authenticity measures. One longitudinal study (Boyraz et al., 2014) further found that lack of authenticity increases psychological distress. Among the three components, it seems that self-alienation is most important to affective functioning (Stevens, 2016; Wood et al., 2008). It is worth noting that studies predominantly examined the links with positive mental health indicators, consistent with the humanistic model of psychological functioning.

Research has further shown that perceived authenticity is related to other personality traits, although it cannot be reduced to them. For instance, quite predictably, it is negatively related to neuroticism, while positively to

the other Big Five traits, albeit to a varying degree (Grégoire et al., 2014; Wood et al., 2008). One study also found that authenticity loads on the honesty-humility factor of personality (Maltby et al., 2012).

Considering the lack of research in clinical samples as opposed to the conceptualized relevance of (in)authenticity to psychopathological distress, the objective of the current study is to examine the unique predictive utility of trait authenticity with respect to symptomatic and overall distress in outpatients seeking counselling services. We will include gender and age as control variables, as well as neuroticism since it has been consistently evidenced to be a transdiagnostic risk factor for psychopathology (Jeronimus et al., 2016), while few studies have found a moderate bidirectional association between neuroticism and authenticity. Based on the literature and empirical findings, we hypothesize that a) authenticity dimensions have a significant incremental contribution to the prediction of clinical distress, and b) self-alienation is a stronger predictor of symptomatic and overall distress than authentic living and acceptance of external influence.

Method

Participants

The clinical sample consisted of 105 outpatients referred to counselling at a psychiatric clinic (58% female; $M_{age} = 28.6 \pm 9.4$; range: 18-65 years; 55% had a university degree, 45% had secondary education). Most had been diagnosed with anxiety and/or mood disorders (anxiety disorders 46.7%; mood disorders 20.9%; mixed anxiety and depressive disorder 20%), while other disorders were less prevalent (psychosis 5.7%; conduct disorder 2.9%; personality disorder 1.9% and psychoactive substance use 1.9%). Only individuals who had less than three counselling sessions before data collection began were invited to participate. Over half (59%) responded to measures as part of an extensive psychological assessment prior to their first counselling session (21% prior to the second and 20% prior to the third session). None of the invited outpatients declined to participate and all

provided informed consent. The data was collected from December 2018 until June 2019.

Due to lack of normative data for the utilized measures, we recruited a demographically matched control sample ($N = 102$; 62% female; $M_{\text{age}} = 30 \pm 9.4$; range: 18-52 years; 56% had a university degree, 44% had secondary education). Thus, controls did not differ significantly from outpatients in age ($t(205) = -1.08, p = .28$), gender ($\chi^2(1) = 0.29, p = .59$), or education ($\chi^2(1) = 0.00, p = .99$). Potential participants were recruited from the general population through snowball sampling by trained undergraduate psychology students for course credit (during May-June 2019 and November 2019-February 2020). All were screened for utilization of mental health services in the previous six months (based on self-reports) and provided informed consent to participate in the study.

Data in both samples were collected via the paper-and-pencil method. Personal identifiers were not recorded. Procedures performed in the study were in accordance with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

The data reported in this manuscript were collected as part of a larger data collection. The data on psychological distress provided by the clinical sample and half of the control sample were used in Blazhevskaja-Stoilkovska and Naumova (2020), however, the relationships examined in this paper have not been previously published.

Instruments

Brief Symptom Inventory (BSI)

Psychological distress was measured with the 53-item Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983, for model fit of the Macedonian adaptation partially based on this data set see Blazhevskaja-Stoilkovska & Naumova, 2020). It is one of the most widely used multidimensional self-report instruments that measures nine symptom dimensions: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. Number of items per

subscale ranges from four to seven, with most subscales comprising five or six items. Participants rate the level of distress experienced during the previous seven days on a 5-point scale (from 0 = *not at all* to 4 = *extremely*). Higher mean scores indicate higher symptomatic distress, i.e., specific dimensional psychopathology (Derogatis, 2017). From the three available global distress indices, for the purpose of this study, only the General Severity Index (GSI) is utilized as the most sensitive indicator of overall distress, since it combines data on the number of experienced symptoms and the intensity of perceived distress. In defined clinical populations the BSI complements expert clinical judgement on one's psychological status. Cronbach's α for all subscales and the GSI are presented in Table 1.

The Authenticity Scale

The Authenticity Scale (Wood et al., 2008) was used as a measure of dispositional authenticity, created in line with the tripartite authenticity model. Accordingly, it consists of three subscales, each comprising four items: self-alienation, authentic living and accepting external influence. Participants respond on a 7-point scale (from 1 = *does not describe me at all* to 7 = *describes me very well*), with higher total scores indicating greater self-alienation and acceptance of external influence, as well as a more pronounced tendency of living in accordance with one's identity. The authors report that the subscales correlate with well-being measures and the Big Five traits. CFA revealed good fit of the proposed three-factor structure of the scale in the clinical sample and acceptable fit in the control sample (Schermelleh-Engel et al., 2003). Due to multivariate non-normality and samples sizes the MLM estimator was used (outpatients: $\chi^2(51) = 58.36, p = .22, CFI = .98, TLI = .97, RMSEA = .04, SRMR = .07$; controls: $\chi^2(51) = 68.70, p = .05, CFI = .96, TLI = .95, RMSEA = .06, SRMR = .06$). Cronbach's α (Table 1) indicate satisfactory internal consistencies in both samples.

Neuroticism from Big Five Inventory (BFI)

Neuroticism was measured with the 8-item subscale from the Big Five Inventory (BFI; John & Srivastava, 1999). The items consist of short phrases

assessing prototypical markers of neuroticism, although three items are worded positively and reversely scored. Participants rate each item on a 5-point scale (from 1 = *does not describe me at all* to 5 = *describes me very well*). Considering the ease of responding, the original strongly disagree-strongly agree response format was replaced with the Authenticity Scale categories. Higher mean scores indicate higher neuroticism. CFA revealed good fit of the unidimensional structure of the scale in both samples (Schermeleeh-Engel et al., 2003) when correlated errors of positively worded items and selected negatively worded items were included in the model. Data were multivariate normal, so the ML estimator was used (outpatients: $\chi^2(15) = 19.72$, $p = .18$, $CFI = .98$, $TLI = .96$, $RMSEA = .06$, $SRMR = .04$; controls: $\chi^2(16) = 18.50$, $p = .29$, $CFI = .99$, $TLI = .99$, $RMSEA = .04$, $SRMR = .04$). The internal consistency of the scale is satisfactory in both samples (Table 1).

Prior mental health service utilization

Data on prior mental health service utilization was collected by asking potential controls "Have you seen a psychologist and/or psychiatrist in the previous six months (for counselling, psychotherapy and/or pharmacotherapy?" Response categories were a) No; b) Yes, on few occasions (1-3 sessions); c) Yes, on many occasions or continuously for a longer period. Only individuals who have not used any mental health services were included in the control sample.

Preliminary Data Screening

In the clinical sample, 18 cases had missing data, almost all on one or two items, while in the control sample 4 cases had missing data on one item. Little's MCAR test showed that data were missing completely at random (outpatients: $\chi^2 = 1290.14$, $df = 1282$, $p = .43$; controls: $\chi^2 = 314.54$, $df = 288$, $p = .13$), thus imputation was conducted with the EM method.

With respect to the regression analyses, based on standardized residual values $> \pm 3.3$, two outliers were detected in the control sample (one per separate regression model). However, the diagnostic plots revealed that

these were not influential observations and were not excluded from the analyses.

Statistical analysis

Confirmatory factor analyses (CFA) were conducted using the Lavaan package (Rosseel, 2012) in R environment (R Core Team, 2020). Model fit was evaluated using recommendations by Schermelleh-Engel et al. (2003) for good fit: $0 \leq \chi^2 \leq 2df$, $CFI \geq .97$, $TLI \geq .97$, $RMSEA \leq .05$, $SRMR \leq .05$; and acceptable fit: $2df < \chi^2 \leq 3df$, $CFI < .97$, $TLI < .97$, $RMSEA \leq .08$, $SRMR \leq .10$. All other analyses were conducted in SPSS 24.0.

Results

The initial comparison of the clinical and control sample (Table 1) revealed that the experiences of outpatients are significantly more distant from their beliefs, feelings and objective reality, as well as more conforming to expectations of others. The participants did not, however, differ significantly in authentic living. Neuroticism was also significantly higher in the clinical sample, as well as all dimensions of psychological symptoms and overall distress, with anxiety and obsession-compulsion being most pronounced in both groups. It is worth noting that medium to large effect sizes were found between the differences.

Table 1*Descriptives, Cronbach's alphas and mean differences*

	Outpatients		Controls		Samples differences	
	<i>M (SD)</i>	α	<i>M (SD)</i>	α	<i>t</i> (205)	<i>d</i>
Authenticity Scale						
Self-alienation	14.52 (6.03)	.72	9.93 (5.60)	.85	5.68***	0.79
Authentic living	21.58 (4.76)	.71	21.71 (4.90)	.75	-.18	0.03
Accepting external influence	15.25 (6.55)	.87	11.08 (4.77)	.77	5.22***	0.73
BFI	<i>M (SD)</i>	α	<i>M (SD)</i>	α	<i>t</i> (205)	<i>d</i>
Neuroticism	3.41 (.80)	.79	2.64 (.87)	.85	6.62***	0.92
BSI	<i>M (SD)</i>	α	<i>M (SD)</i>	α	<i>t</i> (205)	<i>d</i>
Somatization	1.18 (.95)	.86	.76 (.66)	.80	3.63***	0.51
Obsession-compulsion	1.78 (1.05)	.86	1.10 (.81)	.83	5.21***	0.72
Interpersonal sensitivity	1.56 (.96)	.68	.73 (.72)	.76	7.19***	0.98
Depression	1.64 (1.00)	.85	.75 (.75)	.84	7.29***	1.01
Anxiety	1.96 (1.02)	.87	1.12 (.80)	.84	6.56***	0.92
Hostility	1.34 (.95)	.79	.86 (.81)	.82	3.91***	0.54
Phobic anxiety	1.19 (.95)	.73	.42 (.54)	.66	7.17***	1.00
Paranoid ideation	1.48 (.95)	.76	.98 (.74)	.72	4.26***	0.59
Psychoticism	1.21 (.81)	.68	.58 (.63)	.68	6.19***	0.87
General Severity Index	1.48 (.74)	.96	.82 (.55)	.96	7.37***	1.01

Notes. BFI = Big Five Inventory; BSI = Brief Symptom Inventory. *** $p < .001$

Bivariate correlations (Table 2) revealed similar patterns of association between authenticity dimensions and psychological symptoms in both samples. Self-alienation was moderately to strongly positively correlated to all symptom dimensions, with the strength of association being highest for depression, psychoticism and obsession-compulsion. Accepting external influence had small to moderate positive associations with all symptom dimensions, being most relevant to interpersonal sensitivity, depression and psychoticism, while authentic living was weakly and negatively correlated to psychopathology, being most relevant to depression. Additionally, neuroticism and authenticity components were moderately related in both samples (outpatients: $r = .45$ with self-alienation, $r = -.26$ with authentic living, $r = .29$ with accepting external influence; controls: $r = .53$ with self-alienation, $r = -.23$ with authentic living, $r = .32$ with accepting external influence). Lastly, self-alienation was moderately related to authentic living (outpatients: $r = -.21$; controls: $r = -.24$) and accepting external influence (outpatients: $r = .40$; controls: $r = .37$), while authentic living was insignificantly related to acceptance of external influences in both samples (outpatients: $r = -.17$, controls: $r = -.15$).

Table 2

Correlations between authenticity dimensions and psychological symptoms in outpatients and controls

	SOM	OC	IS	DEP	ANX	HOS	PA	PI	PSY	GSI
Self alienation	.40*** (.36***)	.53*** (.60***)	.45*** (.58***)	.62*** (.69***)	.36*** (.53***)	.24* (.40***)	.37*** (.46***)	.24* (.47***)	.56*** (.71***)	.54*** (.70***)
Authentic living	-.14 (-.05)	-.23* (-.11)	-.19 (-.18)	-.29** (-.22*)	-.17 (-.01)	-.06 (-.11)	-.08 (-.15)	.00 (-.15)	-.23** (-.15)	-.20* (-.15)
Accepting ext. influence	.25* (.16)	.23* (.29**)	.33** (.36**)	.30** (.26**)	.24* (.23*)	.04 (.05)	.17 (.16)	.21* (.20*)	.26** (.36**)	.29** (.30**)

Notes. Control sample correlations presented in parentheses. SOM=Somatization; OC=Obsession-compulsion; IS=Interpersonal sensitivity; DEP=Depression;

ANX=Anxiety; HOS=Hostility; PA=Phobic anxiety; PI=Paranoid ideation; PSY=Psychoticism; GSI=General Severity Index.

* $p < .05$, ** $p < .01$, *** $p < .001$.

We then conducted two series of hierarchical regression analyses to examine the unique predictive power of authenticity with respect to symptomatic and overall distress, after controlling for the effects of demographic and personality covariates. The assumptions of linearity and independence of errors, as most relevant assumptions of regression analysis, were not violated in any model in both samples. Normality of errors was mildly violated in several models in the control sample, while homoscedasticity was mildly violated in several models in both samples, however, due to sample sizes, the regression models can be considered robust to mild violations of these two assumptions (Ernst & Albers, 2017). As for multicollinearity, the obtained *VIF* values were < 1.70 and *Tolerance* values were > 0.60 .

In all models, gender and age were included in the first block, neuroticism in the second and the three authenticity dimensions in the final block. The analyses for both samples are presented comparatively in Table 3 and Table 4. In the clinical sample, the demographic covariates account for a small degree of variance in symptomatic and overall distress, however, their contribution is significant only for somatization and anxiety symptoms (Table 3). Neuroticism accounted for a considerable degree of variance in all models (highest for anxiety and overall distress, lowest for paranoid ideation). Adding the dimensions of authenticity in the final block, significantly increased the predictive power of several models, with self-alienation being the only dimension with a significant contribution. More specifically, self-alienation accounted for a considerable degree of variance in depression, psychoticism, obsession-compulsion and to a lesser degree in interpersonal sensitivity and overall distress. Considering the significant zero-order correlations with all other symptom dimensions, exploratory mediation analyses were conducted and revealed that neuroticism fully mediated the effect of self-alienation on anxiety and somatization, and partially mediated its effect on hostility.

However, a causal relationship between self-alienation and neuroticism was not the focus of this study, thus further exploratory analyses were not conducted.

Table 3

Authenticity dimensions as predictors of somatization, obsession-compulsion, interpersonal sensitivity, depression and anxiety in outpatients and controls

Block and Variables	Outpatients					Controls				
	SOM	OC	IS	DEP	ANX	SOM	OC	IS	DEP	ANX
Gender	.25 [*]	.05	.03	.08	.26 ^{**}	.03	.12	.13	.04	.14
Age	-.04	-.05	-.20 [*]	-.12	.06	-.05	-.23 [*]	-.22 [*]	-.27 ^{**}	-.17
ΔR^2	.07 [*]	.00	.04	.02	.07 [*]	.00	.07 [*]	.07 [*]	.07 [*]	.05
Neuroticism	.49 ^{***}	.52 ^{***}	.52 ^{***}	.53 ^{***}	.65 ^{***}	.32 ^{**}	.46 ^{***}	.52 ^{***}	.48 ^{***}	.64 ^{***}
ΔR^2	.22 ^{***}	.25 ^{***}	.24 ^{***}	.25 ^{***}	.38 ^{***}	.09 ^{**}	.20 ^{***}	.24 ^{***}	.20 ^{***}	.36 ^{***}
Self-alienation	.19	.40 ^{***}	.22 [*]	.47 ^{***}	.08	.30 [*]	.48 ^{***}	.38 ^{***}	.59 ^{***}	.30 ^{**}
Authentic living	.01	-.08	-.02	-.12	.01	.06	.05	-.01	-.05	.18 [*]
Accepting ext. influence	.05	-.02	.16	.02	.02	.01	.03	.12	-.03	-.02
ΔR^2	.03	.13 ^{***}	.08 ^{**}	.20 ^{***}	.01	.06	.16 ^{***}	.12 ^{***}	.24 ^{***}	.08 ^{**}

Notes. Gender – 0 = *male*, 1 = *female*. SOM - Somatization; OC - Obsession-compulsion; IS - Interpersonal sensitivity; DEP - Depression; ANX - Anxiety.

* $p < .05$, ** $p < .01$, *** $p < .001$.

In the control sample, demographic covariates significantly predicted obsession-compulsion, interpersonal sensitivity and depression symptoms (Table 3) as well as overall distress (Table 4), however, only age made a significant contribution to these models. The indicators of symptomatic and overall distress in this sample can thus be interpreted as primarily reflecting developmentally normative fluctuations in negative affect and interpersonal functioning. The findings on neuroticism are identical to the ones in the clinical sample, the only difference being that this trait is less relevant to

somatization in the control sample. Finally, with respect to authenticity, the results are quite similar, although in controls authenticity is also relevant to anxiety (with authentic living having a significant contribution apart from self-alienation) (Table 3). Furthermore, it accounted for a higher degree of variance in psychoticism and overall distress (Table 4).

It is noteworthy that, due to both positive and negative associations between authenticity dimensions, suppressor effects were present in the models. The two most evident cases were the models for anxiety (Table 3) and hostility in the control group (Table 4), with significant beta weights for authentic living and acceptance of external influences being opposite in sign relative to their respective zero-order correlations.

Table 4

Authenticity dimensions as predictors of hostility, phobic anxiety, paranoid ideation, psychoticism and overall distress in outpatients and controls

Block and Variables	Outpatients					Controls				
	HOS	PA	PI	PSY	GSI	HOS	PA	PI	PSY	GSI
Gender	.00	.12	.00	-.04	.13	.04	.08	-.16	.06	.07
Age	-.15	-.11	-.12	-.08	-.12	-.23*	-.22*	-.14	-.13	-.24*
ΔR^2	.02	.03	.01	.01	.03	.05	.06	.05	.02	.06*
Neuroticism	.51***	.43***	.29**	.50***	.63***	.57***	.42***	.30**	.43***	.60***
ΔR^2	.24***	.17***	.08**	.23***	.37***	.29***	.16***	.08**	.17***	.33***
Self-alienation	.08	.22*	.10	.44***	.31**	.16	.32**	.39***	.67***	.52***
Authentic living	.07	.07	.11	-.07	.03	.02	-.03	-.04	.03	.04
Accepting ext. influence	-.10	.00	.14	.01	-.01	-.18*	-.07	.06	.10	.00
ΔR^2	.02	.04	.04	.17***	.08***	.04	.07*	.12***	.33***	.18***

Notes. Gender – 0 = *male*, 1 = *female*. HOS - Hostility; PA - Phobic anxiety; PI - Paranoid ideation; PSY - Psychoticism; GSI - General Severity Index.

* $p < .05$, ** $p < .01$, *** $p < .001$.

Overall, the findings partially confirmed the first and second assumption since, in outpatients, only self-alienation was a significant predictor of most symptom dimensions and overall distress.

Discussion

Classical person-centered theory rejected the concept of psychopathology and provided a model of distress, dysfunction and maladjustment defined as outcomes of inauthenticity (incongruence) or alienated ways of being in the world (Rogers, 1961; 1980). Contemporary theory and practice, however, are open to the possibility of dimensional assessment of mental health problems and a person-centered approach to psychopathology (Joseph, 2017; Warner, 2017; Wilkins, 2017). In this context, our study provides several valuable findings. First of all, given the need for

psychometrically robust tools for the assessment of PCA concepts, the differences between outpatients and controls in terms of inauthenticity dimensions demonstrate the discriminative ability of the Authenticity Scale (AS), although examinations with larger clinical samples are necessary. The absence of differences regarding authentic living, at the same time, can be interpreted in two ways. In an elaborate analysis of the relationship between alienation and authenticity, Schmid (2005) argues that authentic living is possible even in states of severe dysfunction or clinical distress, given that authenticity is a staged process of balancing one's individuality and interrelatedness with others. Thus, striving towards balance 'coincides' with suffering. On the other hand, recent psychometric explorations of the AS in a non-Western culture (Nartova-Bochaver et al., 2021) indicate the risk of social desirability bias related to the positive wording of all items on the authentic living subscale. Additionally, even though authenticity components were interrelated in the expected direction according to the tripartite model, authentic living was insignificantly related to acceptance of external influences in both samples.

These arguments and findings may also help explain why authentic living and accepting external influence were not found to be relevant predictors of distress. Additionally, although previous studies have provided correlational evidence on the association between these two dimensions and negative affect or distress in community samples (Grégoire et al., 2014; Grijak, 2017; Wood et al., 2008), one study using path analysis (Stevens, 2016) has not found significant relationships between these dimensions and affective functioning. Therefore, further cross-cultural examinations of the tripartite model are needed as well as more nuanced insights into the relative contribution of each component to the utility of the model.

With respect to the humanistic-existential conceptualization of self-alienation, our study confirmed that it is the core component of authenticity that significantly determines psychological functioning, even after accounting for the effects of another relevant and widely evidenced personality risk factor (neuroticism). If we approach the assessed

psychopathological dimensions from the perspective of the PCA as differentiated client processes (Tudor & Worall, 2006), it is important to note that this discrepancy between the perceived self and the actual experience was most relevant for depression in the clinical sample, consistent with Rogers' assertions, while in the control group it had the strongest effect on symptoms of psychoticism, which when less pronounced primarily reflect the tendency towards social alienation, one that inevitably arises from alienation from one's self (Rogers, 1980).

The findings further point to a differentiated role of self-alienation relative to the severity of experienced distress, while the relationship patterns between neuroticism and symptom dimensions were identical in both samples (except in the case of somatization). Therefore, the findings in the control group are in line with the empirical and theoretical literature (except for hostility), however for individuals experiencing clinical distress self-alienation was not relevant for paranoid ideation, while it was partially, i.e., fully mediated by neuroticism in the cases of hostility, somatization and anxiety. Considering that anxiety is most pronounced in outpatients both from a dimensional and a categorical perspective, and given that Rogers (1957) defined anxiety as a threat occurring when the individual becomes gradually aware of self-alienation - these findings might reflect the causal relationship between self-alienation and the formation of a 'neurotic' self-structure. However, high neuroticism can also promote and augment self-alienation processes. Although the link of neuroticism to authenticity was out of the scope of this study, it is relevant to note that robust meta-analytic studies have not found conclusive evidence that any of the dominant models seeking to explain the role of neuroticism in psychopathology can account for all findings (Ormel et al., 2013), nevertheless, with respect to anxiety disorders, the evidence is most consistent with the common cause model, with the issue of operational overlap confounding the interpretation of findings. Thus, given that from a PCA perspective all psychological disturbances arise from believing that one is what one is not and denying who one truly is (Lambers, 2003a, 2003b, 2003c, 2003d), further studies should

examine the relationships with incongruence outcomes for which self-alienation was not found to have a significant incremental contribution and to disentangle its association with neuroticism, as well.

The differentiated findings could also result from the overall heterogeneity of distress in outpatients, greater variance in their styles of processing experiences (Warner, 2017) and the absence of data that could contextualize their current condition (such as, past and current adverse life events, baseline symptom levels and duration of their mental health problems, previous treatments, etc.), as well as the cross-sectional study design.

We can, however, reaffirm that self-alienation is a relevant explanatory factor associated with a wide range of symptom dimensions, even when it does not profoundly disrupt the functioning of the individual at the intra- and interpersonal level (as in the control group). Furthermore, taking into account the complex pathways and interconnected causes involved in the development and maintenance of clinical distress, it might not seem surprising that self-alienation was a stronger predictor of lower overall distress in the control sample (additionally, as previously discussed, neuroticism may act as a mediator). On the other hand, experiencing elevated distress may also lead to self-alienation by reducing awareness of one's physiological, emotional and cognitive experiences (Boyraz et al., 2014). So there is a need for prospective studies examining the potentially reciprocal relationship between specific aspects of authenticity and psychopathological processes.

With respect to clinical practice implications and considering that the outpatients were counselling clients, the findings suggest that an increase of self-knowledge, i.e., of congruence between actual and symbolized experiences needs to be a more explicit and direct goal of treatment as well as a measured outcome (Patterson, 2017). From a humanistic-experiential perspective, psychological symptoms are seen as cries for help, as expressions of loss of balance in the striving for authenticity and as key to understanding the person that is suffering (Schmid, 2005). Therefore, elevated

self-alienation in the clinical sample should not be interpreted as a psychological setback, but rather as an expression of the wish to understand oneself and of the preparedness to embark on a supported stage of authenticity development. In line with this, a recent study (Mørken, 2019), conducted concurrently with ours, has shown that the AS could be used as a measure of treatment evaluation. Hence, future research could also examine whether the promotion of authenticity during treatment can improve psychological functioning and overall well-being, irrespective of the therapeutic orientation and complement the focus on reduced symptoms as the primary outcome. This could also entail a shift in the narrative and a move closer to treatment in terms of authenticity and alienation, rather than health and disorder (Tudor & Worrall, 2006).

Despite the limitations of using a cross-sectional design, a restricted set of control variables and a heterogeneous outpatient sample, our findings contribute to the literature on authenticity and psychopathology, since this is a rare study conducted in clinical context with implications relevant both for the development and treatment of clinical distress. The findings also provide further psychometric and cross-cultural evidence on the utility of the Authenticity Scale. Given that elevated psychological distress and treatment involvement are not rare in community samples (Thurston et al., 2008), an additional strength of the study is the screening of the control group for mental health service use, thus providing stronger evidence on the discriminative ability of the measures used.

Conflict of interest

We have no conflicts of interest to disclose.

Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

References

- Akin, A., & Akin, U. (2014). Examining the relationship between authenticity and self-handicapping. *Psychological Reports, 115*(3), 795–804.
<https://doi.org/10.2466/09.PR0.115c26z1>
- Barrett-Lennard, G. T. (1998). *Carl Rogers' helping system: Journey and substance*. Sage.
- Blazhevska-Stoilkovska, B. & Naumova, K. (2020). Psychometric properties of the Brief Symptom Inventory in a clinical and nonclinical sample. *Psihologija: nauka i prakтика, IV*(7-8), 9–23. <https://doi.org/10.37509/psyscip207-8009bs>
- Boyras, G., & Kuhl, M. L. (2015). Self-focused attention, authenticity, and well-being. *Personality and Individual Differences, 87*, 70–75.
<https://doi.org/10.1016/j.paid.2015.07.029>
- Boyras, G., Waits, J. B., & Felix, V. A. (2014). Authenticity, life satisfaction, and distress: A longitudinal analysis. *Journal of Counseling Psychology, 61*(3), 498–505.
<https://doi.org/10.1037/cou0000031>
- Derogatis, L. R. (2017). Symptom Checklist-90-Revised, Brief Symptom Inventory, and BSI-18. In M. E. Maruish (Ed.), *Handbook of psychological assessment in primary care settings* (p. 599–629). Routledge/Taylor & Francis Group.
- Derogatis, L. R., & Melisaratos, N. (1983). The Brief Symptom Inventory: An introductory report. *Psychological Medicine, 13*(3), 595–605.
<https://doi.org/10.1017/S0033291700048017>
- Ernst, A.F., & Albers, C.J. (2017). Regression assumptions in clinical psychology research practice—a systematic review of common misconceptions. *PeerJ, 5*, e3323. <https://doi.org/10.7717/peerj.3323>
- Grégoire, S., Baron, L., Ménard, J., & Lachance, L. (2014). The Authenticity Scale: Psychometric properties of a French translation and exploration of its relationships with personality and well-being. *Canadian Journal of Behavioural Science / Revue Canadienne Des Sciences Du Comportement, 46*(3), 346–355. <https://doi.org/10.1037/a0030962>
- Grijak, D. (2017). Authenticity as a predictor of mental health. *Klinička Psihologija, 10*(1–2), 23–34. <https://doi.org/10.21465/2017-KP-1-2-0002>
- Harter, S. (2002). Authenticity. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 382–394). Oxford University Press.
- Horney, K. (1951). *Neurosis and human growth*. Routledge.

- Jeronimus, B. F., Kotov, R., Riese, H., & Ormel, J. (2016). Neuroticism's prospective association with mental disorders halves after adjustment for baseline symptoms and psychiatric history, but the adjusted association hardly decays with time: A meta-analysis on 59 longitudinal/prospective studies with 443 313 participants. *Psychological Medicine*, 46(14), 2883–2906. <https://doi.org/10.1017/S0033291716001653>
- John, O. P., & Srivastava, S. (1999). The Big Five Trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (pp. 102–138). Guilford Press.
- Joseph, S. (2017). Mental health and the person-centred approach. In S. Joseph (Ed.), *The handbook of person-centred therapy and mental health: Theory, research and practice* (pp. 12–23). PCCS Books.
- Kernis, M. H., & Goldman, B. M. (2006). A multicomponent conceptualization of authenticity: Theory and research. In *Advances in Experimental Social Psychology* (Vol. 38, pp. 283–357). Elsevier. [https://doi.org/10.1016/S0065-2601\(06\)38006-9](https://doi.org/10.1016/S0065-2601(06)38006-9)
- Lambers, E. (2003a). The person-centred perspective on psychopathology: The neurotic client. In D. Mearns (Ed.), *Developing person-centred counselling* (pp. 103–109). SAGE Publications Ltd. <https://www.doi.org/10.4135/9781446279779.n25>
- Lambers, E. (2003b). Borderline personality disorder. In D. Mearns (Ed.), *Developing person-centred counselling* (pp. 110–112). SAGE Publications Ltd. <https://www.doi.org/10.4135/9781446279779.n26>
- Lambers, E. (2003c). Psychosis. In D. Mearns (Ed.), *Developing person-centered counselling* (pp. 113–116). SAGE Publications Ltd. <https://www.doi.org/10.4135/9781446279779.n27>
- Lambers, E. (2003d). Personality disorder. In D. Mearns (Ed.), *Developing person-centered counselling* (pp. 117–120). SAGE Publications Ltd. <https://www.doi.org/10.4135/9781446279779.n28>
- Maltby, J., Wood, A. M., Day, L., & Pinto, D. (2012). The position of authenticity within extant models of personality. *Personality and Individual Differences*, 52(3), 269–273. <https://doi.org/10.1016/j.paid.2011.10.014>
- May, R. (1981). *Freedom and destiny*. Basic Books.
- Mørken, D. (2019). *The Authenticity Scale as an outcome measure for psychological therapies* [Doctoral dissertation, University of Roehampton]. UR Repository.

Retrieved from

<https://pure.roehampton.ac.uk/portal/en/studentTheses/the-authenticity-scale-as-an-outcome-measure-for-psychological-th>

Nartova-Bochaver, S., Reznichenko, S., & Maltby, J. (2021). The Authenticity Scale: Validation in Russian culture. *Frontiers in Psychology, 11*, 609617.

<https://doi.org/10.3389/fpsyg.2020.609617>

Ormel, J., Jeronimus, B. F., Kotov, R., Riese, H., Bos, E. H., Hankin, B., Rosmalen, J. G. M., & Oldehinkel, A. J. (2013). Neuroticism and common mental disorders: Meaning and utility of a complex relationship. *Clinical Psychology Review, 33*(5), 686–697. <https://doi.org/10.1016/j.cpr.2013.04.003>

Patterson, T. G. (2017). Assessing efficacy and effectiveness in person-centered therapy: challenges and opportunities. In S. Joseph (Ed.), *The handbook of person-centered therapy and mental health: Theory, research and practice* (pp.699–732). PCCS Books.

Pillow, D. R., Hale, W. J., Crabtree, M. A., & Hinojosa, T. L. (2017). Exploring the relations between self-monitoring, authenticity, and well-being. *Personality and Individual Differences, 116*, 393–398. <https://doi.org/10.1016/j.paid.2017.04.060>

Pinto, D. G., Maltby, J., Wood, A. M., & Day, L. (2012). A behavioral test of Horney's linkage between authenticity and aggression: People living authentically are less-likely to respond aggressively in unfair situations. *Personality and Individual Differences, 52*(1), 41–44. <https://doi.org/10.1016/j.paid.2011.08.023>

R Core Team (2020). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. Retrieved from <https://www.R-project.org/>

Robinson, O. C., Lopez, F. G., Ramos, K., & Nartova-Bochaver, S. (2013). Authenticity, social context, and well-being in the United States, England, and Russia: A three country comparative analysis. *Journal of Cross-Cultural Psychology, 44*(5), 719–737. <https://doi.org/10.1177/0022022112465672>

Rogers, C. R. (1954). *Client-Centered Therapy: Its current practice, implications, and theory*. Houghton Mifflin

Rogers, C. R. (1957). The necessary and sufficient conditions of therapeutic personality change. *Journal of Consulting Psychology, 21*(2), 95–103. <https://doi.org/10.1037/h0045357>

Rogers, C. R. (1961). *On becoming a person: A therapist's view of psychotherapy*. Constable.

Rogers, C. R. (1980). *A way of being*. Houghton Mifflin.

- Rosseel, Y. (2012). Lavaan: An R Package for Structural Equation Modeling. *Journal of Statistical Software*, 48, 1–36. <https://doi.org/10.18637/jss.v048.i02>
- Satici, S. A., Kayis, A. R., & Akin, A. (2013). Predictive role of authenticity on psychological vulnerability in Turkish university students. *Psychological Reports*, 112(2), 519–528. <https://doi.org/10.2466/02.07.PRO.112.2.519-528>
- Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research*, 8(2), 23–74.
- Schmid, P. F. (2005). Authenticity and alienation: Towards an understanding of the person beyond the categories of order and disorder. In S. Joseph & R. Worsley (Eds.), *Person-centered psychopathology* (pp. 75–90). PCCS Books.
- Slabu, L., Lenton, A. P., Sedikides, C., & Bruder, M. (2014). Trait and State authenticity across cultures. *Journal of Cross-Cultural Psychology*, 45(9), 1347–1373. <https://doi.org/10.1177/0022022114543520>
- Smallenbroek, O., Zelenski, J. M., & Whelan, D. C. (2017). Authenticity as a eudaimonic construct: The relationships among authenticity, values, and valence. *The Journal of Positive Psychology*, 12(2), 197–209. <https://doi.org/10.1080/17439760.2016.1187198>
- Stevens, F. L. (2016). Authenticity: A mediator in the relationship between attachment style and affective functioning. *Counselling Psychology Quarterly*, 30(4), 392–414. <https://doi.org/10.1080/09515070.2016.1176010>
- Thurston, I.B., Curley, J., Fields, S., Kamboukos, D., Rojas, A., & Phares, V. (2008). How nonclinical are community samples? *Journal of Community Psychology*, 36(4), 411–420. <https://doi.org/10.1002/jcop.20223>
- Tudor, K., & Worrall, M. (2006). *Person-Centred Therapy*. Routledge. <https://doi.org/10.4324/9780203965252>
- Warner, M. (2017). A person-centred view of human nature, wellness and psychopathology. In S. Joseph (Ed.), *The handbook of person-centred therapy and mental health: Theory, research and practice* (pp.151–188). PCCS Books.
- Wilkins, P. (2017). Assessment and 'diagnosis' in person-centered therapy. In S. Joseph (Ed.), *The handbook of person-centered therapy and mental health: Theory, research and practice* (pp.217–246). PCCS Books.
- Winnicott, D. W. (1965). *The maturational processes and the facilitating environment*. International Universities Press.

Wood, A. M., Linley, P. A., Maltby, J., Baliousis, M., & Joseph, S. (2008). The authentic personality: A theoretical and empirical conceptualization and the development of the Authenticity Scale. *Journal of Counseling Psychology, 55*(3), 385–399. <https://doi.org/10.1037/0022-0167.55.3.38>

Yalom, I. D. (1980). *Existential psychotherapy*. Basic Books.

.....

Relevantnost autentičnosti za klinički distress: reafirmacija uloge samootuđenja

Katerina Naumova¹  i Florijan Naumov²

¹ Odsek za psihologiju, Filozofski fakultet, Univerzitet Sveti Ćirilo i Metodije, Skoplje, Severna Makedonija

² Univerzitetska Klinika za psihijatriju, Medicinski fakultet, Univerzitet Sveti Ćirilo i Metodije, Skoplje, Severna Makedonija

SAŽETAK

Nekoliko teorijskih perspektiva u psihologiji savetovanja tvrde da autentičnost treba da bude primarni cilj tretmana, dok su otuđenje od sebe definisali kao osnovni uzrok distresa i psihopatološke patnje. Nedavni empirijski nalazi pokazuju da tripartitni model dispozicijske autentičnosti, zasnovan na Rogersovoj teoriji usmerenoj na osobu, uspešno predviđa mentalno blagostanje. Uzimajući u obzir nedostatak istraživanja na kliničkim uzorcima, ova studija je ispitivala unikatni doprinos autentičnosti kao osobine u predikciji distresa kod ambulantnih pacijenata upućenih na savetovanje ($N = 105$; 58% ženskog pola, uzrasta 18-65 godina) i kod demografski izjednačenih kontrolnih ispitanika ($N = 102$; 62% ženskog pola, uzrasta 18-52 godine). Kod većine ambulantnih pacijenata dijagnostikovani su anksiozni poremećaji i/ili poremećaji raspoloženja, dok su kontrolni ispitanici prošli kroz skrining za korišćenje usluga za mentalno zdravlje. Rezultati su pokazali veće samootuđenje i prihvatanje spoljašnjih uticaja u kliničkom uzorku, kao i izraženiji neuroticizam, ali i simptomatski i generalni distress u odnosu na kontrolnu grupu. Jedino je samootuđenje dalo unikatni doprinos u predikciji kliničkog distresa kod ambulantnih pacijenata, nakon kontrole efekta

neuroticizma, potvrđujući tako pretpostavku da što je veće neslaganje između iskustava i njihove simbolizacije, to je veći rizik od psihološke disfunkcije. Nalazi su dalje ukazali na različitu ulogu samootuđenja u odnosu na intenzitet doživljenog distresa, kao i na potrebu za ispitivanjem kauzalne veze sa neuroticizmom. Razmatraju se i implikacije u odnosu na kliničku praksu i na merenje autentičnosti kao ishod tretmana.

Ključne reči: autentičnost, samootuđenje, teorija usmerena na osobu, psihološki distres



Research Article

Effect of the Dark Tetrad on Emotional Intelligence

Katarina Sokić ¹  

¹ *Oxford Business College, Oxford, United Kingdom*

ABSTRACT

The main aim of this study was to investigate the relationships between Dark Tetrad traits (Machiavellianism, narcissism, psychopathy and sadism) and ability emotional intelligence dimensions – self-emotion appraisal, others' emotion appraisal, use of emotion and regulation of emotion. The Wong and Law Emotional Intelligence Scale, Short Dark Triad and Assessment of Sadistic Personality were applied to a sample of 322 participants from the general population (63% women) of Croatia. Results showed that both psychopathy and sadism had negative relations with emotional intelligence. Sadism showed significant effects on self-emotion appraisal, others' emotion appraisal, and use of emotion dimensions, while psychopathy showed significant effect on regulation of emotion. Machiavellianism negatively correlated to a weaker degree with self-emotion appraisal and others' emotion appraisal, but it showed no significant effects on emotional intelligence dimensions in regression analysis. Narcissism showed positive effects on EI as a whole, use of emotion and self-emotion appraisal. The results highlighted the importance of the dark traits in the explanation of emotional intelligence and showed that the dark traits are differently associated with emotional intelligence dimensions.

Keywords: dark traits, psychopathy, Machiavellianism, narcissism, sadism, emotional intelligence

UDC: 159.923:159.942

DOI: 10.19090/pp.2022.1.28-49

Received: 17.09.2021.

Revised: 30.11.2021.

Accepted: 27.12.2021.



Copyright © 2022 The Author(s).

This is an open access article distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

✉ Corresponding author e-mail: katarina.sokić@oxfordbusinesscollege.ac.uk

Introduction

Emotional intelligence (EI) is the “ability to reason validly with emotions and with emotion-related information and to use emotions to enhance thought” (Mayer et al., 2016, p. 296). Salovey & Mayer (1990) considered EI to be an aspect of personal intelligence related to feelings. Personal intelligence includes knowledge about the self and about others, and accordingly, it is divided into inter and intrapersonal intelligence (Gardner, 1983). Model of EI of Mayer & Salovey (1997) is also known as the cascading model (Joseph, & Newman, 2010), and it includes four dimensions of EI: emotion perception, emotion understanding, emotion facilitation, and emotion regulation. Based on this model, Wong & Low (2002) developed a four-factor self-report EI measure (The Wong and Law Emotional Intelligence Scale - WLEIS) composed of four dimensions: a) appraisal and expression of emotion in the self, which reflects the ability to understand and express self-emotions, b) appraisal and recognition of emotion in others, which represents the ability to detect and understand others' emotions, c) regulation of emotion in the self, which encompasses the abilities to regulate self-emotions and successfully recover from emotional distress, and d) use of emotion to facilitate performance, which reflects the ability to use emotions to promote constructive behaviors and better personal performance.

People with developed emotional intelligence use emotions and moods to induce adaptive behavior. Appraising emotions in others and empathy could help individuals in assessing the affective reactions of others and in choosing socially adaptable behaviors. Also, emotion regulation skills lead to adaptive states of mood. However, in antisocial individuals, emotional regulation may lead to manipulative behavior such as manipulative scenarios or manipulation to others in order to achieve illicit goals (Salovey & Mayer, 1990).

The alternative concept of EI considers EI to be a set of affected-related personality traits like assertiveness, adaptability, empathy (Anglim et al., 2020; Pérez et al., 2005; Van Rooy & Viswesvaran, 2004). According to this

concept, EI is defined as “a constellation of emotion-related self-perceptions and dispositions located at the lower levels of personality hierarchies” (Petrides et al., 2007, p. 26). The results of meta-analyses showed that correlations between trait EI concept and ability EI concept are low ($r = .26$, see Joseph & Newman, 2010). Therefore, in the present study, ability-based model of EI will be used in line with the original proposal by Salovey & Mayer (1990).

The EI is often explored within the models of basic personality traits (i.e., Big Five and HEXACO model of personality). In the studies which used ability EI model (e.g., Shi & Wang, 2007; Wong & Law, 2002), the results indicated that self-emotion appraisal, others’ emotion appraisal, use of emotion, and EI total score moderately negatively correlated with Big Five Neuroticism, while only others’ emotion appraisal had negative and low correlation with Extraversion. EI total score, use of emotion and regulation of emotions dimensions had low positive correlation with Openness. EI total score, others’ emotion appraisal and regulation of emotions dimensions had low to moderate positive correlation with Conscientiousness and Agreeableness. Also, EI total score and all EI dimensions, except regulation of emotions, had low to moderate positive correlations with Conscientiousness (Shi & Wang, 2007; Wong & Law, 2002). Other studies that used trait EI models, showed that EI subdimensions highly positively correlated with HEXACO dimensions of Extraversion, Conscientiousness and Agreeableness (Austin & Vahle, 2016; Veselka et al., 2010). Facet-level correlations from a recent study (Anglim et al., 2020) thoroughly explained this connection; it has been shown that the Social Self-Esteem and Liveliness facet of Extraversion strongly correlated with some components of trait EI such as managing one’s own emotions.

Emotional intelligence and dark traits

In recent years, there has been a growing interest in examining the relationship between emotional intelligence and socially undesirable traits named dark traits (Ali et al., 2009; Dinić et al., 2021; Michels, & Schulze, 2021;

Schreyeret al., 2021). These traits are encompassed in the constructs of the Dark Triad and the Dark Tetrad. The Dark Triad constitutes Machiavellianism, subclinical narcissism and subclinical psychopathy. Machiavellianism involves a person's strong tendency to manipulate, and is often accompanied by a lack of empathy, lower levels of affect, a focus on pursuing one's own goals and an abnormal view of morality (Spain et al., 2014). O'Connor & Athota (2013) found that Agreeableness mediated the relationship between EI and Machiavellianism; individuals high in EI showed low levels of Machiavellianism because they are more agreeable but not emotionally competent. Furthermore, a high level of EI can be related to high Machiavellianism, when Agreeableness is low.

The main features of narcissism are a grandiose sense of self-importance (e.g., overemphasis on one's own achievements and talents, expectation to be recognized as superior even without real achievements), preoccupation with fantasies about one's own boundless success, power, excellence and beauty (Wright et al., 2013). Psychopathy is a constellation of interpersonal, affective and antisocial characteristics often in the context of chronic antisocial and socially deviant behavior (Hare, 2003). In addition to the Dark Triad, sadism was included to form the Dark Tetrad. Sadism is the tendency to seek pleasure or dominance by inflicting suffering, pain and humiliation on others (Myers et al., 2006). Sadism reflects a tendency to enjoy inflicting pain and suffering on others and refers to the cruel, demeaning or aggressive behavior towards others in an effort to humiliate and dominate them (Plouffe et al., 2017).

Recent meta-analyses (Miao et al., 2019; Michels & Schulze, 2021; Vize et al., 2018) examined relationships between the Dark Triad traits and EI respecting two dominant models of EI: the ability model based on Mayer and Salovey's four-branch model (Mayer & Salovey, 1997), and the personality EI model (Neubauer & Freudenthaler, 2005; Pérez et al., 2005; Petrides et al., 2011). The meta-analysis conducted by Miao et al. (2019) showed that overall EI, ability and trait, were significantly negatively related to Machiavellianism and psychopathy and that overall EI, ability and trait, were not related to

narcissism. In contrast, the meta-analysis conducted by Michels & Schulze (2021) has shown that narcissism was positively related to trait EI and negatively related to ability EI. Further, Machiavellianism and psychopathy were negatively related to both ability EI and trait EI. The meta-analysis by Vize et al. (2018) indicated that both psychopathy and Machiavellianism had low to moderate negative correlation with EI, and narcissism was significantly positively related to EI. In contrast, recent study has shown that trait EI positively correlated with narcissism, negatively with Machiavellianism, and, surprisingly, was unrelated to psychopathy and sadism (Schreyer et al., 2021).

In view of these contradictory findings and given that the role of sadism in the prediction of EI has not been sufficiently examined, one aim of this study was to contribute to a better understanding of these relationships. We were particularly interested in whether there is a strong association of EI with sadism, given recent debate in the literature about the justification for including sadism as a different dark personality trait and whether sadism is an improvement over the Dark Triad. (Book et al., 2016; Dinić et al., 2021; Dinić et al., 2020; Dinić & Jevremov, 2019; Foulkes, 2019; Furnham & Horne, 2021). Namely, some authors consider sadism a conduct disorder (Myers et al., 2006) or just one psychopathy facet since psychopathy and sadism had similar patterns of relationships with HEXACO traits (Book et al., 2016). However, some recent studies have shown that the inclusion of sadism contributes to better elucidation of profiles more prone to sadism (Dinić et al., 2020). Furthermore, sadism has shown uniqueness among the Dark Tetrad, and it is not justified to consider it redundant (Dinić et al., 2020; Međedović & Petrović, 2015).

Objectives and hypotheses

The main aim of this study was to investigate the relations between emotional intelligence dimensions and Dark Tetrad traits. In this study, four-factor ability model of EI based on the Wong and Low questionnaire (2002) was used, which represents an operationalization of Salovey & Mayer's (1990) conceptualization of EI. Based on the theory that EI involves the abilities to

properly understand, use and regulate emotions (Mayer et al., 2016), and empirical evidence that empathic deficit and callousness are core of Dark Tetrad traits, especially psychopathy and sadism (Ali et al., 2009; Dinić et al., 2020; Međedović & Petrović, 2015; Paulhus, 2014), we expect that psychopathy and sadism negatively correlate with the overall score of EI and all the subdimensions of EI. Since Machiavellianism involves manipulateness and the callousness exploitation of others for one's own ends (Spain et al., 2014), and with prior research showing negative associations of Machiavellianism and EI dimensions (Miao et al., 2019; Vize et al., 2018), we expect negative relations between Machiavellianism and emotion appraisal in self and in others. Since narcissism is connected to prosocial traits such as high extraversion and low selfishness (Book et al., 2015; Malesza & Kalinowski, 2019; Papageorgiou, 2019), and on the basis of prior evidence (Vize et al., 2018), we expect positive associations between narcissism dimensions of EI related to appraisal and expression of emotions in the self and use of emotions.

Method

Participants and Procedure

The original sample included 361 participants. Questionnaire data for 39 participants were excluded from analyses due to missing data, and thus, the final sample comprised 322 participants. Out of the total sample ($N = 322$), 202 participants declared themselves females, 118 declared themselves males, and 2 declared to be other. Participants were from Croatia, aged between 20 and 68 ($M = 37.45$, $SD = 11.07$). Participants did not receive a fee to participate in the survey. The size of our sample was above the minimum of 250 recommended for correlational studies by Schönbrodt & Perugini (2013). Data were collected online from the general population on a convenient sample during the spring of 2020. The study protocol was approved by the Ethics Committee from the Department of Psychology, Faculty of Humanities and Social Sciences, University of Zagreb.

Measures

Wong and Law Emotional Intelligence Scale

The Wong and Law Emotional Intelligence Scale (WLEIS; Wong & Law, 2002, for Croatian adaptation see Sokić & Horvat, 2019) is a short 16-item measure of emotional intelligence as an ability. WLEIS measures four dimensions of emotional intelligence: self-emotion appraisal (SEA; e.g., "I have good understanding of my own emotions."), others' emotion appraisal (OEA; e.g., "I always know my friends' emotions from their behavior."), use of emotion (UOE; e.g., "I always tell myself I am a competent person"), and regulation of emotion (ROE, e.g., "I can always calm down quickly when I am very angry."). Participants were asked to rate the extent to which each item applied to them on a 7-point scale from 1 = *strongly disagree* to 7 = *strongly agree*. A higher mean score indicates a higher degree of EI.

The Short Dark Triad

The Short Dark Triad (SD3; Jones & Paulhus, 2014, for Croatian adaptation see Wertag et al., 2011) was developed to capture three dark traits: Machiavellianism, narcissism, and psychopathy. The instrument consists of 27 items scored on a 5-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*, with 9 items devoted to each of the three scales. Example items include: "Avoid direct conflict with others because they may be useful in the future." (Machiavellianism), "People see me as a natural leader." (narcissism), and "Payback needs to be quick and nasty." (psychopathy).

The Assessment of Sadistic Personality

The Assessment of Sadistic Personality (ASP; Plouffe et al., 2017) assesses sadism and consists of 9 items (e.g., "Being mean to others can be exciting."). Participants were asked to what extent they agree with each item on a 5-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. A maximum-likelihood confirmatory factor analysis (CFA) in AMOS Version 26 was conducted in order to test unidimensionality of the ASP. The model is acceptable when Comparative Fit Index (*CFI*) > .90, Tucker-Lewis

Index (TL) > .90, Root Mean Square Error of Approximation ($RMSEA$) < .08, and Standardized Root Mean Squared Residual ($SRMR$) < .08 (Brown, 2006). CFA showed good fit for the ASP model: $\chi^2(27) = 132.12$; $p < .001$; $CFI = .91$; $TLI = .94$, $RMSEA = .07$, and $SRMR = .04$.

Data Analyses

To quantify bivariate relationships between the subscales and total score of EI and dark traits, zero-order correlations (Pearson's r) were calculated. To predict EI subscales and total score based on Dark Tetrad, five hierarchical multiple regression analyses were performed. Gender and age were included as a control variable in the 1st step, and scores on four Dark Tetrad scales were entered in the 2nd step.

Results

Descriptive statistics and bivariate correlations

Descriptives and alpha reliabilities for all scales are reported in Table 1. All scales demonstrated an adequate alpha coefficient of reliability. In line with previous findings (Kong, 2017; Extremera Pacheco et al., 2019; Sokić & Horvat, 2019), in this study alphas for all WLAIS scales ranged from .85 to .92. The reliability of the Short Dark Triad and the Assessment of Sadistic Personality were acceptable and consistent with those reported in the previous literature (Jones & Paulhus, 2014; Plouffe et al., 2017). Skewness and kurtosis for all scales were within the recommended values for normal distribution (between -2 to +2, see Gravetter & Wallnau, 2014). Mean scores on EI dimensions were similar to data presented in the previous findings (Sokić & Horvat, 2019) indicating that the majority of participants have pronounced abilities to recognize their own and others' emotions as well as regulation and use of emotions. Means scores on Machiavellianism and narcissism were in line with earlier findings (Dinić et al., 2020; Gojković et al., 2019; Paulhus et al., 2021; Plouffe et al., 2017; Schreyer et al., 2021).

Table 1*Descriptive statistics and alpha reliabilities*

Variable	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>	<i>Sk</i>	<i>Ku</i>	α
Self-emotion appraisal	7	28	23.45	3.53	-1.29	1.25	.86
Others' emotion appraisal	7	28	22.43	3.81	-1.30	1.23	.85
Use of emotion	4	28	21.76	4.49	-1.17	1.76	.87
Regulation of emotion	4	28	20.91	4.72	-1.17	1.48	.92
El total score	35	111	88.09	13.17	-1.40	1.94	.92
Machiavellianism	10	45	24.86	6.16	0.38	0.28	.81
Narcissism	9	42	24.61	5.33	-0.24	0.71	.73
Psychopathy	9	39	17.94	5.24	0.65	0.48	.75
Sadism	9	36	14.21	5.31	1.34	1.81	.84

Table 2 presents simple bivariate (zero-order) correlations between all measured variables. Bivariate correlations between the EI subscales were moderate to large, indicating partial overlap among them. Within Dark Tetrad traits, sadism had small to moderate correlations with narcissism and Machiavellianism, and large correlation with psychopathy. Machiavellianism had moderate positive correlations with narcissism and psychopathy, and psychopathy had small positive correlations with narcissism, which is consistent with the previous studies (Lee, 2019; Paulhus et al., 2021; Plouffe, 2017).

Bivariate correlations between the EI dimensions and Dark Tetrad traits partially supported our hypothesis. Consistent with the prediction, both psychopathy and sadism showed negative correlations with EI total score and self-emotion appraisal, others' emotion appraisal and use of emotion subscales, but not with regulation of emotion subscale. As predicted, Machiavellianism negatively correlated to a weaker degree with self-emotion

appraisal and others' emotion appraisal subscales. Narcissism showed positive bivariate correlations with EI as a whole and with use of emotion subscale. Contrary to our prediction, narcissism was not connected with self-emotion appraisal and others' emotion appraisal subscales.

Table 2

Bivariate correlations

Variable	1	2	3	4	5	6	7	8
1. Self-emotion appraisal								
2. Others' emotion appraisal	.62***							
3. Use of emotion	.50***	.37***						
4. Regulation of emotion	.48***	.36***	.53***					
5. EI total score	.80***	.73***	.79***	.79***				
6. Machiavellianism	-.21**	-.12*	.07	-.02	-.10			
7. Narcissism	.06	-.00	.37***	.11	.20**	.28***		
8. Psychopathy	-.24**	-	-.03	-.19**	-	.54***	.29***	
		.26***			.22**			
9. Sadism	-	-	-.06	-.13**	-	.44***	.21***	.69***
	.27***	.25***			.25**			

*** $p < .001$. ** $p < .01$. * $p < .05$.

Prediction of emotional intelligence based on Dark Tetrad traits

Participants' scores on four EI subscales regressed on Dark Tetrad traits with gender and age included as control variables in each case at the 1st step (Table 3). Dark Tetrad traits together accounted for additional 9% of the variance in the self-emotion appraisal ($\Delta F[4, 315] = 4.22, p < .01$), 7% of the additional variance in others' emotion appraisal ($\Delta F[4, 315] = 5.33, p < .001$), 19% of the additional variance in the use of emotion ($\Delta F[4, 315] = 16.08, p <$

.001), 9% of the additional variance in the regulation of emotion ($\Delta F[4, 315] = 4.97, p < .001$), and 14% of the additional variance in the EI total ($\Delta F[4, 315] = 7.12, p < .001$).

Sadism uniquely negatively predicted self-emotion appraisal, others' emotion appraisal and use of emotion, while psychopathy showed independent negative associations with the regulation of emotion subscale. Narcissism uniquely positively predicted self-emotion appraisal, use of emotion and regulation of emotion, with dominant prediction in the case of use of emotion. Machiavellianism showed no significant contribution to the prediction of EI subscales.

Table 3

Standardized beta coefficients of the Dark Tetrad traits in predicting emotional intelligence scale and subscales

	Self- emotion appraisal	Others' emotion appraisal	Use of emotion	Regulation of emotion	EI total
	β	β	β	β	β
<i>Step 1</i>					
Gender	.07	.18**	-.02	-.05	.06
Age	.09	.03*	-.06	.04	.06
R^2	.01	.03	.00	.00	.01
<i>Step 2</i>					
Gender	-.02	.09	.01	-.11	.00
Age	.08	.03	.00	.08	.08
Machiavellianism	-.03	.05	.09	.09	.11
Narcissism	.15*	.09	.43***	.16*	.29***
Psychopathy	-.09	-.11	-.05	-.28***	-.16*
Sadism	-.23*	-.22**	-.17*	-.10	-.22**
ΔR^2	.09**	.07***	.19***	.09***	.13***
Total R^2	.10**	.10***	.19***	.10***	.14***

* $p < .05$, ** $p < .01$, *** $p < .001$.

Discussion

This study aimed to investigate the relations of emotional intelligence dimensions (self-emotion appraisal, others' emotion appraisal, use of emotion and regulation of emotion) and Dark Tetrad traits (Machiavellianism,

narcissism, psychopathy and sadism). The results from this study support most of the proposed hypotheses.

The bivariate correlation analyses showed small-to-medium effect sizes between EI dimensions and Dark Tetrad traits. Our results are in line with the previous findings that have shown negative relations between EI and Machiavellianism, psychopathy and sadism, as well as positive relations between EI and narcissism (Michels & Schulze, 2021; Petrides et al., 2011; Plouffe et al., 2017; Vize et al., 2018). Thus, narcissism uniquely positively predicted measures of adaptive function and emotional stability (adequate use and regulation of emotion), in line with the view that narcissism includes elements of adaptivity when not accompanied by high levels of the other three dark personality traits.

However, although the association between Machiavellianism and total score on the EI scale was negative, contrary to predictions, this relation was not significant ($r = -.10$, $p = .17$). As expected, Machiavellianism, psychopathy and sadism were negatively correlated with the self-emotion appraisal dimension of EI. The negative associations between them were consistent with the studies showing that these dark traits were related to low emotionality (Akram & Stevenson, 2021; Plouffe, 2017; Schreyer et al., 2021). These results are in line with the theoretical assumptions that Machiavellianism, psychopathy and sadism entail an emotional coldness and low emotionality (Međedović & Petrović, 2015; Paulhus & Williams, 2002). Contrary to our hypothesis, narcissism was unrelated to the self-emotion appraisal dimension. This result is in accordance with the previous studies which showed that overall EI and ability EI were not related to narcissism (Miao et al., 2019), and in line with a view that narcissistic individuals are self-destructive having reduced empathy, and more interested in their own success and status than in emotional closeness to others (Malesza et al., 2019).

Expected negative correlations of Machiavellianism, psychopathy and sadism with others' emotion appraisal confirmed theoretical assumptions that low empathy is a central element of all Dark Triad traits (Dinić et al., 2020; Paulhus & Williams, 2002; Plouffe et al., 2017). Also, these findings are in line

with the theoretical construct of EI by which appraising and expressing emotions in others include empathy and non-verbal perception (Salovey & Mayer, 1990). Narcissism was unrelated to others' emotion appraisal, which is in line with the findings that narcissists are not interested in other people (Park et al., 2014). Following our hypothesis, the results of this study confirmed positive associations between narcissism and use of emotion, but the expected negative association between psychopathy and sadism and use of emotion was not confirmed. Utilization of emotion reflects the ability to use emotions in adaptive ways including flexible planning, creative thinking, redirected attention, and motivation (Salovey & Mayer, 1990). We assume that our findings are due to narcissists' ability to position themselves in a positive light in an overconfident way (Jones & Paulhus 2011). The absence of the expected negative association of psychopathy with use of emotion may be due to measuring psychopathy as a one-dimensional construct that does not separate the characteristics of primary psychopathy characterized by callousness and manipulateness and secondary psychopathy involving impulsivity and deviant behavior (Levenson et al, 1995; Lykken, 1995). It should be noted that sadism did not show zero-order relationships with use of emotion; expected negative association emerged only after controlling for the variance in sadism shared with the other three dark traits. Consistent with the expectations, psychopathy and sadism were negatively correlated with the regulation of emotion. This EI subscale measures the ability to adequately regulate emotions and successfully recover from emotional distress (Wong & Law, 2002). The results are consistent with our hypothesis based on the conception of psychopathy and sadism as involving deficient emotional and behavioral restraint, high behavioral impulsivity, impulsive thrill-seeking and aggression (Foulkes, 2019; Međedović & Petrović, 2015).

These findings must be considered bearing some limitations in mind. Firstly, participants were recruited online, and study sample consisted of general population, rather than offenders, forensic and clinical or another more homogeneous pattern sample. This way of conducting research greatly reduces the possibility of sample control so that, in fact, we do not know

whether the data on sociodemographic characteristics are true. Although such a sample may be appropriate for the investigation of continuous relations between dark tetrad traits and emotional intelligence dimensions, additional studies with other samples are needed. Therefore, although our findings provide preliminary support, they cannot be generalized to the other populations. Although such a sample may be appropriate for the investigation of continuous relations between Dark Tetrad traits and emotional intelligence dimensions, additional studies with other samples are needed. Next, the present study employed short self-report measures of the Dark Triad and emotional intelligence, which could have affected socially desirable responsiveness in an effort to present themselves in a favorable light. Moreover, associations between EI and dark triad measures are complex and different on the facet level (Walker et al., 2021). The authors emphasize that grandiose and vulnerable narcissism should be considered separately rather than combined into a total score because grandiose narcissism is positively related to EI, while vulnerable narcissism negatively related to EI. Also, Walker et al., (2021) indicate that primary psychopathy is positively related to EI but secondary psychopathy is negatively related to EI. Therefore, future empirical research on the relationship between the dark traits and EI should be conducted focusing on facet-level analysis. For further clarifying the nature of dark personality traits and their links to emotional intelligence, it is necessary to use other measures of these psychological constructs.

Despite these limitations, our findings confirmed that sadism and psychopathy have a strong maladaptive potential and therefore represent a high risk factor for establishing normal interpersonal relationships, both for intimate and working life. Also, our findings indicated that narcissism has adaptive potential in promote constructive, social desirable behaviors.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Conflicting Interests

We have no conflicts of interest to disclose.

Data availability statement

The data that support the findings of this study are available from the author, upon reasonable request.

References

- Akram, U., & Stevenson, J. C. (2021). Self-disgust and the dark triad traits: The role of expressive suppression. *Personality and Individual Differences, 168*, 110296. <https://doi.org/10.1016/j.paid.2020.110296>
- Ali, F., Amorim, I. S., & Chamorro-Premuzic, T. (2009). Empathy deficits and trait emotional intelligence in psychopathy and Machiavellianism. *Personality and Individual Differences, 47*(7), 758–762. <https://doi.org/10.1016/j.paid.2009.06.016>
- Anglim, J., Morse, G., Dunlop, P. D., Minbashian, A., & Marty, A. (2020). Predicting trait emotional intelligence from HEXACO personality: Domains, facets, and the general factor of personality. *Journal of Personality, 88*, 324–338. <https://doi.org/10.1111/jopy.12493>
- Austin, E. J., & Vahle, N. (2016). Associations of the Managing the Emotions of Others Scale (MEOS) with HEXACO personality and with trait emotional intelligence at the factor and facet level. *Personality & Individual Differences, 94*, 348–353. <https://doi.org/10.1016/j.paid.2016.01.047>
- Book, A., Visser, B. A., Blais, J., Hosker-Field, A., Methot-Jones, T., Gauthier, N. Y., & D'Agata, M. T. (2016). Unpacking more “evil”: What is at the core of the dark tetrad? *Personality and Individual Differences, 90*, 269–272. <https://doi.org/10.1016/j.paid.2015.11.009>
- Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. New York, NY: Guilford Publication.
- Dinić, B. M., & Jevremov, T. (2019). Trends in research related to the Dark Triad: A bibliometric analysis. *Current Psychology, 40*, 3206–3215. <https://doi.org/10.1007/s12144-019-00250-9>
- Dinić, B. M., Wertag, A., Sokolovska, V., & Tomašević, A. (2021). The good, the bad, and the ugly: Revisiting the Dark Core. *Current Psychology*. <https://doi.org/10.1007/s12144-021-01829-x>

- Dinić, B. M., Wertag, A., Tomašević, A., & Sokolovska, V. (2020). Centrality and redundancy of the Dark Tetrad traits. *Personality and Individual Differences*, 109621. <https://doi.org/10.1016/j.paid.2019.109621>
- Extremera Pacheco, N., Rey, L., & Sánchez-Álvarez, N. (2019). Validation of the Spanish version of the Wong Law Emotional Intelligence Scale (WLEIS-S). *Psicothema*, 31(1), 94–100. <https://doi.org/10.7334/psicothema2018.147>
- Foulkes, L. (2019). Sadism: Review of an elusive construct. *Personality and Individual Differences*, 151, 109500. <https://doi.org/10.1016/j.paid.2019.07.010>
- Furnham, A., & Horne, G. (2021). The Tetradic Heart of Darkness: Comparing three dark-side instruments. *Personality and Individual Differences*, 179, 110918. <https://doi.org/10.1016/j.paid.2021.110918>
- Gardner, H. (1983). *Frames of Mind*, Basic Books: New York.
- Gojković, V., Dostanić, J., Đurić, V. (2019). The Dark Triad, Amoralität, and Impulsivity. *Psihologija*, 52(1), 53–73. <https://doi.org/10.2298/PSI170803028G>
- Gravetter, F. i Wallnau, L. (2014). *Essentials of statistics for the behavioral sciences* (8th edition). Belmont, CA: Wadsworth.
- Hare, R. D. (2003). *The Hare Psychopathy Checklist-Revised (2nd ed.)*. Toronto, Ontario, Canada: Multi-Health Systems.
- Jones, D. N., & Paulhus, D. L. (2011). The role of impulsivity in the Dark Triad of personality. *Personality and Individual Differences*, 51, 679–682. <https://doi.org/10.1016/j.paid.2011.04.011>
- Jones, D. N., & Paulhus, D. L. (2014). Introducing the Short Dark Triad (SD3) a brief measure of dark personality traits. *Assessment*, 21, 28–41. <https://doi.org/10.1177/1073191113514105>
- Joseph, D. L., & Newman, D. A. (2010). Emotional intelligence: An integrative meta-analysis and cascading model. *Journal of Applied Psychology*, 95, 54–78. <https://doi.org/10.1037/a0017286>
- Kong, F. (2017). The validity of the Wong and Law Emotional Intelligence Scale in a Chinese sample: Tests of measurement invariance and latent mean differences across gender and age. *Personality and Individual Differences*, 116, 29–31. <https://doi.org/10.1016/j.paid.2017.04.025>
- Lee, S. A. (2019). The Dark Tetrad and callous reactions to mourner grief: Patterns of annoyance, boredom, entitlement, schadenfreude, and humor. *Personality and Individual Differences*, 137, 97–100. <https://doi.org/10.1016/j.paid.2018.08.019>

- Levenson, M. R., Kiehl, K. A., & Fitzpatrick, C. M. (1995). Assessing psychopathic attributes in a noninstitutionalized population. *Journal of Personality and Social Psychology*, *68*(1), 151–158. <https://doi.org/10.1037/0022-3514.68.1.151>
- Lykken, D. T. (1995). *The antisocial personalities*. Hillsdale, NJ: Erlbaum.
- Malesza, M., & Kalinowski, K. (2019). Willingness to share, impulsivity and the Dark Triad traits. *Current Psychology*, *40*, 3888–3896. <https://doi.org/10.1007/s12144-019-00351-5>
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Implications for educators* (pp. 3–34). New York, NY: Basic Books
- Mayer, J. D., Caruso, D. R., & Salovey, P. (2016). The ability model of emotional intelligence: Principles and updates. *Emotion Review*, *8*, 290–300. <https://doi.org/10.1177/1754073916639667>
- Međedović, J., & Petrović, B. (2015). The dark tetrad: Structural properties and location in the personality space. *Journal of Individual Differences*, *36*, 228–236. <https://doi.org/10.1027/1614-0001/a000179>
- Miao, C., Humphrey, R. H., Qian, S., & Pollack, J. M. (2019). The Relationship between Emotional Intelligence and the Dark Triad Personality Traits: A Meta-Analytic Review, *Journal of Research in Personality*, *78*, 189–197. <https://doi.org/10.1016/j.jrp.2018.12.004>
- Michels, M., & Schulze, R. (2021). Emotional intelligence and the dark triad: A meta-analysis. *Personality and Individual Differences*, *180*, 10961. <https://doi.org/10.1016/j.paid.2021.110961>
- Myers, W. C., Burket, R. C., & Husted, D. S. (2006). Sadistic personality disorder and comorbid mental illness in adolescent psychiatric inpatients. *Journal of the American Academy of Psychiatry and the Law Online*, *34*(1), 61–71.
- Neubauer, A. C., & Freudenthaler, H. H. (2005). Models of emotional intelligence. In R. Schulze, & R. D. Roberts (Eds.), *Emotional intelligence: An international handbook* (pp. 31–50). Cambridge, WA: Hogrefe & Huber.
- O'Connor, P. J., & Athota, V. S. (2013). The intervening role of agreeableness in the relationship between trait emotional intelligence and Machiavellianism: Reassessing the potential dark side of EI. *Personality and Individual Differences*, *55*(7), 750–754. <https://doi.org/10.1016/j.paid.2013.06.006>
- Papageorgiou, K. A., Benini, E., Bilello, D., Gianniou, F. M., Clough, P. J., & Constantini, G. (2019). Bringing the gap: A network approach to Dark Triad, mental

- toughness, the big five, and perceived stress. *Journal of Personality*. Online first. <https://doi.org/10.1111/jopy.12472>
- Park, A., Ickes, W., & Robinson, R. L. (2014). More f#!%ing rudeness: Reliable personality predictors of verbal rudeness and other ugly confrontational behaviors. *Journal of Aggression, Conflict and Peace Research*, 6(1), 26–43. <https://doi.org/10.1108/JACPR-04-2013-0009>
- Paulhus, D. L. (2014). Toward a taxonomy of dark personalities. *Current Directions in Psychological Science*, 23, 421–426. <https://doi.org/10.1177/0963721414547737>
- Paulhus, D. L., & Williams, K. M. (2002). The Dark Triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, 36, 556–563. [https://doi.org/10.1016/S0092-6566\(02\)00505-6](https://doi.org/10.1016/S0092-6566(02)00505-6)
- Paulhus, D. L., Gupta, R., & Jones, D. N. (2021). Dark or disturbed? Predicting aggression from the Dark Tetrad and schizotypy. *Aggressive Behavior*. <https://doi.org/10.1002/ab.21990>
- Pérez, J. C., Petrides, K. V., & Furnham, A. (2005). Measuring trait emotional intelligence. In R. Schulze, & R. D. Roberts (Eds.), *Emotional intelligence: An international handbook* (pp. 181–201). Cambridge, WA: Hogrefe & Huber.
- Petrides, K. V., Pérez-González, J. C., & Furnham, A. (2007). On the criterion and incremental validity of trait emotional intelligence. *Cognition and Emotion*, 21, 26–55. <https://doi.org/10.1080/02699930601038912>
- Petrides, K., Vernon, P., Schermer, J., & Veselka, L. (2011). Trait Emotional Intelligence and the Dark Triad Traits of Personality. *Twin Research and Human Genetics*, 14(1), 35–41. <https://doi.org/10.1375/twin.14.1.35>
- Plouffe, R. A.; Saklofske, D. H.; Smith, M. M. (2017). The Assessment of Sadistic Personality: Preliminary psychometric evidence for a new measure. *Personality and Individual Differences*, 104, 166–171. <https://doi.org/10.1016/j.paid.2016.07.043>
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9(3), 185–211. <https://doi.org/10.2190/DUGG-P24E-52WK-6CDG>
- Schönbrodt, F. D., & Perugini, M. (2013). At what sample size do correlations stabilize? *Journal of Research in Personality*, 47, 609–612. <https://doi.org/10.1016/j.jrp.2013.05.009>
- Schreyer, H., Plouffe, R. A., Wilson, C. A., & Saklofske, D. H. (2021). What makes a leader? Trait emotional intelligence and Dark Tetrad traits predict transformational leadership beyond HEXACO personality factors. *Current Psychology*. <https://doi.org/10.1007/s12144-021-01571-4>

- Shi, J., & Wang, L. (2007). Validation of emotional intelligence scale in Chinese university students. *Personality and Individual Differences, 43*(2), 377–387. <https://doi.org/10.1016/j.paid.2006.12.012>
- Sokić, K. i Horvat, Đ. (2019). Examining the Role of Boldness in the Prediction of Emotional Intelligence in Men and Women. *Interdisciplinary Description of Complex Systems, 17*(2-B), 315–325. <https://doi.org/10.7906/indecs.17.2.8>
- Spain, S. M., Harms, P. & LeBreton, J. M. (2014). The dark side of personality at work. *Journal of Organizational Behavior, 35*(S1), S41–S60. <https://doi.org/10.1002/job.1894>
- Van Rooy, D. L., & Viswesvaran, C. (2004). Emotional intelligence: A meta-analytic investigation of predictive validity and nomological net. *Journal of Vocational Behavior, 65*, 71–95. [https://doi.org/10.1016/S0001-8791\(03\)00076-9](https://doi.org/10.1016/S0001-8791(03)00076-9)
- Veselka, L., Petrides, K. V., Schermer, J. A., Cherkas, L. F., Spector, T. D., & Vernon, P. A. (2010). Phenotypic and genetic relations between the HEXACO dimensions and trait emotional intelligence. *Twin Research and Human Genetics, 13*(1), 66–71. <https://doi.org/10.1375/twin.13.1.66>
- Vize, C. E., Lynam, D. R., Collison, K. L., & Miller, J. D. (2018). Differences among dark triad components: A meta-analytic investigation. *Personality Disorders: Theory, Research, and Treatment, 9*(2), 101–111. <https://doi.org/10.1037/per0000222>
- Walker, S. A., Double, K. S., & Birney, D. P. (2021). The Complicated Relationship Between the Dark Triad and Emotional Intelligence: A Systematic Review. *Emotion Review, https://doi.org/17540739211014585*
- Wertag, A., Vrselja, I., & Tomić, T. (2011). Assessing Construct Validity of Paulhus's and Williams's (2002) Dark Triad Questionnaire D3–27 / Provjera konstruktne valjanosti Paulhusovog i Williamsovog (2002) upitnika Mračne trijade D3–27. In 19th Annual Conference of Croatian Psychologists. Osijek, Croatia
- Wong, C.-S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude. *The Leadership Quarterly, 13*(3), 243–274. [https://doi.org/10.1016/s1048-9843\(02\)00099-1](https://doi.org/10.1016/s1048-9843(02)00099-1)
- Wright A. G. C., Pincus A. L., Thomas K. M., Hopwood C. J., Markon K. E., Krueger R. F. (2013). Conceptions of narcissism and the DSM-5 pathological personality traits. *Assessment, 20* (3), 339–352. <https://doi.org/10.1177/1073191113486692>

.....

Utjecaj Mračne tetrade na emocionalnu inteligenciju

Katarina Sokić ¹ 

¹ *Oksford Biznis Koledž, Oksford, Ujedinjeno Kraljevstvo*

Glavni cilj ovog istraživanja bio je ispitati odnose između osobina Mračne tetrade (Makijavelizma, narcizma, psihopatije i sadizama) i dimenzija emocionalne inteligencije - sposobnosti procjene vlastitih emocija, procjene tuđih emocija, korištenja emocija i regulacije emocija. Wong i Law skala emocionalne inteligencije, Kratki upitnik Mračne trijade i Skala procjene sadističke ličnosti primijenjeni su na uzorku od 322 sudionika iz opće populacije (63% žena) Hrvatske. Rezultati su pokazali da su psihopatija i sadizam negativno povezani s emocionalnom inteligencijom. Sadizam se pokazao značajnim u predviđanju procjene vlastitih emocija, procjene tuđih emocija i korištenja emocija, dok je psihopatija značajan prediktor regulacije emocija. Makijavelizam je na bivarijatnoj razini negativno korelirao s procjenom vlastitih emocija i procjenom tuđih emocija, ali nije pokazao značajne učinke na dimenzije emocionalne inteligencije u regresijskoj analizi. Narcizam je pokazao pozitivne učinke na EI u cjelini, dimenziju korištenja emocija i samo-procjenju vlastitih emocija. Rezultati su naglasili značaj mračnih crta ličnosti u objašnjenju emocionalne inteligencije i pokazali da su mračne crte različito povezane s dimenzijama emocionalne inteligencije.

Ključne riječi: mračne crte, psihopatija, Makijavelizam, narcizam, sadizam, emocionalna inteligencija



Research Article

"Attention please!": The dark side of dancers' personality

Maja S. Vukadinović  

¹ *Novi Sad School of Business, Novi Sad, Serbia*

ABSTRACT

The present study aims to investigate the dark side of dancers' personality. In recent literature, dark personality traits were conceptualized as the Dark Tetrad which includes Machiavellianism, narcissism, psychopathy and sadism. The participants in this study were 98 dancers, aged between 18 and 57 ($M = 34.71$, $SD = 11.21$; 86.7% women), who practiced different dance types (classical ballet, modern dance, flamenco, oriental dance, hip-hop, salsa, tango, merengue, bachata and Latin dances-samba, rumba) both professionally and non-professionally. They answered 13 questions from the pilot version of the list of Indicators of the meaning of dance for dancers, the Short Dark Triad (SD3) and the Assessment of Sadistic Personality (ASP). The results have shown that dancers had higher scores narcissism and lower scores on Machiavellianism and sadism compared to participants from the reference community sample from previous study (Dinić et al., 2018, 2020). Professional dancers had higher scores on narcissism, compared to those who practice dance as recreation meaning that they tend to seek prestige or status and have a need for admiration and attention from other people more than recreationists. Furthermore, a series of regression analyses showed that psychopathy is negatively related to dancers' evaluation of the dance as an enjoyable and pleasant activity. It is concluded that dark personality traits are a component of dancers' personality and one of the factors that affect dancers' evaluation of the meaning of dance. Moreover, practical implications of the obtained results related to the pedagogical dance practice are discussed, as well as the dark traits of creative personality.

Keywords: dancers, dark personality traits, Dark Tetrad, narcissism, meaning of dance

UDC: 159.923:793

DOI: 10.19090/pp.2022.1.51-85

Received: 29.08.2021.

Revised: 07.11.2021.

Accepted: 13.11.2021.



Copyright © 2022 The Author(s).

This is an open access article distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

✉ Corresponding author email: vukadinovicmaja.vps@gmail.com

Introduction

Being a dancer could bring a lot of pleasure, enjoyment, privilege and attention to an individual. Dancers' bodies are beautiful, strong and powerful. As Abra (1987, pp.33) said "they radiate a public image of unworldly glamour and romance". Often, they are subjects of admiration or desire. Part of their profession is to keep the audience's attention by mastery of performance. However, their beauty has its challenges as well. Performing dancers invest a lot of hours in practicing and self-discipline, they are mostly oriented towards achievement; they strive for perfection, which often results in suffering from low levels of self-esteem and self-confidence (Bakker, 1991). It has already been shown that non-professional dancers are more satisfied with their body than professionals (Anshel, 2004), since a dancer's body is a carrier of their entire dance and performance on stage (García Dantas et al., 2018).

The motivation for this study stems from the questions concerning the relationship between dancers' personalities and their relationship to dance as a unique, complex and multifunctional phenomenon. More precisely, this research deals with investigating the dark side of dancers' personality and aims to determine if the dancers are somehow affected by the characteristics inherent in dance as an activity and dance as a profession and its context.

Context, characteristics and functions of dance

In the broadest sense, dance is related to body movement and can be performed individually or with other people, in a group or in pairs, by a predetermined pattern of movement, i.e., steps, or it can be spontaneous and unplanned. Dancing can be an art form, sport, it can be a hobby or a type of recreation. It is an activity that can be practiced formally on stage, or informally at social gatherings and in the privacy of one's home (Lovatt, 2018; Vukadinović, 2019).

Depending on whether the dance exists in an anthropological, artistic, cultural, geographical, aesthetic, social or other context (Layson, 1994), and

on the degree of organization and stylization of the movement and the presence of formal characteristics in its performance, (Au, 2002; Krešić, 1997; McFee, 1992; Vukadinović, 2013; Vukadinovic & Markovic, 2017) it is possible to distinguish dance as a spontaneous activity and as a form of art. Based on different sources, dance can be defined as any rhythmic-bodily movement in space, while artistic dance is a form of complex and highly articulated movement. In other words, it is a system of organized and formalized movements which represent the carrier of a certain meaning that the artist consciously expresses and intentionally conveys to the observer (e.g., Blom & Chaplin, 2000; Carter, 1998; Džadžević, 2005; Jowitt, 1994; Krešić, 1997; Layson, 1994; Meekums, 2005; Tufnel & Crickmay, 2006; Vukadinović, 2019).

What distinguishes dance from other artistic disciplines are two main characteristics. Firstly, dance is spatially and temporally determined, which implies its synchronization in time and space (Brown et al., 2006; Christensen et al., 2017; Grove et al., 2005; Hagendoorn, 2003; Laban, 1960; Luck & Sloboda, 2009; Repp & Panel, 2004). Secondly, dancers do not create in the same medium through which the audience receives their work; they use their bodies as a mean of expression (Arnheim, 2003; Krešić, 1997; Vukadinović & Marković, 2012; Vukadinović, 2019).

According to different authors dance has many functions which could be categorized (Christensen et al., 2017; Džadžević, 2005; Maletić, 1986, Maraz, et al., 2015). They include a) innate human need for rhythmic movement; b) need to express emotions; c) socializing and communication d) fitness e) giving aesthetic form to movements, mastery and aesthetic experience; f) symbolical transformation of impression into dance; g) improving self-confidence, and h) escapism. Since it is a complex, universal, multifunctional and inspiring phenomenon, dance is a subject of many disciplines such as philosophy, history and anthropology, medicine, aesthetics, psychology etc. The personality of dancers is one of the topics which intrigue many psychologists. They are mostly interested in discovering the specifics that characterize the creative personality of dancers.

Personality of Dancers and the Dark Tetrad

Earlier studies dealing with dancer's personality were mainly focused on investigating dancers' traits and their relationship to their creative potential (Alter, 1984; Bakker, 1991; Fink et al., 2009; Fink & Wosschnjak, 2011). According to the Big Five model of personality, strong and positive association has been found between dancers' openness to experience and creativity (Bakker, 1991; Fink & Wosschnjak, 2011). This finding is in line with other studies which have shown the same connection between personality traits and creativity (Chamoro-Premuzic & Raichenbacher, 2008; Feist, 1999; King et al., 1996). Furthermore, it has been shown that dancers are, among other traits, characterized as introverted, high on emotionality, strongly achievement and performance oriented, as well as more open to experience (Bakker 1991; Fink & Wosschnjak, 2011). These studies mostly explored classical ballet and modern dancers who were professionals in their domains of dance. Regarding other types of dances such as tango, research of Lolich et al. (2015) showed that dancers have hyperthymic and irritable temperament features. Concerning non-professional dancers who practice dance as recreation (ballet, contemporary, hip-hop, ballroom, latin), Barreiro and Furnham (2019) investigated the relationship between dance style choices and Big Five personality traits. Their study showed that conscientiousness predicts choice for classical ballet, contemporary, jazz/tap and ballroom dancers, while extraversion increases the likelihood of choosing latin dances as a recreational practice.

Even though these previous findings are very important and informative, there are still a small number of studies dealing with dancers' personality traits. In the psychological domain of personality differences there is a growing interest for dark traits of personality along with the work on Big Five (Dinić & Jevremov, 2021). Thus, a lot of questions have not been addressed yet. These include questions like: is there a dark side of dancers' personality? Do they have narcissistic, psychopathic, or sadistic tendencies?

Does the Dark Tetrad predict dancers' motivation and understanding of dance?

The present study aims to investigate the dark side of dancers' personality using the Dark Tetrad model which includes Machiavellianism, narcissism, psychopathy and sadism (e.g., Dinić et al., 2020; Paulhus, 2014). Machiavellianism is associated with cynicism, manipulation and coldness; narcissism with sense of grandiosity, seeking prestige or status and a need for admiration and attention from other people; psychopathy with a lack of remorse, callousness, tendency to be insensitive, egocentric and impulsive; and sadism with the experience of feeling satisfaction when other is molested, hurt or harassed (e.g., Paulhus, 2014).

Since earlier studies have shown a relationship between creativity and the Dark Tetrad (Dahmen-Wassenberg et al., 2016), as well as between aesthetic preferences and the Dark Tetrad (Newberry, 2017), some kind of manifestation of dancers' dark side of personality could be expected. What is familiar is that dancers tend to be low at self-esteem and anxious with perfectionist tendencies (Dahmen-Wassenberg et al., 2016) and masochistic orientation (Abra, 1987). However, there is not enough data on the topic of dancers' dark side of personality.

The present study

The purpose of this study is to investigate the characteristics of dancers and their relationship with the domain of dark personality traits, as well as the relationship between dancers' understanding of the meaning of dance and the Dark Tetrad. Although previous research has shown that creativity and choice of the dance style are influenced by basic personality traits (Bakker 1991; Barreiro & Furnham, 2019; Fink & Woschnjak, 2011), to the best of our knowledge, there is no study aiming to investigate dancers' dark side of personality, i.e. no study has been conducted yet to explore the relationship between dancers characteristics and the Dark Tetrad. Thus, the main aim of this research was to explore Dark Tetrad traits among dancers. Based on the definition of dance, as well as on the dance context which

requires the presence of audience, it can be hypothesized that dancers will show high scores on the scales measuring narcissism. Moreover, based on the fact that dancers show high levels of conscientiousness (which involves self-discipline and diligence) which overleaps with the description of perfectionism (Barreiro & Furnham, 2019), and having in mind dancers' masochistic orientation as well (Abra, 1987), it can be hypothesized that dancers will show low scores at scales measuring sadism and Machiavellianism. Regarding psychopathy, there are no expectations based on previous research.

Method

Participants and procedure

This study included 98 dancers. There were 13.3% ($n = 13$) men and 86.7% ($n = 85$) women dancers, aged between 18 and 57 ($M = 34.71$, $SD = 11.21$). By their age, the participants were categorised into 4 groups: between 18-25 (23.5%); 26-35 (32.7%); 36-45 (24.5%) and 45 and more (19.4%). This categorisation was made according to the characteristics of dance as a profession. Dance as a profession has a specific age limitation due to the difficulty of a dancer's work. Average years of active dance career are about 20 (18-40 years). Dancers' level of professionalism is also categorised into 5 groups: high professionals – performing and teaching dance (9.2%); professional performers (8.2%); professional teachers (13.3%); practicing dance as recreation (58.2%); used to go dance classes (11.2%). Furthermore, the dancers were categorised by the years of practicing dance into four groups: 1-5 years (25.5%); 5-9 years (17.3%); 10-19 years (24.5%); 20 and more (32.6%). There were 50% of them practicing social dances, e.g., dances in pair such as salsa, tango, merengue, bachata and latin dances (rumba, samba) and 50% practicing individual dances such as flamenco, hip-hop, classical ballet, oriental and contemporary dance.

The instruments were placed on the Google Forms platform and distributed via social networks. After the participants had given their consent

to participate in the study, they answered a set of questions related to their sociodemographic characteristics (age and gender) and their dance practice (type of dance, level of professionalism and years of practicing dance). They then filled the instruments: Indicators of meaning of dance, SD3 and ASP. The contact e-mail of a researcher was given to the participants in case they wanted to receive feedback on the study. The participation in the study was voluntary, anonymous, and without any financial compensation. The study was conducted in accordance with the Helsinki Declaration.

Instruments

The Short Dark Triad (SD3)

The Short Dark Triad (SD3; Jones & Paulhus, 2014, for Serbian adaptation see Dinić et al., 2018). This instrument measures three dark personality traits – Machiavellianism, psychopathy and narcissism. It consists of 27 items and participants give their answers on a five-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*). The alpha reliability of scales measuring Machiavellianism is $\alpha = .79$, narcissism $\alpha = .80$ and psychopathy $\alpha = .77$.

Assessment of Sadistic Personality (ASP)

Assessment of Sadistic Personality (ASP; Plouffe et al., 2017, for Serbian adaptation see Dinić et al., 2018). This scale consists of 9 items and participants give their answers on a five-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*). The alpha reliability of the ASP is marginal, $\alpha = .66$.

Pilot version of the list of Indicators of the meaning of dance for dancers

The list of indicators of the meaning of dance for dancers is made for the purpose of this study. Based on a wide range of literature dealing with the meaning of dance, the list of Indicators was formulated (Barreiro & Furnham, 2019; Biddle et al., 2000; Blom & Chaplin, 2000; Brown et al., 2006; Chodorow 1991; Christensen, et al. 2017; Cova & Deonna, 2014; Dunin, 1989; Džadžević 2005; Fink & Woschnjak, 2011; Grlić, 1975; Jola et al., 2011; Jowitt,

1997; Kent et al., 1984; Krešić, 1997; Lolich et al., 2015; Lovatt, 2018; Maraz et al., 2015; Magazinović, 1951; Maletić, 1986; Martin, 1965; McEwena, & Younga, 2011; Reason & Reynolds, 2010; Reynolds & Reason, 2012; Royce, 1977; Vukadinović & Marković, 2012; Vukadinović, 2013, 2016, 2019). For precise relation between indicators and related literature see Appendix A (Table 1). The list consists of 13 indicators, given in the form of sentences: "Dance for me is: 1 – Pleasure; 2 - Escape from reality; 3 - Effort; 4 - Enjoyment; 5 - Frustration; 6 - Returning to myself; 7 - Ideal way of expressing myself; 8 - Creativity; 9 - Stress relief; 10 - Way of being in good physical shape; 11 - Way of expressing my sexuality; 12 - Way of seduction; 13 - Entertainment". Participants answered on a five-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*). The scores on the 13 indicators were cumulatively summed. Higher scores mean that the participants evaluate the dance as a more enjoyable and pleasant activity. The indicator 3 – Effort as well as indicator 5 – Frustration was not recoded. There are several reasons for this: firstly, all types of dances imply special dance techniques (e.g., McFee, 1992; Siegel, 1972, Vukadinović, 2019) which differ in the amount of effort which a dancer is supposed to make. Secondly, the effort invested in dance technique depends on the dancers' level of professionalism and on how seriously he/she approaches the dance training (e.g., McFee, 1992; Siegel, 1972, Vukadinović, 2019). Frustration could arise related to the influence of these two elements, and it could have an effect on what dance means for dancer. The Chronbach's alfa of the list of Indicators is $\alpha = .83$, and for total score $M = 49.93$, $SD = 7.09$. The total scores may vary in the range between 13 (minimum) and 65 (maximum). Although there were no norms, the obtained total score of $M = 49.93$ could be interpreted as above-mean score. Descriptive statistics and psychometric properties (M , SD and α) for all used scales as well as correlations between all used scales are reported in Supplement (see Supplement - Table A, B, C).

Data analysis

Data analysis was performed using statistical software SPSS for Windows v25.0. For comparison between Dark Tetrad scores of dancers and

community sample from Serbia (from Dinić et al., 2018, 2020), t-test was used (online calculator on <https://graphpad.com>). The reference sample from Dinić et al. (2018, 2020) included the sample of 433 participants from the general population in Serbia (50.1% men) aged between 19 and 40 years ($M = 28.10$, $SD = 6.60$), of different education levels. Furthermore, because of small subsamples per categories of dancers, non-parametrical tests were applied (Kruskal-Wallis or Mann-Whitney U test) for exploring the effect of gender, preference for individual or dance in pair, age, level of professionalism, type of dance and years of practicing dance, on the dark traits.

To investigate the relations between the Dark Tetrad traits and total score on scales measuring the indicators of meaning of dance for dancers, Pearson correlation coefficients were calculated. To explore the possibilities of prediction of the meaning of dance for dancers based on the Dark Tetrad traits, hierarchical linear regression was applied with characteristics of dancers in the first step, in order to control their effects, and the Dark Tetrad traits in the second step. Additionally, regression analyses were conducted on each of the 13 indicators. Due to small sample of dancers, Bonferroni p -value correction was used.

Results

Characteristics of dancers and the Dark Tetrad traits

Based on the comparison with reference study by Dinić et al. (2018, 2020) the results of this present study have shown, as it was hypothesized, that dancers have lower Machiavellianism and sadism scores, but higher narcissism scores compared to the scores of the participants in mentioned earlier studies (Table 1). There were no significant differences in psychopathy. All significant differences remained after Bonferroni correction ($p < .0125$).

Table 1

Differences between dancers and data obtained in earlier study of Dinić et al. (2018, 2020) on Dark Tetrad traits

	Dancers ($N=98$)		Data obtained in Dinić et al., 2018, 2020 ($N=443$)		Samples differences	
	M	SD	M	SD	$t(539)$	p
Machiavellianism	25.14	6.50	27.35	6.70	2.97	.000
Psychopathy	17.28	6.42	17.54	6.11	0.38	.705
Narcissism	27.41	7.44	24.29	6.78	4.05	.000
Sadism	11.39	3.02	14.66	4.53	9.86	.000

Regarding dancers' characteristics, the results of Mann-Whitney U tests have shown that there are significant differences between men and women in psychopathy, with men obtaining higher scores (Table 2). However, since the group of male dancers is very low, this result should be taken with caution, although it remained significant after Bonferroni correction ($p < .0125$).

Table 2

Gender differences in Dark Tetrad traits

	Machiavellianism	Narcissism	Psychopathy	Sadism
<i>MR</i> Men ($n = 13$)	52.50	47.58	68.8	57.54
<i>MR</i> Women ($n = 85$)	49.04	49.79	46.66	48.27
Mann-Whitney U	513.50	577.50	311.00	448.00
p	.68	.79	.01	.25

Note. *MR* = mean rank.

Results of Kruskal-Wallis tests have shown those high professionals and those who practice dance as recreation differed only in narcissism, with

professionals obtaining higher scores (Table 3). This difference remained significant after Bonferroni correction ($p < .0125$).

Table 3

Dancer's level of professionalism differences in Dark Tetrad traits

Categories of dancers	Frequenc y	Machiavellianis m	Narcissis m	Psychopath y	Sadis m
		<i>MR</i>	<i>MR</i>	<i>MR</i>	<i>MR</i>
High professionals	9	51.33	71.28	50.50	44.83
Professional performers	8	44.81	49.31	43.75	49.06
Professional teachers	13	58.92	57.69	53.96	54.81
Practicing dance as recreation	57	45.76	41.50	47.56	47.29
used to go dance classes	11	59.64	63.59	57.64	58.82
Kruskal-Wallis H (<i>df</i> = 4)		4.08	13.59	1.83	2.46
<i>p</i>		.39	.01	.77	.65

Note. *MR* = mean rank.

Results of Mann-Whitney U tests have shown that dancers who prefer individual dance were significantly different in Machiavellianism in comparison to dancers who prefer dance in pairs. Those who prefer individual types of dances have higher scores on Machiavellianism (Table 4). However,

these differences were not significant after the p-value correction ($p < .0125$), thus it is not considered as a significant one.

Table 4

Differences in dancers' preferences for individual or dance in pair and Dark Tetrad traits

	Machiavellianism	Narcissism	Psychopathy	Sadism
MR Individual (n = 49)	54.96	52.78	52.09	48.79
MR In Pair (n = 49)	44.04	46.22	46.91	50.21
Mann-Whitney U	933.00	1040.00	1073.50	1165.50
p	.05	.25	.37	.79

In addition, variables such as dancers' age, type of dance which the dancers practice, as well as years of experience and practice in dance do not have an effect regarding the Dark Tetrad traits (see Supplement Table D).

The meaning of dance for dancers and Dark Tetrad traits

The results of correlation showed that there was negative and medium strong correlation between Machiavellianism and psychopathy with the total score on Indicators of the meaning of dance for dancers. Machiavellianism, psychopathy and sadism have significant, medium strong and negative relations with pleasure and enjoyment, stress relief and returning to inner self. Furthermore, Machiavellianism and psychopathy have significant, medium and negative correlations with understanding of dance as a way of being in good physical shape. These significant correlations after Bonferroni correction ($p < .0009$) are presented in the Table 5.

Table 5

Correlations between each indicator and total score on scale of Indicators of the meaning of dance for dancers and Dark Tetrad

		Machiavellianism	Narcissism	Psychopathy	Sadism
For me dance is					
1	Pleasure	-.51***	-.28	-.55***	-.42***
2	Escape from reality	-.08	-.08	-.15	-.18
3	Effort	.04	-.10	-.02	-.05
4	Enjoyment	-.56***	-.29	-.59***	-.39***
5	Frustration	.00	-.20	.29	.17
6	Returning to myself	-.38***	-.18	-.46***	-.37***
7	Ideal way of expressing myself	-.38***	-.13	-.35***	-.32
8	Creativity	.04	.12	.009	-.01
9	Stress relief	-.49***	-.31	-.54***	-.38***
10	Way of being in good physical shape	-.40***	-.19	-.39**	-.20
11	Way of expressing my sexuality	-.26	.01	-.30	-.24
12	Way of seduction	-.08	.07	-.20	-.16
13	Entertainment	-.10	.00	-.13	-.14
	Total score	-.38***	-.18	-.45**	-.31

Note. *** $p < .00089$ in line with Bonferroni correction.

Furthermore, hierarchical regression analysis was applied. In the first step, the variables which influence the Dark Tetrad traits were entered (gender, level of professionalism and preference for individual or group dance), and in the second step, the Dark Tetrad traits were entered as predictors. Criterion variable was the total score on Indicators of the meaning of dance. Results showed that both steps had significant effects and, more importantly, that the second step obtained significant incremental effect and explained additional 16% of criterion (Table 6). Beside the level of professionalism, psychopathy stands out as a significant negative predictor of meaning of dance for dancers.

Table 6

Beta partial contribution of demographics and the Dark Tetrad traits to prediction of Indicators of the meaning of dance for dancers

	Indicators of the meaning of dance for dancers					
	Total score	Pleasure	Enjoyment	Frustration	Return to inner self	Stress relief
Gender	.11	.05	.05	-.05	.30***	-.02
Level of Professionalism	-.38***	-.16	-.19**	-.21**	-.34***	-.29**
Individual/Pair dance	.00	.06	.07	-.19	.00	.10
R^2	.19	.08**	.11	.07	.24***	.14**
Machiavellianism	-.16	-.26***	-.30***	.00	.17	-.17
Narcissism	-.004	.03	.05	-.45***	-.00	-.05
Psychopathy	-.41***	-.27	-.35***	.15	-.18	-.34***
Sadism	-.03	-.14	-.03	.22	-.12	-.05
ΔR^2	.16***	.28***	.31***	.14**	.15***	.26***
Total R^2	.36***	.36***	.43***	.21**	.39***	.40***

Notes. Gender was coded as 1 = men, 2 = women; Individual dance was coded as 1 and dance in pair as 2; Level of professionalism was coded as 1 = High professionals (performing and teaching dance); 2 = Professional performers; 3 = Professional teachers; 4 = Practicing dance as recreation; 5 = used to go dance classes.

*** $p < .001$; ** $p < .01$.

Additional series of hierarchical regression analysis were performed on each indicator of meaning of dance for dancers. In Table 6, the results for those tested models which proved to be statistically significant are listed. They suggest that only the indicators such as pleasure enjoyment, frustration, returning to inner self and stress relief could be predicted by the Dark Tetrad traits. The results have also shown that the range of R^2 for non-significant regression models is between .11 and .17.

To sum up the results regarding the relationship between the Indicators of the meaning of dance and the Dark Tetrad obtained from regression analyses, it can be indicated that: the trait of psychopathy negatively predicts a total score obtained on scales measuring Indicators of meaning of dance; the trait of Machiavellianism negatively predicts enjoyment; the trait of psychopathy negatively predicts dancers' enjoyment and stress relief and, finally, the trait of narcissism negatively predicts frustration.

Discussion

Results have shown that dancers are different from the participants whose data were obtained in earlier studies regarding the Dark Tetrad. In the text which follows every single trait of the Dark Tetrad will be discussed in detail. Since the narcissism is the dancers' most prominent trait, we will start from that point.

Narcissism

It is indicated by the results that the trait of narcissism is more characteristic for dancers than for the participants in earlier studies (Dinić et al, 2018, 2020), thus, the hypothesis that the dancers will show high scores on the scales measuring narcissism has been confirmed. The trait of narcissism implies tendencies to seek prestige or status and a need for admiration and attention from other people (Jonason & Webster, 2012). This finding was expected having in mind the context of dance as a performing art which

requires the presence of the audience, even if the audience is the dancer himself/herself (Layson, 1994; McFee, 1992; Schaverien, 2005) and taking into account its communicative function, as well (Christensen et al., 2017; Džadžević, 2005; Maletić, 1986; Vukadinović, 2019). Furthermore, the results of this study indicated that there is significantly higher narcissism manifested in highly professional dancers than in those who practice dance as recreation. It looks as if the characteristics of a dancer's profession, i.e., performing on stage, competing for important roles with colleagues, being exposed to the audience and critics, in some way "support" the narcissistic tendencies. Even though there is no significant regression model by which narcissism is a predictor of dancers' way to express their sexuality, it is important to comment that earlier studies showed that dancers use their body not only as an instrument of expression and communication, but also as a mediator of their sexuality (Džadžević, 2005; Havelock, 1983; Maletić, 1986, Martin, 1965; Spencer 1988). Havelock (1983) noticed that sexual motive represents one of the main factors and motives of human dance in general. But preferences for social dances, where moving body together with a partner, touching and sweating together is present - especially typical for dances in pair such as rumba, bachata or merengue, may reveal narcissistic tendencies (privilege, paying attention etc.).

The results of this study also indicate that dancers' narcissistic tendencies turned out to be "frustration sensitive". Frustration impacts negatively on dancers' need to seek prestige or status and the need for admiration and attention from other people.

Machiavellianism

In comparison with the data from an earlier study of Dinić et al (2018, 2020), the trait of Machiavellianism is significantly less manifested in dancers, thus, the hypothesis that the dancers will show low scores on the scales measuring Machiavellianism has been confirmed. This means that generally dancers are less cynical, manipulative and cold. In one of the previous studies, it has been shown that manipulation as a cognitive skill is related to social

cognition (Sutton et al., 2010). It is explained that manipulation results from the lack of social skills and understanding. Since dance is a phenomenon in which social component is highly involved, our result could be interpreted from the social context of dance. On one hand, anthropological studies indicate that dance is highly motivated by the social needs; it helped the men to feel as part of a group and to develop social skills (Deniker, 1900; Džadžević, 2005; Janković & Janković, 1949, 1964; Layson, 1994; Maletić, 1986; Mauss, 1950; Spencer, 1988). While dancing in a group, same emotions, aims, rhythms and moods are shared. On the other hand, this result may be interpreted in the light of the fact that practicing dance engages the body and focuses the cognition on body movements, on mastering them in space and synchronisation with rhythm as temporal determinant (Adams, 2010; Brown et al., 2006; Christensen et al., 2017; Grove et al., 2005; Hagendoorn, 2003; Jaeger, 2009; Laban, 1960; Luck & Sloboda, 2009; Repp & Panel, 2004, Stevens & Glass, 2005; Stevens & McKechnie, 2005). In line with this interpretation is the other finding of this study which indicates that Machiavellianism stands out as significant, but negative predictor of pleasure and enjoyment. Dancers who have low scores on Machiavellianism have high scores on understanding dance as pleasure and enjoyment.

Psychopathy

The findings of this study have shown that there are no differences between dancers and participants in the earlier studies of Dinić et al (2018, 2020) regarding the scores obtained on the scales measuring psychopathy. Within the group of dancers, differences in gender in relation to psychopathy stand out. Male dancers obtained higher scores than female dancers. Since it was shown in the previous study (Dinić et al., 2018) that men generally have higher scores on psychopathy than women, this result was expected. However, it should be taken with reserve because the sample of male dancers was very small.

Furthermore, the results of regression analyses showed that psychopathy is a negative predictor of total score on the scales measuring the indicators of the meaning of dance for dancers. Moreover, it is a negative predictor of enjoyment and stress relief. Understood as a lack of remorse, callousness, tendency to be insensitive, egocentric and impulsive (Dinić et al., 2018; Jonason et al., 2012), psychopathy turns out to be negatively related to the listed meaning of dance for dancers. In earlier studies, it has been shown that psychopathy is negatively associated with agreeableness and conscientiousness (Crysel et al., 2013; Paulhus & Williams, 2002). Most of the literature which deals with dance motivation and effects that dance has on its practitioners suggests that "good feeling", experience of strength and freedom of movement, mood enhancement, intimacy, fitness, socializing are the main factors of dance motivation (Barreiro & Furnham, 2019; Maletić, 1986; Krešić, 1997; Maraz et al., 2015). For most dancers, dance represents a pleasant activity motivated by inner needs and it is coloured with a special kind of their sensitivity (Bakker, 1991). Having that in mind, negative association between psychopathy and listed meaning of dance for dancers could be anticipated.

Sadism

The findings of this study have shown that the trait of Sadism is less characteristic for dancers than for the participants of an earlier research of Dinić et al. (2018, 2020), thus hypothesis that dancers will show low scores on the scales measuring narcissism has been confirmed. The trait of sadism implies experiencing feelings of satisfaction when other people suffer, when others are harassed or hurt (Dinić et al., 2020). This result is expected, and it could be explained by the functions inherent in dance as an activity such as social, cognitive and psychobiological (Christensen et al. 2017; Maletić, 1986). One of the functions which dance shares, and which relates to aggressive behaviour and sadism, is that some researchers report that dance is sometimes practiced as regulator or a vent of surplus of physical energy (Bale, 1911; Džadžević, 2005; Spencer, 1988). Furthermore, it is noticed that in professional dancers who dedicate to a career in dance, there is some kind of

masochistic orientation rather than a sadistic one (Abra, 1987). This topic related to the dimension of dancers' masochism – sadism needs more empirical investigation, and it could be addressed in some future studies.

Before we address the questions that remained unanswered, it is necessary to mention the limitations of this study and methodological problems which were encountered. Among others, they include the lack of control of all variables (e.g. type of dance), maintenance of balance between the number of male and female dancers, and achieving homogeneity between investigated categories of the dancers' age, level of professionalism, years of practicing dance, and type of dance the participants practice. Also, the limitation of this study regarding marginal Chronbach α obtained as a reliability measure for scales of sadism, which implies that this result should be taken with reserve. Furthermore, it seems that more empirical studies would be needed to investigate the profile of social dance practitioners as well as intercultural differences between them if they exist.

Despite all the difficulties, this study provided a better insight into the relationship between the Dark Tetrad and the characteristics of dancers. The questions arising from this research refer to dancers' personality profile, i.e., the relationship between basic traits and the Dark Tetrad traits. It would be worth investigating the differences between highly professional dancers and those who practice dance for recreation. In that sense, a variable of dance type (e.g., classical ballet, hip hop, tango, etc.) would probably have effects on the differences between dancers and their profile.

Regarding some practical implications, the findings of this study could be useful not just for choreographers and dance teachers but for psychologists as well. On one hand, results which indicate higher scores on the scale of narcissism of professional dancers comparing to the people who practice dance as recreation could contribute to a better understanding of what is called "dancer's identity" – i.e. the degree to which one identifies as a dancer which is not dependent on the number of years of dance experience but is shaped by the subjective interpretation of the meaning of dance for a

dancer (Langdon & Petracca, 2010, Krešić, 1997, pp. 360). It appears that narcissism forms a part of professional "dancer's identity". Furthermore, acknowledging the existence of narcissism which is more characteristic for professional dancers could represent useful information for dance teachers and choreographers. Considering the results of this study, teaching style which mostly promotes body appearance, and the strength of a dancer as key components of successful performance (Langdon & Petracca, 2010) could be improved by putting an accent on dancers' competences (e. g. technique, complexity and elegance of movements, originality and creativity) instead of on how attractive they look. Possibly such change of teaching style as well as of the expectations of the dance community (e.g., Ravaldi et al., 2006) may influence the understanding of dance as a profession and change the degree of narcissism in shaping future professional dancers.

On the other hand, findings of this study could be useful for researchers from the domain of psychology, especially those interested in the relationship between personality traits and creativity. Even though previous studies in different art disciplines revealed which normal personality traits are related with creative processes, this study provides information about some specific, dark characteristics of a creative personality in the domain of dance. Dark traits probably accompany a creative personality regardless of the artistic discipline. However, precise question which follows from the results of our study relates to a dark trait such as narcissism. Is narcissism related to a specific artistic discipline or to the representation of its product? Is narcissism specific for personalities whose profession is performance-based art? These questions remain open, waiting to be addressed in future dialogs between researchers in psychology and art.

Generally, it can be concluded that people who practice dance as a regular activity, whether it is professionally or not, differ from the participants from community sample regarding the Dark Tetrad. They have higher scores on the scales measuring narcissism. As a multidimensional phenomenon which includes physiological, emotional, cognitive and motivational components, dance enables a unique way of expression for humans. Free of

aims and an achievement, spontaneous dance brings to its practitioners a possibility to feel pleasure and enjoyment and to connect with their inner self. It is also a medium which people can use for stress relief and fitness. Understood as an art form which includes an aesthetic purpose, defined structure, artistic articulation of formalized movement, communication of the meaning and presence of the audience, dance is determined with a particular context. With such specific context, dance provides an opportunity for getting attention, this attention being motivated by narcissistic tendencies of a dancer or gained by its mastery and beauty of the performance.

Conflict of interest

We have no conflicts of interest to disclose.

Data availability statement

The data that support the findings of this study are available from the author, upon reasonable request.

References

- Abra, J. (1987). The Dancer as Masochist. *Dance Research Journal*, 19(2), 33–39.
<https://doi.org/10.2307/1478169>
- Adams, F. (2010). Embodied Cognition. *Phenomenology and the Cognitive Science*, 9(4), 619–628. <https://doi.org/10.1007/s11097-010-9175-x>
- Alter, J. B. (1984). Creativity profile of university and conservatory dance students. *Journal of Personality Assessment*, 48, 153–158.
- Anshel, M. H. (2004). Sources of disordered eating patterns between ballet dancers and non-dancers. *Journal of Sport Behavior*, 27, 115–133.
- Arnhajm, R. (2003). *Prilog psihologiji umetnosti*. [Addition to the psychology of art]. Beograd: SKC Beograd.
- Au, S. (2002). *Ballet and modern dance*. London: Thames & Hudson Ltd.
- Bakker, F. C. (1991). Development of personality in dancers: A longitudinal study. *Personality and Individual Differences*, 12(7), 671–681.
[https://doi.org/10.1016/0191-8869\(91\)90222-w](https://doi.org/10.1016/0191-8869(91)90222-w)
- Bale, J. (1911). *The Dance*. Oxford: Danielsson.

- Barreiro, C. & Furnham, A. (2019). Individual Differences as Predictors of Seven Dance Style Choices. *Psychology, 10*, 916–930.
<https://doi.org/10.4236/psych.2019.106059>
- Biddle, S., Fox, K., & Boutcher, S.H. (2000). *Physical activity and psychological well-being*. London: Routledge.
- Blom, A. & Chaplin, L. (2000). *The moment of movement*. London: Dance books.
- Brown, S., Martinez, M. J., & Parsons, L. M. (2006). The neural basis of human dance. *Cerebral Cortex, 16*(8), 1157–1167. <https://doi.org/10.1093/cercor/bhj057>
- Carter, A. (1998). *Dance Studies Reader*. London & New York: Routledge.
- Chamorro-Premuzic, T., & Reichenbacher, L. (2008). Effects of personality and threat of evaluation on divergent and convergent thinking. *Journal of Research in Personality, 42*, 1095–1101. <https://doi.org/10.1016/j.jrp.2007.12.007>
- Chodorow, J. (1991). *Dance Therapy and Depth Psychology: The moving Imagination*. London: Routledge.
- Christensen, J., Cela-Conde, C. J., & Gomila, A. (2017). Not all about sex: neural and bio-behavioral functions of human dance. *Annals of the New York Academy of Sciences, 1400*(1), 8–32. <https://doi.org/10.1111/nyas.13420>
- Cova F. & Deonna J. A. (2014). Being moved. *Philosophical Studies, 169*, 447–466.
<https://doi.org/10.1007/s11098-013-0192-9>
- Crysel, L.C., Crosier, B. S., & Webster, G.D. (2013). The dark triad and risk behavior. *Personality and individual differences, 54* (1), 35–40.
<https://doi.org/10.1016/j.paid.2012.07.029>
- Dahmen-Wassenberg, P., Kämmerle, M., Unterrainer, H.F., & Fink, A. (2016). The Relation Between Different Facets of Creativity and the Dark Side of Personality. *Creativity Research Journal, 28*(1), 60–66. <https://doi.org/10.1080/10400419.2016.1125267>
- Deniker, J. (1900). *Races et Peuples de la terre*. Paris.
- Dinić, B. M., & Jevremov, T. (2021). Trends in research related to the Dark Triad: Abibliometric analysis. *Current Psychology, 40*, 3206–3215. <https://doi.org/10.1007/s12144-019-00250-9>
- Dinić, B. M., Bullut Allred, T. Petrović, B., & Wertag, A. (2020). A test of three sadism measures. Short Sadistic Impulse Scale, Varieties of Sadistic Tendencies, and Assessment of Sadistic Personality. *Journal of Individual Differences*. Online First. <https://doi.org/10.1027/1614-0001/a000319>

- Dinić, B. M., Petrović, B., & Jonason, P. K. (2018). Serbian adaptations of the Dark Triad Dirty Dozen (DTDD) and Short Dark Triad (SD3). *Personality and Individual Differences, 134*, 321–328. <https://doi.org/10.1016/j.paid.2018.06.018>
- Dunin, E. I. (1989). Dance events as a mean to social interchange. U L. Torp (Ed.), *The Dance Event: a Complex Cultural Phenomenon* (pp. 21–29). Copenhagen: ICTM Study Group on Ethnocoreology.
- Džadžević, D. (2005). *Igra*. [Dance]. Novi Sad: Prometej.
- Feist, G. J. (1999). The influence of personality on artistic and scientific creativity. In R. J. Sternberg (Ed.), *Handbook of creativity* (pp. 273–297). Cambridge: Cambridge University Press.
- Fink, A. & Woschnjak, S. (2011). Creativity and personality in professional dancers. *Personality and Individual Differences, 51*(6), 754–758. <https://doi.org/10.1016/j.paid.2011.06.024>
- Fink, A., Graif, B., & Neubauer, A. C. (2009). Brain correlates underlying creative thinking: EEG alpha activity in professional vs. Novice dancers. *NeuroImage, 46*, 854–862. <https://doi.org/10.1016/j.neuroimage.2009.02.036>
- García Dantas, A., Amado Alonso, D., Sánchez Miguel, P. A. (2018). Factors dancers Associate with their body dissatisfaction. *Body Image, 25*, 40–47. <https://doi.org/10.1016/j.bodyim.2018.02.003>
- Grić, D. (1975). *Igra kao estetski problem*. [Dance as an aesthetic problem]. Beograd: Filozofsko društvo Srbije.
- Grove, R., Stevens, C., & McKechnie S. (Eds.) (2005). *Thinking in Four Dimensions. Creativity and Cognition in Contemporary Dance*. Melbourne: Melbourne University Press.
- Hagendoorn, I. (2003). The dancing brain. *Cerebrum, 5*(2), 19–34.
- Havelock, E. (1983). *From the Dance of the Life*. Oxford: Oxford University Press.
- Jaeger, S. (2009). Embodiment and Presence: The ontology of Presence Reconsidered. U D. Krasner & D. Z. Saltz (Eds.), *Staging Philosophy: Interactions of Theater, Performance, and Philosophy* (pp. 122–141). Michigan: The University of Michigan Press.
- Janković, Lj. & Janković, D. (1949). *Narodne Igre. V Knjiga*. [Folklore]. Beograd: Prosveta izdavačko preduzeće Srbije.
- Janković, Lj. & Janković, D. (1964). *Narodne Igre. VII Knjiga*. [Folklore]. Beograd: Prosveta.

- Jola, C., Ehrenberg, S., & Reynolds, D. (2011). The experience of watching dance: Phenomenological-neuroscience duets. *Phenomenology and the Cognitive Sciences*, 11(1), 17–37. <https://doi.org/1007/s11097-010-9191-x>
- Jonason, P. K. & Webster, G. D. (2012). The Dirty Dozen: A Concise Measure of the Dark Triad. *Psychological Assessment*, 22(2), 420–432. <https://doi.org/10.1037/a0019265>
- Jones, D. N., & Paulhus, D. L. (2014). Introducing the Short Dark Triad (SD3): A brief measure of dark personalities. *Journal of Research in Personality*, 21, 28–41. <http://doi.org/10.1177/1073191113514105>
- Jowitz, D. (1994). Expression and expressionism in American modern dance. In J. Adshead-Lansdale, & J. Layson (Eds.), *Dance History: An Introduction* (pp. 169–181). London & New York: Routledge.
- Kent, A., Camner, J., & Camner, C. (1984). *The Dancers' Body Book*. New York: Harper Colins Publisher Inc.
- King, L. A., Walker, L. M., & Broyles, S. J. (1996). Creativity and the Five-Factor model. *Journal of Research in Personality*, 30, 189–203. <https://doi.org/10.1006/jrpe.1996.0013>
- Krešić, I. (1997). Osnovni problemi umetničke igre. [Problems of a dance as an art form]. U S. Hrnjica, V. Panić, K. Radoš, & I. Krešić (Eds.), *Psihologija* (pp. 245–279). Beograd: Zavod za udžbenike i nastavna sredstva.
- Laban, R. (1960). *Mastery of Movement*. London: Macdonald & Evans.
- Langdon, S. W. & Petracca, G. (2010). Tiny dancer: Body image and dancer identity in female modern dancers. *Body Image*, 7, 360–363. <https://doi.org/10.1016/j.bodyim.2010.06.005>
- Layson, J. (1994). Historical perspectives in the study of dance. In J. Adshead-Lansdale, & J. Layson (Eds.), *Dance History: An Introduction*, (pp. 4–17). London & New York: Routledge.
- Lolich, M., Vázquez, G. H., Zapata, S., Hakiskal, K. K., & Hakiskal, H. S. (2015). Affective temperaments in tango dancers. *Journal of Affective Disorders*, 173(1), 27–30. <https://doi.org/10.1016/j.jad.2014.10.018>
- Lovatt, P. (2018). *Dance psychology*. UK: Nortfolk.
- Luck, G. & Sloboda, J. A. (2009). Spatio-temporal cues for visually mediated synchronisation. *Music Perception*, 26(5), 465–473. <https://doi.org/10.1525/mp.2009.26.5.465>
- Magazinović, M. (1951). *Istorija igre*. [History of dance]. Beograd: Prosveta.

- Maletić, A. (1986). *Knjiga o plesu*. [Book about Dance] Zagreb: Kulturno-prosvetni sabor Hrvatske.
- Maraz, A., Király, O., Urbán, R., Griffiths, M. D., & Demetrovics, Z. (2015). Why do you dance? Development of the dance motivation inventory (DMI). *PLoS One*, *10*(3), e0122866. <https://doi.org/10.1371/journal.pone.0122866>
- Martin, J. (1965). *The Modern Dance*. Brooklyn: Dance Horizons, Inc.
- Mauss, M. (1950). *Sociologie et Anthropologie*. Paris.
- McEwena, K., & Younga, K. (2011). Ballet and pain: reflections on a risk-dance culture. *Qualitative Research in Sport, Exercise and Health*, *3*, 152–173. <https://doi.org/10.1080/2159676X.2011.572181>
- McFee, G. (1992). *Understanding Dance*. London & New York: Routledge.
- Meekums, B. (2005). *Dance Movement Therapy. A creative Psychotherapeutic Approach*. London: SAGE Publications.
- Newberry, M. (2017, May). Darkness and light: the role of dark triad traits and empathy in understanding preference for visual artworks. Paper presented at the 11th Annual International Conference on Psychology, Athens, Greece.
- Paulhus, D. L. & Williams, K.M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and Psychopathy. *Journal of research in personality*, *36* (6), 556–563. [https://doi.org/10.1016/S0092-6566\(02\)00505-6](https://doi.org/10.1016/S0092-6566(02)00505-6)
- Paulhus, D. L. (2014). Toward a Taxonomy of Dark Personalities. *Current Directions in Psychological Science*, *23*(6), 421–426. <https://doi.org/10.1177/0963721414547737>
- Plouffe, R. A., Saklofske, D. H., & Smith, M.M. (2017). The assessment of sadistic personality: Preliminary psychometric evidence for a new measure. *Personality and Individual Differences*, *104*, 166–171. <https://doi.org/10.1016/j.paid.2016.07.043>
- Ravaldi, C., Vannacci, A., Bolognesi, E., Stafania, M., Faravelli, C., & Ricca, V. (2006). Gender role, eating disorder symptoms, and body image concern in ballet dancers. *Journal of Psychosomatic Research*, *61*, 529–535. <https://doi.org/10.1016/j.jpsychores.2006.04.016>
- Reasons, M. & Reynolds, D. (2010). Kinaesthesia, Empathy and Related Pleasures: An Inquiry into Audience Experience of Watching Dance. *Dance Research Journal*, *42*(2), 49–75. <https://doi.org/10.1017/S0149767700001030>

- Repp, B. H. & Panel, A. (2004). Rhythmic movement is attracted more strongly to auditory than to visual rhythms. *Psychological Research*, 68(4), 252–270. <https://doi.org/10.1007/s00426-003-0143-8>
- Reynolds, D. & Reasons, M., (Eds.) (2012). *Kinaesthetic Empathy in creative and Cultural Practice*. USA: University of Chicago Press.
- Royce, A. P. (1977). *The Anthropology of dance*. Bloomington and London: Indiana University Press.
- Schaverien, J. (2005). Art, dreams and active imagination: a post-Jungian approach to transference and the image. *Journal of Analytical Psychology*, 50, 127–153. <https://doi.org/10.1111/j.0021-8774.2005.00519.x>
- Siegel, M. (1972). *At the Vanishing Point*. New York: Saturday Review Press.
- Spencer, P. (1988). *Society and Dance*. Cambridge: Cambridge University Press.
- Stevens C., & McKechnie, S. (2005). Thinking in action: thought made visible in contemporary dance. *Cognitive Processing*, 6, 243–252. <https://doi.org/10.1007/s10339-005-0014-x>
- Stevens, K. & Glass, R. (2005). Choreographic Cognition: Investigating the Psychological Processes Involved in Creating and Responding to Contemporary Dance. Conference Proceedings: *Dance Rebooted: Initializing the Grid*. Australia: Ausdance National.
- Sutton, J., Smith, P. K., & Swettenham J. (2010). Social cognition and bullying: Social inadequacy or skilled manipulation? *British Journal of Developmental Psychology*, 17(3), 435–450. <https://doi.org/10.1348/026151099165384>
- Tufnel, M. & Crickmay, C. (2006). *Body, Space, Image*. London: Dance Books
- Vukadinović, M. & Marković, S. (2012). Aesthetic experience of dance performances. *Psihologija*, 45(1), 23–41. <https://doi.org/10.2298/PSI1201023V>
- Vukadinović, M. & Marković, S. (2017). The relationship between the dancers' and the audience's aesthetic experience. *Psihologija*, 50(4), 465–481. <https://doi.org/10.2298/PSI160222009V>
- Vukadinović, M. (2013). An audience's subjective experience of the freedom of artistic expression in different dance forms from the perspective of the cultural psychology of creativity. *Universitas Psychologica*, 12(3), 709–723. <https://doi.org/10.11144/Javeriana.UPSY12-3.asef>
- Vukadinović, M. (2016). Ples kao izraz aktivne imaginacije: umetnički, psihološki i psihoterapijski aspekti.[Dance as an expression of active imagination: artistic, psychological and psychotherapeutic aspects]. *Zbornik Matice srpske za društvene nauke*, 155-156(2), 339–352.

Vukadinović, M. (2019). *Psihologija plesa i umetničke igre*. [Psychology of dance]. Sombor: Učiteljski fakultet, Novi Sad: Novosadski centar za istraživanje plesa i umetnost flamenka – La Sed Gitana.

Apendices

Apendix A

Table 1

Indicators of meaning of dance and related literature

	Indicators of meaning of dance	Literature
1	Pleasure	Brown et al., 2006; Jowitt, 1994; Krešić, 1997; Reason & Reynolds, 2010; Martin, 1965; Maletić, 1986, Reynolds & Reason, 2012
2	Escape from reality	Barreiro & Furnham, 2019; Jola et al. 2011; Maraz et al., 2015; Reason & Reynolds, 2010; Vukadinović, 2019
3	Effort	Džadžević, 2005; Krešić, 1997; Maletić, 1986; Reason & Reynolds, 2010
4	Enjoyment	Brown et al., 2006; Blom & Chaplin, 2000; Cova & Deona, 2014; Kent, 1984; Krešić, 1997; Martin, 1965; Royce, 1977
5	Frustration	Džadžević, 2005; Krešić, 1997; Maletić, 1986; Magazinović, 1951; McEvena & Younga, 2011; Vukadinović, 2019
6	Returning to myself	Blom & Chaplin, 2000; Maletić, 1986; Chodorow, 1991; Vukadinović, 2016
7	Ideal way of expressing myself	Cova & Deona, 2014; Blom & Chaplin, 2000; Dunin, 1989; Jowitt, 1994. Maletić, 1986, Magazinović, 1951; Martin, 1965; Vukadinović, 2019

8	Creativity	Barreiro & Furnham, 2019; Blom & Chaplin, 2000; Fink & Woschnjak, 2011; Grljić, 1975; Vukadinović & Marković, 2012; Vukadinović, 2013, 2016, 2019
9	Stress Relief	Barreiro & Furnham, 2019; Biddle et al., 2000; Chodorow, 1991; Kent, 1984; Vukadinović, 2016
10	Way of being in good physical shape	Barreiro & Furnham, 2019; Biddle et al., 2000; Chodorow, 1991; Maraz et al., 2015
11	Way of expressing my sexuality	Christensen et al., 2017; Havelock, 1983; Džadžević, 2005; Maletić, 1986; Martin, 1965; Royce, 1977; Spencer 1988
12	Way of seduction	Christensen et al. 2017; Havelock, 1983; Džadžević, 2005; Lolich et al., 2015; Maletić, 1986; Royce, 1977; Spencer 1988; Vukadinović, 2019
13	Entertainment	Blom & Chaplin, 2000; Lovatt, 2018; Vukadinović, 2019

Supplement

Table A*Descriptive statistics and alpha reliabilities of all used scales*

Scale	<i>M</i>	<i>SD</i>	α
Indicators of meaning of dance:			
Pleasure	4.82	.50	-
Escape from reality	3.28	1.33	-
Effort	1.74	0.93	-
Enjoyment	4.83	0.49	-
Frustration	1.49	0.79	-
Returning to myself	4.32	1.09	-
Ideal way of expressing myself	4.40	1.00	-
Creativity	4.52	0.80	-
Stress Relief	4.67	0.87	-
Way of being in good physical shape	4.19	1.14	-
Way of expressing my sexuality	3.65	1.16	-
Way of seduction	3.33	1.15	-
Entertainment	4.70	0.66	-
Total score - Indicators of meaning of dance	49.93	7.09	.83
Machiavellianism	25.14	6.50	.79
Narcissism	17.28	6.42	.80
Psychopathy	27.41	7.44	.77
Sadism	11.39	3.02	.66

Table B*Correlations between Dark Tetrad traits*

	Machiavellianism	Narcissism	Psychopathy
Machiavellianism	1		
Narcissism	.57	1	
Psychopathy	.68	.51	1
Sadism	.43	.36	.64

Note. All correlations are significant at $p < .01$.

Table C

Correlation between Indicators of meaning of dance for dancers

	1	2	3	4	5	6	7	8	9	10	11	12
1 Pleasure	1											
2 Escape from reality	.41*	1										
3 Effort	.08	.21	1									
4 Enjoyment	.90*	.40	-.03	1								
5 Frustration	-.21	-.01	.45	-.18	1							
6 Returning to myself	.61*	.54*	.11	.61*	-.05	1						
7 Ideal way of expressing myself	.57*	.35*	.09	.59	-.03	.74*	1					
8 Creativity	.09	.20	.15	.15	.05	.31**	.51*	1				
9 Stress relief	.71**	.44	.15	.75*	.04	.67*	.69*	.17	1			
10 A way to be in a physical good form	.54*	.36*	.11	.57*	.00	.36*	.38*	.15	.61*	1		

11	Way of expressing my sexuality	.42*	.31**	.05	.37*	-	.38*	.49	.1	.52*	.58
		**	*		**	.05	**	***	0	**	***
1	Way of seduction	.40	.41*	.16	.35*	-	.49	.39*	.1	.51*	.47*
2		***	**		**	.02	***	**	2	**	**
1	Entertainment	.14	-	-.14	.19	-	-	-.12	.0	.05	.39*
3			.04			.23	.07		3	**	.11
											.07

Note. *** $p < .001$


Table D

Results of Kruskal-Wallis tests for effects of age, dance type and years of experience and practice in dance on Dark Tetrad traits

	Machiavellianism			Narcissism			Psychopathy			Sadism		
Categories	1	2	3	1	2	3	1	2	3	1	2	3
Kruskal-Wallis H	3.48	8.19	.96	.6	11.5	0.5	4.8	6.2	0.5	2.9	9.2	3.0
df	3	8	3	3	8	3	3	8	3	3	8	3
p	.32	.41	.81	.8	.17	.92	.18	.62	.91	.40	.32	.39

Note. Categories: 1 = age; 2 = dance type; 3 = years of experience and practice in dance.

"Pažnja, molim!": Mračna strana ličnosti plesača

Maja S. Vukadinović 

¹ *Visoka Poslovna Škola Novi Sad, Novi Sad, Srbija*

SAŽETAK




Cilj ovog rada je da se istraži tamna strana ličnosti plesača. U novijoj literaturi, mračne crte ličnosti su konceptualizovane kao Mračna tetrada koja uključuje Makijavelijanizam, Narcizam, psihopatiju i sadizam. U istraživanju je učestvovalo 98 plesača uzrasta između 18 i 57 godina ($M = 34.71$, $SD = 11.21$; 86.7% žena), koji se bave različitim tipovima plesa (klasičan balet, moderna igra, flamenco, orijentalni ples, hip-hop, tango, merengue, bačata i latino plesovi kao što su samba i rumba). U istraživanje su bili uključeni i profesionalci i oni koje se rekreativno bave plesom. Zadatak učesnika sastojao se u tome da odgovore na 13 pitanja pilot verzije Liste indikatora značenja plesa kao i na upnike SD3 i ASP vezane za Mračnu tetrad. Rezultati su pokazali da plesači imaju više skorove na skali narcizma a niže skorove na skali Makijavelijanizma i sadizma u poređenju sa učesnicima prethodne studije (Dinić et al, 2018, 2020). Profesionalni plesači imaju više skorove na skali narcizma u poređenju sa osobama koje se plesom bave rekreativno. Takođe, rezultati regresionih analiza pokazali su da je psihopatija negativan prediktor procene značenja plesa u smislu aktivnosti koja donosi uživanje i prijatnost. U zaključku rada istaknuto je da tamne crte predstavljaju komponentu ličnosti igrača kao i jedan od faktora koji utiču na procenu značenja plesa za plesače. Praktične implikacije rezultata diskutovane su u kontekstu pedagoške plesne prakse kao i u kontekstu mračnih crta kreativne ličnosti.

Ključne reči: plesači, tamne crte ličnosti, Mračna tetrada, narcizam, značenje plesa



Research Article

Basic values as predictors of leisure-time activities among adolescents

Zoran Pavlović   and Ivana Stepanović Ilić ² 

¹ *Department of Psychology, Faculty of Philosophy, University of Belgrade*

² *Department of Psychology, Faculty of Philosophy, University of Belgrade*

ABSTRACT

The main goal of the study is to analyse a rarely investigated relationship between leisure-time activities and Schwartz's 10 basic values in adolescents. The sample included 1,349 Serbian high-school students (44% boys; 62% vocational schools). The leisure-time questionnaire consisted of groups of items related to hobbies, sports, following different themes/shows in the media (TV, Internet, magazines), listening to music, going out, attending cultural and sports events, activities on the Internet and social networking sites usage. Values (Self-direction, Stimulation, Hedonism, Achievement, Power, Security, Conformity, Tradition, Benevolence and Universalism) were examined by the PVQ21 questionnaire. Factor analysis yielded seven factors of leisure activities (45.96% explained variance), defined by the following contents: pop culture; music, culture & arts; movies, TV shows and the internet; science & politics; IT; going out; sports. Correlation analysis showed that the assessment of different activities was significantly related to the distinctive sets of basic values, which was additionally confirmed by multiple regression analysis including basic values as predictors and demographic variables as controls. The main conclusion of the research is that values are important motivators of activities during free time and that different values are mostly expressed through different activities, but also that different activities can be motivated by the same basic values.

Key words: basic values, leisure, PVQ21, adolescents, Serbia

UDC: 159.922.8:379.8(497.11)

DOI: 10.19090/pp.2022.1.87-120

Received: 28.07.2021.

Revised: 19.10.2021.

Accepted: 22.10.2021.



Copyright © 2022 The Author(s).

This is an open access article distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

✉ Corresponding author email: zoran.pavlovic@f.bg.ac.rs

Introduction

Values are understood as important abstract ideals serving as guiding principles in life (Feather, 1995; Maio, 2017; Rokeach, 1973; Schwartz, 1992). They are conceptualized in various ways – as way of life preferences (Morris & Jones, 1955), personality type (Vernon & Allport, 1931), actions (Adler, 1956), beliefs (Rokeach, 1973), etc. Despite different operationalisations of values, it is almost taken for granted that they direct people's actions. Schwartz (1992; 2017; Schwartz et al., 2012; see Pavlović, 2009; 2021) identified several characteristics of values common to most psychological approaches, one of them being that values are desirable goals that motivate action.

Schwartz's theory of basic values

Schwartz's value theory (Schwartz, 1992; Schwartz & Bilsky, 1987) has been one of the most influential theories in this field. It has been validated in more than 60 countries (Schwartz, 1992; 1994), most recently in 49 cultural groups (Schwartz & Cieciuch, 2021). Values are defined as "trans-situational goals, varying in importance, that serve as guiding principles in the life of a person or other social entity" (Schwartz, 1994, p. 21) and treated as an expression of three universal requirements of human existence: the needs of individuals as biological organisms (e.g., pleasure), coordinated social interactions (e.g., honesty), and group survival (e.g., obedience) (Schwartz, 1992; Schwartz et al., 2012; Schwartz & Cieciuch, 2021).

Based on these needs, Schwartz derived a model consisting of 10 motivationally distinct value types (Schwartz, 1992; 1994; Schwartz et al., 2012): Self-Direction (Choosing, creating, exploring), Stimulation (Excitement, novelty, and challenge in life), Hedonism (Pleasure, sensuous gratification), Achievement (Personal success through demonstrating competence according to social standards), Power (Social status and prestige, control/dominance over people and resources), Security (Safety, harmony, and stability of society relationships and self), Conformity (Restraint of actions, inclinations, and impulses likely to upset/harm others and violate

social norms), Tradition (Respect, commitment, and acceptance of the customs and ideas of traditional culture/religion), Benevolence (Preserving and enhancing the welfare of close persons), and Universalism (Understanding, appreciation, tolerance, and protection of all people and nature welfare).

According to motivational (in)compatibility, 10 basic values are arranged in a circumplex structure (Schwartz, 1992; Schwartz et al., 2012; Schwartz & Cieciuch, 2021), in which the pursuit of adjacent value domains (e.g., stimulation and hedonism) is possible and one of the opposite values (e.g., stimulation and tradition) generates conflict.

Values and behaviour

There is abundant evidence that values are connected to a wide range of laboratory-induced and real-life behaviours (Bardi & Schwartz, 2003; Roccas & Sagiv, 2017; Rokeach, 1973). When activated, they also lead to behaviour promoting the underlying values (Maio et al., 2009; Roccas, 2003; Verplaken & Holland, 2002). However, the relationship between values and specific behaviour is at best moderate. Analysing the relationship between basic values and various behavioural measures, Schwartz (2017) showed that correlations were modest, ranging from .19 to .49, even for the behaviours whose primary motivator values should be, i.e., for value-congruent or expressive behaviour (Schwartz & Bardi, 2003; Schwartz, 2017; Skimina et al., 2019).

It is well-evidenced that the relationship between values and behaviour is dependent on several factors. One of them is the freedom of choosing between alternative actions. It is argued that values are a more important behavioural motivator when there is no environmental limitation of actions (Maio, 2017). As such, it can be expected that values should have a more prominent role in guiding actions in those behavioural areas that are freely pursued, for example, those during leisure-time. The second factor that affects the relationship between values and behaviour is age, which is, in a sense, a proxy for the behavioural restrictions. Compared to adults,

adolescents confront more environmental restrictions that could prevent value-motivated acts, which is one of the reasons for the typically found modest correlations between values and behaviour (Benish-Weisman et al., 2017). This bears relevance for the current study since leisure is considered to be the time when adolescents have space to deliberately choose activities that fulfil their needs and interests, exploring identity in that way (Stepanović et al., 2009). All said, if behaviours that are significantly motivated by values are to be found among adolescents, it is most reasonable to seek them in the area of the freely pursued leisure activities.

Leisure-time activities and values

Leisure activities have significant functions in adolescents' lives, such as: identity development; transition to adulthood; building competencies; establishing socio-emotional relationship; promoting well-being (Coatsworth et al., 2005; Roberts, 1983; Shaw et al., 1995; Stepanović Ilić et al., 2019; Trainor et al., 2010). The way adolescents spend free time depends on various factors – gender and socio-economic status (Bekkers, 2005, Windle et al., 2005), family and social environment variables (Barnes and Farrell, 1992; Tucker et al., 2003) and dispositions such as personality traits (Atkins et al., 2005) or sensation seeking (Nower et al., 2004).

The relationship between values and leisure activities has been seldom studied and the findings are limited to particular values and specific behavioural measures. For example, it was demonstrated that Schwartz's value model was useful when analysing the patterns of Internet usage (Bagchi et al., 2015) or music preferences (Gardikioltis & Baltzis, 2010). Focusing on prosocial and age-inappropriate activities during leisure (e.g., pornography, drinking), Rechter et al. (2016) found that adolescents' preferences were predicted by higher-order Schwartz's values. Self-transcendence and Conservation values positively predicted adolescents' preferences for prosocial activities, while Self-enhancement and Hedonism positively predicted an inclination towards age-inappropriate activities. In the local

context, one study reported a significant relationship between adolescents' leisure patterns and preference of 18 personal and 18 social goals (Stepanović Ilić et al., 2019).

The lack of research on the possible relation between values and adolescents' leisure habits is puzzling, having in mind the previously discussed issue of values expression in behaviour, as well as the fact that operationalisations of values are very often related to the preferred lifestyles. Previous seminal work conceptualized values as a preferred way of life (Morris & Jones, 1955). The very idea that values can be understood and measured as the preferred way of doing things suggests their conceptual and empirical closeness with leisure activities. Further, some authors perceive values as the preferred way of spending free time (Čulig et al., 1982; Vasović, 1984). One possible reason for the lack of systematic studies in this field could be associated with adolescence being a turbulent developmental period when the value system has not yet fully consolidated (Boer & Boehnke, 2016; Erikson, 1968; Nurmi, 2004). This issue should be addressed in research by, for example, studying adolescents of different age, while investigating the relationship between values and leisure activities in a more systematic way. Hence, although we focus on a relatively narrow adolescents' age span, the contribution of our study should be considered as the first step in covering a broader spectrum of both leisure behaviour (by targeting a large number of activities) and values (from Schwartz's model).

Research aims

Values are usually understood as important behaviour motivators and representations of important human needs (Rokeach, 1973; Schwartz, 1992), while leisure activities are seen as some sort of behavioural manifestations of free will and important inner needs (Stepanović et al., 2009). That said, the aim of this study is twofold: (1) to empirically categorize leisure activities into behavioural patterns, in order to (2) analyse their relationship with Schwartz's basic values. In Schwartz's theory, basic values have a distinct motivational content, i.e., they guide behavior towards specific goals whose

achievement fulfills the important needs that values express. By examining the predictive power of values for specific leisure activities, we will be able to empirically examine the motivational “meaning” of adolescents’ leisure activities, i.e., to identify the goals adolescents strive to achieve by spending free time in a specific way and the needs that such activities possibly serve.

Method

Sample

Data were collected in 2018 within a larger survey on Serbian adolescents’ everyday life ($N = 1349$), which was conducted among the first grade (51%), aged 15, and third grade (49%), aged 17, high schoolers. Sample was stratified (included all main regions of Serbia, a relatively proportional type of school structure etc.), but convenient. In total, students at 26 schools took part in the research. In each school, one first-year and one third-year class were chosen randomly from all the classes in those two grades. There were slightly more girls (56%) than boys (44%); 38% of students attended grammar school, 59% four-year and 3% three-year vocational schools.

Procedure

The survey was conducted by school psychologists trained by the researchers. Informed consent was obtained from school principals and the respondents’ parents/caregivers. Respondents were told that the aim of the research was to obtain information about their everyday life and leisure habits and assured that their answers would remain anonymous. Participants completed the questionnaire during regular lesson time in the classroom, in two sessions each lasting up to 45 minutes.

Data and measures

Leisure-time activities

Items regarding hobbies, sports, following different themes in the media (TV, Internet, magazines), listening to music, going out, attending cultural and sports events, Internet and social networks activities were used to register the adolescents' leisure engagement (49 items; sample item: "*How often do you listen to rock music?*"). Students estimated the frequency of performing activities on a 5-point scale (1 – *never*, 5 – *often*). The items covering leisure activities were selected from the instrument constructed to investigate everyday life of adolescents by one author of the study and associates; the questionnaire was created for the follow-up study conducted in the same secondary schools 10 years after the initial study in 2008. Similar to previous studies on adolescents' leisure (Bruyn & Cillessenn, 2008; Piko & Vazsonyi, 2004; Stepanović et al., 2009; Stepanović Ilić et al., 2019), we aimed at providing an empirical categorization of leisure activities using factor or cluster analysis in order to group leisure activities and consequently relate them to values. However, it is very important to bear in mind that we deal with the self-reported measures, *assessments* of behaviour, and not the behaviour itself.

Basic values

Values were measured by the PVQ-21 (Davidov et al., 2008; Schwartz, 2003). Students were asked to compare the person described in items (e.g., "*Thinking up new ideas and being creative is important to him. He likes to do things in his own original way.*") to themselves and rate how similar the person was to them on a 6-point scale (1 – *not like me at all*, 6 – *very much like me*). Multidimensional scaling (PROXSCAL) on 21 individual values (S -stress = .05; DAF=.97, Tucker's ϕ =.99) and 10 computed basic values (S -stress=.01; DAF=.99, Tucker's ϕ = .99) showed a satisfactory fit with the circular structure and ordering of values (see Appendix, Figure 1 and Figure 2). Thus, mean-centred scores (Schwartz, 2003) for 10 basic values (Self-direction, Stimulation, Hedonism, Achievement, Power, Security, Conformity,

Tradition, Benevolence and Universalism) were used in the analysis (higher values implying more relative importance).

Socio-demographic variables

The questionnaire included several relevant demographic variables: Gender, Age (the first vs. third grade), Type of school (grammar vs. vocational high school), School achievement (*unsatisfactory/satisfactory/good/very good/excellent*) and Family economic situation (1 – *We do not have enough money for food* / 6 – *We can buy almost anything we want*). Since they are important correlates of both values and leisure-time activities, we included these variables as controls in our analysis.

Results

Groups of leisure-time activities

Different cluster and factorial solutions were probed, and the seven-factor solution (45.96% of explained variance) was accepted as the most meaningful (PCA; Varimax rotation; Eigenvalues > 1; KMO = .82). Table 1 presents the overview of the identified dimensions (the full rotated factor matrix is given in the Appendix, Table 1).

Table 1*Extracted leisure behavioural patterns*

Factor label	Sample items (loadings)	% of Variance	No. of items	α
Pop-culture	Fashion (.71)	11.20	7	.80
	Teenage stories (.63)			
	Beauty and Health (.69)			
Music, Culture & Arts	Punk music (.66)	10.36	9	.78
	Metal music (.66)			
	Rock music (.62)			
Movies, TV shows & Internet	Movies and TV shows (.59)	67.48	12	.76
	YouTube (.55)			
	Instagram (.49)			
Science & Politics	Politics (.69)	5.02	5	.71
	Political talk shows (.67)			
	News (.68)			
IT	Programming (.75)	4.38	5	.76
	Hi-tech, programming – hobby (.74)			
	Graphic design – hobby (.59)			
Going out	Clubs & Discotheques (.81)	3.84	4	.79
	Parties (.72)			
	Cafés (.62)			
Sports	Sport TV shows (.82)	3.48	3	.84
	Doing sports (.78)			
	Sports events (.66)			

Note Items refer to the frequency of doing something related to the enlisted topics (following, reading, watching, practicing etc.).

The items related to fashion, teenage stories, beauty and health, celebrities and listening to pop music loaded on the first latent dimension, which we labelled as Pop-culture. The second, Music, Culture & Arts, covers listening to various genres (punk, heavy metal etc.), labelled as rebellious music preference (Rentfrow & Gosling, 2003), watching culture and art TV shows, and visiting museums and galleries. The consumption of entertaining media contents (movies, TV shows, music), along with online and social network activities, constitute the third dimension, entitled Movies, TV shows & Internet. Following news and watching political shows, as well as an interest in science, comprise the fourth factor, Science & Politics. The fifth is defined by the computer, graphic design and programming activities (labelled IT) and the sixth (Going Out) is associated with attending parties and visiting clubs and cafés. Following sports and practicing them constitute the seventh dimension (Sports)¹.

Basic values and leisure activities

Generally speaking, the appreciation of basic values and the extracted leisure patterns are meaningfully related (Table 2). Benevolence and Achievement have the least importance for leisure activities, while Hedonism and Power values are related with most activity types. Correlations are generally low (< .20).

¹ Factor scores are used in further analysis; higher values imply assessments of more frequent activities.

Table 2*Inter-correlations between leisure factors and 10 basic values*

	Pop Culture	Culture, Music & Art	Movies, TV-shows and Internet	Science & Politics	IT	Going out	Sports
Security	.01	-.04	-.08 **	.17 **	.01	-.12 **	-.07 *
Conformity	-.11 **	-.07 *	-.05	.01	.06 *	-.07 *	.10 **
Tradition	-.09 **	.00	-.11 **	.01	.01	-.13 **	.14 **
Benevolence	.11 **	-.00	-.02	-.08 **	-.08 **	-.03	-.06
Universalism	.09 **	.20 **	-.09 **	.01	-.04	-.21 **	-.05
Self-direction	.00	.19 **	.00	-.01	.06	-.01	-.03
Stimulation	.09 **	.03	.17 **	-.10 **	.02	.12 **	.05
Hedonism	.02	-.13 **	.16 **	-.16 **	-.10 **	.26 **	-.03
Achievement	.03	-.10 **	.02	.05	-.02	.04	.02
Power	-.12 **	-.08 **	-.01	.07 *	.07 *	.16 **	-.08 *

Note. * $p < .05$. ** $p < .01$.

The Pop-culture pattern is accompanied by the appreciation of Universalism and Benevolence, adjacent values in the circumplex model, suggesting that these are governed by the relationship needs and “other” focused, not in a submissive way. This is in line with the content that these activities are related to, such as fashion, celebrities, and popular issues in the broadest sense.

Adolescents prone to Music, Culture & Arts activities have pronounced needs to rely on their own judgments, in terms of intellectual autonomy, as well as to experience variety (as suggested by the positive correlation with Universalism and Self-direction). They are oriented towards the activities granting various experiences with diverse ideas (culture and art)

and with people (evidenced in valuing Universalism and lower valuing of Achievement and Power, which suggests that others are not there to be “mastered” or to achieve prestige but are treated as equals).

Adolescents with high scores on the Movies, TV shows & Internet factor strive for affectively pleasant arousals (positive correlations with Hedonism and Stimulation) and are less attached to social conventions and the certainty they bring (negative correlations with Tradition and Security). Obviously, media-entertainment is one way of achieving pleasures and excitement when these are valued.

Inclination towards Science & politics is characterized by a somewhat opposite pattern of correlations. Stimulation and Hedonism are negatively valued, unlike Security, harmony and stability of society. Science and politics are probably seen as social areas through which these goals can be achieved and, at the same time, as the fields requiring dedication which does not agree with sensation seeking.

IT activities have less meaningful relationships with values. Spending free time in this way is demotivated by hedonistic goals, and elicited by care about social status, prestige and “mastery” (a positive correlation with Power).

The Going out pattern is almost synonymous with seeking pleasant experiences and it is indeed more practiced by adolescents who value Hedonism and Stimulation. They, at the same time, disvalue the prescribed social roles and the harmony of social relations more (negative correlations with Tradition, Conformity and Security) which is, probably, an indication of a general personal focus among those who spend spare time in these activities.

Finally, interest in Sports is associated with those combinations praising Conformity and Tradition, which implies submission to socially imposed expectations, while negative correlations with Security and Power indicate a low evaluation of security and harmony through the control of relations. It is possible that these young people accept some prescribed social

roles for which these activities are typical (e.g., gender roles) and are more engaged in interpersonal relationships that are conflicted and insecure.

Basic values as predictors of leisure activities

As demographic variables are important sources of variations in the leisure time activities, we performed hierarchical multiple regression analysis with gender, age, type of school, school achievement and family economic situation entered in the first step, and basic values as predictors in the second step, in order to test whether values can explain additional variations in leisure activities. Due to a very specific relationship between basic values and the corresponding problems with multicollinearity in the regression models, we followed the suggestion made by Schwartz (2003) that maximum eight values should be entered in the regression model simultaneously. Those basic values that had the highest Variance Inflation Ratio (*VIF*) scores in the regression models which included all ten values were excluded from the final regression models that will be presented here (see Appendix, Table 2 for *VIF* values in initial and final regression models). When the two selected values, Universalism and Power, were excluded, *VIF* values were below the conventional level <10, which indicated no multicollinearity between the rest of the predictors. The final regression models for each group of leisure activities are presented in Table 3.

Each regression model is significant, explaining from 3% (Music, Culture & Arts) to 42% (Pop-culture) of the leisure factors' variance in the first step, and from 9% (IT) to 43% (Pop-culture) in the second step of hierarchical regression analysis. Adding basic values in each case improved the explanatory power of the model, sometimes marginally (for the Pop-culture factor), but other times immensely (e.g., values explained almost two and a half times more variance in Music, Culture & Arts than demographic variables). The significance of demographic values is, however, rarely affected by the introduction of values into the regression models. Finally, there is at least one value that significantly predicts each leisure pattern, implying that basic values matter beyond the variations explained by demographic variables.

After controlling for demographics, only Self-direction negatively predicted the activities related to the Pop-culture factor. The most important predictor for this leisure pattern was female gender. The orientation towards Music, Culture & Arts was most strongly positively predicted by Self-direction, and negatively by Hedonism and Achievement. This additionally indicates the importance of intellectual autonomy and acceptance of diversity for these leisure activities. Movies, TV shows & Internet and Going out patterns were positively predicted by Hedonism and Stimulation. Significant predictors of the media entertainment factor also included school type (vocational) and lower school achievement, while age and higher economic status were as important as Hedonism in the case of adolescents who love to go out. Science & politics activities were positively predicted by Security, but also by gender (male), type of school (grammar) and age (older), and negatively by Hedonism. Besides gender (male), age (younger), and higher school achievement, the predictors of IT activities were Self-direction (positively) and Hedonism (negatively), signifying the primary importance of intrinsic motives for novelty in adolescents practicing these activities. Finally, Sports activities were more preferred by male students and positively predicted by Conformity, Tradition, Stimulation and Achievement.

Table 3

Hierarchical multiple regression analyses predicting the types of leisure-time activities by demographic variables and basic values

	Pop-Culture		Music, Culture & Arts		Movies, TV shows & Internet		Science & Politics		IT		Going out		Sports	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
(Constant)	-1.98 **	-1.98 **	.00	.13	.64 **	.70 **	-.48 *	-.40	.55 **	.63 **	-.97 **	-.95 **	1.34 **	1.13 **
Gender (girl)	.64 **	.64 **	.00	-.02	.13 **	.12 **	-.16 **	-.16 **	-.22 **	-.22 **	-.06 *	-.06 *	-.30 **	-.29 **
Age	.00	.00	.05	.04	-.06 *	-.05	.16 **	.15 **	-.09 **	-.09 **	.21 **	.23 **	-.07 *	-.06 *
Type of school (grammar)	-.01	-.01	.07 *	.06 *	-.13 **	-.13 **	.15 **	.15 **	.00	.00	-.00	-.01	-.01	.01
School achievement	.05 *	.06 *	.05	.04	-.16 **	-.15 **	.03	.00	.10 **	.09 **	-.08 **	-.05 **	-.04	-.04
Family economic status	.00	-.00	-.12 **	-.11 **	.03	-.00	-.02	-.00	-.01	-.01	.21 **	.17 **	-.02	-.02
Security		.00		-.09 *		-.00		.10 **		-.00		-.04		-.00
Conformity		-.01		-.09 *		.04		-.07		.02		.03		.13 **
Tradition		.00		-.09 *		-.06		-.01		-.03		-.05		.18 **
Benevolence		-.00		-.07 *		-.00		-.04		-.05		.00		.04
Self-direction		-.06 *		.10 **		-.00		-.00		.06 *		-.03		.06 *
Stimulation		.04		-.00		.11 **		-.01		.06		.06 *		.15 **
Hedonism		.03		-.19 **		.10 **		-.16 **		-.12 **		.21 **		.00
Achievement		.04		-.14 **		.01		.02		-.04		-.00		.12 **
ΔR^2	.42	.01	.03	.07	.07	.04	.07	.05	.06	.03	.08	.06	.10	.04
Total R^2	.43		.10		.11		.12		.09		.14		.14	

Note. ** $p < .01$, * $p < .05$.

Table 3

Hierarchical multiple regression analyses predicting the types of leisure-time activities by demographic variables and basic values

	Pop-Culture		Music, Culture & Arts		Movies, TV shows & Internet		Science & Politics		IT		Going out		Sports	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
(Constant)	-1.98 **	.00	.13	.70 **	.64 **	.48 *	.55 **	.63 **	-.97 **	-.95 **	.134 **	.113 **		
Gender (girl)	.64 **	.00	-.02	.12 **	.13 **	-.16 **	-.22 **	-.22 **	-.06 *	-.06 *	-.30 **	-.29 **		
Age	.00	.05	.04	-.05	-.06 *	.16 **	.15 **	-.09 **	.21 **	.23 **	-.07 *	-.06 *		
Type of school (grammar)	-.01	.07 *	.06 *	-.13 **	-.13 **	.15 **	.15 **	.00	-.00	-.01	-.01	.01		
School achievement	.05 *	.06 *	.04	-.15 **	-.16 **	.03	.10	.09 **	-.08 **	-.05 **	-.04	-.04		
Family economic status	.00	-.00	-.11 **	-.00	.03	-.02	-.00	-.01	.21 **	.17 **	-.02	-.02		
Security	.00	-.09 *	-.09 *	-.00	-.09 *	.10	.10	-.00	-.04	-.04	-.00	-.00		
Conformity	-.01	-.09 *	-.09 *	.04	-.07	-.07	-.07	.02	.03	.03	.13 **	.13 **		
Tradition	.00	-.09 *	-.09 *	-.06	-.01	-.06	-.01	-.03	-.05	-.05	.18 **	.18 **		
Benevolence	-.00	-.07 *	-.07 *	-.00	-.04	-.04	-.04	-.05	.00	.00	.04	.04		
Self-direction	-.06 *	.10 **	.10 **	-.00	-.00	-.00	-.00	.06 *	-.03	-.03	.06 *	.06 *		
Stimulation	.04	-.00	-.00	.11 **	-.01	.11 **	-.01	.06	.06 *	.06 *	.15 **	.15 **		
Hedonism	.03	-.19 **	-.19 **	.10 **	-.16 **	-.16 **	-.16 **	-.12 **	.21 **	.21 **	.00	.00		
Achievement	.04	-.14 **	-.14 **	.01	.02	.02	.02	-.04	-.00	-.00	.12 **	.12 **		
ΔR^2	.42	.01	.03	.07	.07	.07	.05	.06	.03	.08	.10	.04		
Total R^2	.43	.10	.11	.12	.14	.14	.14	.14	.14	.14	.14	.14		

Note. **p<.01, *p<.05.

Discussion

The aim of this study was to examine the relationship of the extracted adolescents' leisure time activity assessments with their underlying values. The identified seven leisure factors are similar to those detected in previous local research (Stepanović et al., 2009; Stepanović Ilić et al., 2019). If we interpret this as an indication of stability of adolescents' behavioural assessment patterns, these freely chosen activities should be related to distinct needs and a meaningful relationship with basic values could be expected. The obtained results confirm that basic values, conceptualized by Schwartz (1992), are important predictors of leisure activities and guide them. Hence, we can conclude that leisure is an area of value-expression during adolescence. In addition, our findings are in line with the authors (Bardi & Schwartz 2003; Schwartz, 2017; Skimina et al., 2019) claiming that values primarily govern value-congruent behaviour.

Correlation and regression analyses have shown that each leisure pattern is associated with multiple values and that the relationship between values and behaviour assessments is rather weak. A moderate association of values and behavioural measures was found in previous studies as well (Bardi & Schwartz, 2003; Skimina et al., 2019). An additional reason for this finding may be the fact that the extracted leisure factors included related, but diverse activities. Other explanations might include the peer-normative influences that 'undermine' the role of values in behaviour during adolescence (Benish-Weisman et al., 2017).

Still, adolescents' assessment of the inclination towards particular leisure activities, in some cases, was primarily determined by differences in their values (e.g., the Music, Culture & Arts pattern), while in other cases, like Pop-culture activities, values, in comparison to other variables, were almost irrelevant. In other words, there are differences in the relative contribution of values and other variables for different behaviour assessment. Still, generally speaking, the discovered leisure activities' patterns show a different structure

of correlations with basic values, which implies that their motivational sources are different and that they serve different needs.

Some values seem to be more important predictors of spending free time in a specific way. It is not surprising that leisure is more a matter of Stimulation and Hedonism goals than, for instance, preserving Tradition. Being free to spend time as one pleases is indeed mostly a search for stimulating and amusing experiences. Yet, the relation between leisure behaviour and values seems to be rather complex. Thus, participation in certain leisure activities, such as those related to Science & politics, is negatively predicted by Hedonism. Both Hedonism and Stimulation are irrelevant in the case of the Pop-culture orientation, while for other leisure patterns (Music, Culture & Arts and IT) other values bear more relevance (e.g., Self-direction). These data have some important, both practical and theoretical, implications.

The relationships between values and leisure activities can imply the relevance of basic values in terms of their more general motivational content. Stepanović Ilić et al. (2019) showed that leisure patterns oriented towards fun (entertainment media and going out) were related to valuing personal rather than social goals. Such distinction is relevant when debating the role of Schwartz's values with personal focus, Hedonism and Stimulation being the most important in the present circumstances. Our data show that active (Going out) or passive (Movies, TV shows and Internet) orientation towards fun during free time is self-centred as well. A "clear" social focus is manifested in the Science & Politics pattern, which is similar to the previously identified Academic factor (Stepanović Ilić et al., 2019), characterized by a mixture of importance of social and personal goals. This is in line with reasoning (Hofer et al., 2007) that some adolescents (especially those with high achievement motivation) spend more time in learning than having fun. High importance of Security for these young people, identified in our study, is consistent with the findings of previous research (Stepanović Ilić et al., 2019) that intellectually oriented adolescents appreciated personal safety, crime and corruption reduction. The combined relevance of personal and social focus values in our

study is most evident in the Music, Culture & Arts pattern of activities. In terms of Schwartz's theory (Schwartz et al., 2012), this can be described as the relevance of the Growth or Anxiety-free values.

Almost all leisure activities' patterns are value-ambivalent, motivated by various values (Schwartz, 2017). Still, the fact that the same basic values are related to different activities' assessment indicates that the expression of values during leisure activities could be a result of other measured (e.g., gender) or unmeasured factors (e.g., parental practices). The most important predictors of Pop-culture and Sports patterns are, by far, demographic variables. Hence, the former activities are more practiced by girls and the latter by boys. Smaller relevance of values in these cases indicates that there are salient gender norms regulating participation in such activities. The sports pattern is usually linked to goals associated with nationalism and militarism (Stepanović Ilić et al., 2019) and sport is a generally important area for strengthening the national identity (Jackson & Ponc, 2001). We have also found that sports activities are accompanied by Tradition and Conformity values, which could signal those sports are attractive to boys, especially those appreciating tradition. In such cases, sports can help establish a firm national, as well as gender identity.

Values are major elements not just of identities (Rokeach, 1973; Verplanken & Holland, 2002), but also of lifestyles and subcultures (Inglehart, 1990; Kluckhohn, 1951; Morris & Jones, 1955). Our data suggest that leisure activities' patterns rooted in values serve as markers of differences in lifestyle preferences and an expression of the subculture membership. As shown previously, musical preferences associated with social awareness and rebelliousness are connected to self-transcendence (e.g., Universalism) values (Gardikiotis & Baltzis, 2010). Similarly, openness to experiences, as a personality trait closely associated with the Openness to Change value (Roccas et al., 2002), is related to the preference of complex music (such as blues or rock) (Rentfrow & Gosling, 2003). Hence, spending free time by listening to "rebellious" music and deliberating complex ideas enables the achievement of goals that oppose dominance and supports solidarity

(Gardikiotis & Baltzis, 2010). This is in line with our data regarding the Music, Culture & Arts pattern. Such reasoning is additionally supported by the finding that Self-direction negatively predicts Pop-culture activities. Popularity is a matter of mainstream trends and standards in a society and, as such, rejected by those appreciating personal independence (Self-direction) and attracted to alternative, 'anti-elitist' (sub)culture.

Some previous studies (Stepanović Ilić et al, 2019) showed that different leisure activities' patterns shared common postmodern values – excitement, popularity and hedonism. The theoretical model applied here does not enable us to make corresponding comparisons. Still, similarly, in addition to the fact that specific leisure activities' assessment is accompanied by distinct values, the observed trends can be summarized in the aforementioned sense, relying on higher order values in Schwartz's model. Our results indicate that Stimulation, Hedonism, and Self-direction values, comprising the higher-order Openness to Change dimension (Schwartz, 1992), have the most important role in differentiating those who participate in specific leisure patterns. By different criteria, they denote the values with Personal focus and, finally, Growth and anxiety-free values (Schwartz et al., 2012). All this implicates that leisure activities serve to satisfy important intrinsic needs, as shown in other studies (Leveresen et al., 2012), and, as such, have significant socio-psychological-developmental functions in adolescents' lives.

Finally, one of the obvious practical implications of the presented research would refer to the importance of the removal of (structural) obstacles in participation in various activities of adolescents. Although it was of secondary importance for the present study, it is clear that leisure-time activities are dependent on "resources", such as economic ones. This could both prevent some groups of adolescents to pursue the preferred activities and, at the same time, limit the relevance of values that guide such behaviour. Similarly, as our value "universe" is diverse, so should be the available "options" for spending free time, suggesting the importance of diversification of the

school-based programmes, community initiatives and general opportunities that are offered to adolescents.

Limitations and recommendation for future research

The design of this study was cross-sectional and prevents us from making conclusions regarding the influence of values on leisure activities' assessments. The reverse relationship is quite possible – the judgements on values' appreciation were made on the basis of involvement in various leisure activities. We did not analyse age differences in much detail in this paper; it would be important to do so, especially with the expanded age range of participants, in order to track changes during such an unstable period as adolescence. Since we used the self-reported measures which have well-known weaknesses (Bardi & Schwartz, 2003), future research could deploy a procedure relying on different behavioural data about leisure (e.g., experience sampling; Skimina et al., 2019). The above-mentioned issues also suggest that further studies could benefit from focusing on higher-order values for explaining the variations in leisure activities among adolescents. Finally, we deployed one possible factorial solution that resulted in seven specific leisure-time activities. Our decision was based on the criteria that were not solely and purely statistical, but some future research could benefit from testing the relevance of different factorial solutions regarding leisure activities.

Note

Part of this research was previously reported at the 27th Empirical Studies in Psychology conference (Belgrade, May 14th to 18th 2021).

Funding

This work was supported by the Ministry of Science, Education and Technological Development of the Republic of Serbia – Contract number 451-03-9/2021-14/ 200163

Conflict of interest

We have no conflict of interest to disclose.

Data availability statement

The data that support the findings of this study are available from the corresponding author, [Z.P], upon request.

References

- Adler, F. (1956). The value concept in sociology. *American Sociological Review*, 62, 272–279. <https://doi.org/10.1086/222004>
- Atkins, R., Hart, D., & Donnelly, T. M. (2005). The association of childhood personality type with volunteering during adolescence. *Merrill-Palmer Quarterly (1982-)*, 145–162.
- Bagchi, K. K., Udo, G. J., Kirs, P. J., & Choden, K. (2015). Internet use and human values: Analyses of developing and developed countries. *Computers in Human Behavior*, 50, 76–90. <https://doi.org/10.1016/j.chb.2015.03.055>
- Bardi, A., & Schwartz, S. H. (2003). Values and behavior: Strength and structure of relations. *Personality and social psychology bulletin*, 29(10), 1207–1220. <https://doi.org/10.1177/0146167203254602>
- Barnes, G. M., & Farrell, M. P. (1992). Parental support and control as predictors of adolescent drinking, delinquency, and related problem behaviors. *Journal of Marriage and the Family*, 54, 763–776. <https://doi.org/10.2307/353159>
- Bekkers, R. (2005). Participation in voluntary associations: Relations with resources, personality, and political values. *Political Psychology*, 26(3), 439–454. <https://doi.org/10.1111/j.1467-9221.2005.00425.x>
- Benish-Weisman, M., Daniel, E., & Knafo-Noam, A. (2017). The relations between values and aggression: A developmental perspective. In S. Roccas & S. Sagiv (Eds.), *Values and Behavior – Taking a Cross Cultural Perspective* (pp. 97–114). Springer.
- Boer, D., & Boehnke, K. (2016). What are values? Where do they come from? A developmental perspective. In T. Brosch & D. Sander (Eds.), *Handbook of value: Perspectives from economics, neuroscience, philosophy, psychology, and sociology* (pp. 129–151). Oxford: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780198716600.003.0007>

- Bruyn, H. E., & Cillessen, A. (2008). Leisure Activity Preferences and Perceived Popularity in Early Adolescence. *Journal of Leisure Research, 40*(3), 442–457. <https://doi.org/10.1002/ab.21518>
- Coatsworth, J. D., Sharp, E. H., Palen, L. A., Darling, N., Cumsille, P., & Marta, E. (2005). Exploring adolescent self-defining leisure activities and identity experiences across three countries. *International Journal of Behavioral Development, 29*(5), 361–370. <https://doi.org/10.1080/01650250500166972>
- Čulig, B., Fanuko, N., & Jerbić, V. (1982). *Vrijednosti i vrijednosne orijentacije mladih*. [Values and value orientations of youth] CDD SSOH.
- Davidov, E., Schmidt, P., & Schwartz, S. H. (2008). Bringing values back in: The adequacy of the European Social Survey to measure values in 20 countries. *Public Opinion Quarterly, 72*(3), 420–445. <https://doi.org/10.1093/poq/nfn035>
- Erikson, E. (1968). *Identity: Youth and crisis*. Newton.
- Feather, N. T. (1995). Values, valences, and choice: The influences of values on the perceived attractiveness and choice of alternatives. *Journal of Personality and Social Psychology, 68*(6), 1135–1151. <https://doi.org/10.1037/0022-3514.68.6.1135>
- Gardikiotis, A., & Baltzis, A. (2012). ‘Rock music for myself and justice to the world!': Musical identity, values, and music preferences. *Psychology of Music, 40*(2), 143–163. <https://doi.org/10.1177/0305735610386836>
- Hofer, M., Schmid, S., Fries, S., Dietz, F., Clausen, M. & Reinders, H. (2007). Individual values, motivational conflicts, and learning for school. *Learning and Instruction, 17*(1), 17–28. <https://doi.org/10.1016/j.learninstruc.2006.11.003>
- Inglehart, R. (1990). *Culture shift in advanced industrial societies*. Princeton University Press.
- Jackson, S. J., & Ponir, P. (2001). Pride and Prejudice: Reflecting on Sport Heroes, National Identity, and Crisis in Canada. *Sport in Society, 4*(2), 43–62. <https://doi.org/10.1080/713999819>
- Kluckhohn, C. (1951). Values and value orientations in the theory of action. In T. Parsons, & E. Shils (Eds.), *Toward a general theory of action* (pp. 387–433). Harper & Row.
- Leversen, I., Danielsen, A. G., Birkeland, M. S., & Samdal, O. (2012). Basic psychological need satisfaction in leisure activities and adolescents' life satisfaction. *Journal of Youth and Adolescence, 41*(12), 1588–1599. <https://doi.org/10.1007/s10964-012-9776-5>

- Maio, G. R. (2017). *The psychology of human values*. Psychology press.
- Maio, G. R., Pakizeh, A., Cheung, W. Y., & Rees, K. J. (2009). Changing, priming, and acting on values: effects via motivational relations in a circular model. *Journal of Personality and Social Psychology, 97*(4), 699–715. <https://doi.org/10.1037/a0016420>
- Morris, C., & Jones, L. V. (1955). Value scales and dimensions. *The Journal of Abnormal and Social Psychology, 51*(3), 523–535. <https://doi.org/10.1037/h0048831>
- Nower, L., Derevensky, J. L., & Gupta, R. (2004). The relationship of impulsivity, sensation seeking, coping, and substance use in youth gamblers. *Psychology of Addictive Behaviors, 18*(1), 49–55. <https://doi.org/10.1037/0893-164X.18.1.49>
- Nurmi, J. E. (2004). Socialization and self-development: Channelling, selection, adjustment, and reflection. In: R. M. Lerner and L. Sternberg (Eds.), *Handbook of Adolescent Psychology* (pp. 85–124). John Wiley & Sons, Inc.
- Pavlović, Z. (2009). Sociopsihološka analiza Inglehartovog koncepta vrednosti samoizražavanja. [Sociopsychological analysis of Inglehart's concept of self-expression values] *Primenjena psihologija, 2*(2), 149–166. <https://doi.org/10.19090/pp.2009.2.149-166>
- Pavlović, Z. (2021). *Psihologija vrednosti* [Psychology of human values] Beograd: Institut za psihologiju.
- Piko, B. F., & Vazsonyi, A. T. (2004). Leisure activities and problem behaviors among Hungarian youth. *Journal of Adolescence, 27*(6), 717–734. <https://doi.org/10.1016/j.adolescence.2004.02.004>
- Rechter, E., & Sverdlik, N. (2016). Adolescents' and teachers' outlook on leisure activities: Personal values as a unifying framework. *Personality and Individual Differences, 99*, 358–367. <https://doi.org/10.1016/j.paid.2016.04.095>
- Rentfrow, P. J., & Gosling, S. D. (2003). The do re mi's of everyday life: the structure and personality correlates of music preferences. *Journal of Personality and Social Psychology, 84*(6), 1236–1256. <https://doi.org/10.1037/0022-3514.84.6.1236>
- Roberts K. (1983). *Youth and leisure*. Allen and Unwin.
- Roccas, S. (2003). Identification and status revisited: The moderating role of self-enhancement and self-transcendence values. *Personality and Social*

- Psychology Bulletin*, 29(6), 726–736.
<https://doi.org/10.1177/0146167203029006005>
- Roccas, S., & Sagiv, L. (Eds.). (2017). *Values and behavior: Taking a cross cultural perspective*. Springer.
- Roccas, S., Sagiv, L., Schwartz, S., & Knafo, A. (2002). The Big Five personality factors and personal values. *Personality and Social Psychology Bulletin*, 28, 789–801. <https://doi.org/10.1177/0146167202289008>
- Rokeach, M. (1973). *The nature of human values*. The Free Press.
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 1–65). Academic Press.
[https://doi.org/10.1016/S0065-2601\(08\)60281-6](https://doi.org/10.1016/S0065-2601(08)60281-6)
- Schwartz, S. H. (1994). Are there universal aspects in the content and structure of values? *Journal of Social Issues*, 50(4), 19–45. <https://doi.org/10.1111/j.1540-4560.1994.tb01196.x>
- Schwartz, S. H. (2003). A proposal for measuring value orientations across nations. In *Questionnaire development report of the European Social Survey* (chap. 7). Retrieved from
http://naticent02.uuhost.uu.net/questionnaire/chapter_07.doc
- Schwartz, S. H. (2017). The refined theory of basic values. In S. Roccas & S. Sagiv (Eds.), *Values and Behavior – Taking a Cross Cultural Perspective* (pp. 51–72). Springer.
- Schwartz, S. H., & Bilsky, W. (1987). Toward a universal psychological structure of human values. *Journal of Personality and Social Psychology*, 53, 550–562.
<https://doi.org/10.1037/0022-3514.53.3.550>
- Schwartz, S. H., & Cieciuch, J. (2021). Measuring the Refined Theory of Individual Values in 49 Cultural Groups: Psychometrics of the Revised Portrait Value Questionnaire. *Assessment*. <https://doi.org/10.1177/1073191121998760>
- Schwartz, S. H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C., Ramos, A., Verkasalo, M., Lönnqvist, J.-E., Demirutku, K., Dirilen-Gumus, O., & Konty, M. (2012). Refining the theory of basic individual values. *Journal of Personality and Social Psychology*, 103(4), 663–688.
<https://doi.org/10.1037/a0029393>
- Shaw, S. M., Kleiber, D. A., & Caldwell, L. L. (1995). Leisure and identity formation in male and female adolescents: A preliminary examination. *Journal of*

- Leisure Research*, 27(3), 245–263.
<https://doi.org/10.1080/00222216.1995.11949747>
- Skimina, E., Ciecuch, J., Schwartz, S. H., Davidov, E., & Algesheimer, R. (2019). Behavioral signatures of values in everyday behavior in retrospective and real-time self-reports. *Frontiers in Psychology*, 10, 281.
<https://doi.org/10.3389/fpsyg.2019.00281>
- Stepanović Ilić, I., Videnović, M., & Petrović, N. (2019). Leisure Patterns and Values in Adolescents from Serbia born in 1990s: An Attempt at Building a Bridge between the Two Domains. *Serbian Political Thought*, 26, 99–123.
<https://doi.org/10.22182/spm.6642019.5>
- Stepanović, I., Videnović, M., & Plut, D. (2009). Obrasci ponašanja mladih tokom slobodnog vremena. [Patterns of leisure activities among youth] *Sociologija*, 51(3), 247–261. <https://doi.org/10.2298/SOC0903247S>
- Trainor, S., Delfabbro, P., Anderson, S., & Winefield, A. (2010). Leisure activities and adolescent psychological well-being. *Journal of Adolescence*, 33(1), 173–186. <https://doi.org/10.1016/j.adolescence.2009.03.013>
- Tucker, J. S., Orlando, M., & Ellickson, P. L. (2003). Patterns and correlates of binge drinking trajectories from early adolescence to young adulthood. *Health Psychology*, 22(1), 79–87. <https://doi.org/10.1037/0278-6133.22.1.79>
- Vasović, M. (1984). Psihološka struktura slobodnog vremena mladih. [Psychological structure of youth leisure time] *Obeležja*, 14, 5–21.
- Vernon, P. E., & Allport, G. W. (1931). A test for personal values. *The Journal of Abnormal and Social Psychology*, 26(3), 231–248.
<https://doi.org/10.1037/h0073233>
- Verplanken, B., & Holland, R. W. (2002). Motivated decision making: effects of activation and self-centrality of values on choices and behavior. *Journal of Personality and Social Psychology*, 82(3), 434–447.
<https://doi.org/10.1037/0022-3514.82.3.434>
- Windle, M., Mun, E. Y., & Windle, R. C. (2005). Adolescent-to-young adulthood heavy drinking trajectories and their prospective predictors. *Journal of Studies on Alcohol*, 66(3), 313–322. <https://doi.org/10.15288/jsa.2005.66.313>

Appendices

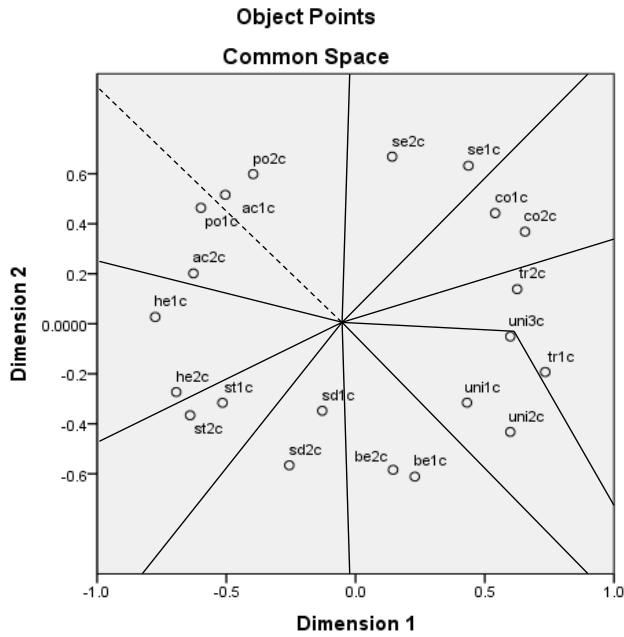


Figure 1. Fit of the 21 narrow values to the Circular Structure (MDS, PROXSCAL; $\phi = .98$).

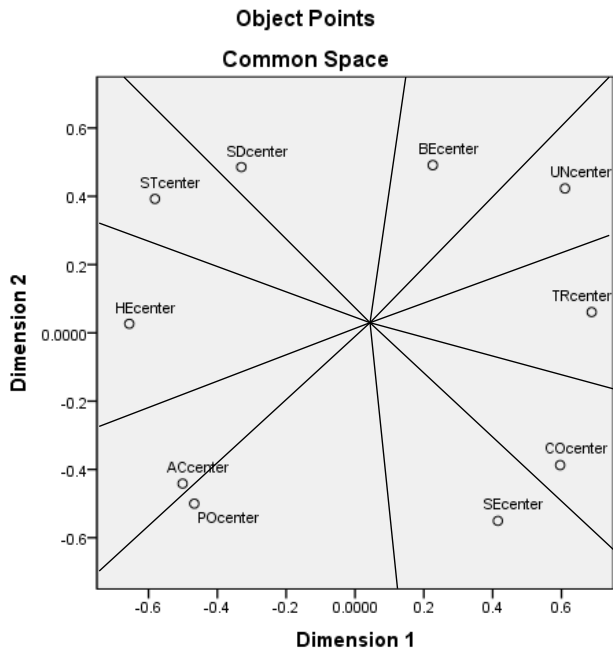


Figure 2. Fit of the 10 basic values to the Circular Structure (MDS, PROXSCAL; $\phi = .98$).

Table 1

Rotated Factor Matrix of the Leisure-time activities assessments (factor loadings)

	Factor						
	1	2	3	4	5	6	7
Following Fashion	.715						
Following Health and Beauty themes	.698						
Following Teenage stories	.629						
Reading Astrology, practicing enigmatic, quizzes	.584						
Reading love novels	.507						
Following the life of the celebrities	.505						
How often listens to pop-music	.426						
How often listens to punk music		.669					
How often listens to metal music		.661					
How often listens to rock music		.617					
How often listens to rhythm and blues		.609					
How often listens to jazz music		.585					
How often listens to reggae		.432					
Watching TV shows on culture and art		.411		.317			
Following culture topics	.351	.376		.362			
How often visits museums and galleries		.349					
Reading books online							
Watching movies and TV series online				.598			
Visiting You Tube				.552			
Listening to music online				.494			
Visiting Snapchat				.479			

How often watches movies on TV		.474	
Online shopping		.434	
Visiting Instagram		.425	
Using Viber		.387	
Using Skype		.386	
Writing e-mails		.363	.306
Reading blogs	.303	.311	
Visiting Twitter		.305	
How often watches TV series			
Following politics		.699	
Watching news		.689	
Watching political talk shows and news on TV		.670	
Following popular science topics	.339	.359	
How often watches science and documentary programs on TV		.351	
Following news on crimes, arrests, accidents			
Computer programming		.756	
IT, programming, technology as a hobby		.742	
Doing graphic design		.594	
Drawing and using computer graphic software		.499	
Following computer and technology topics		.494	
Using educational software			

Visiting clubs and discos	.812
Partying	.720
Visiting cafes	.616
Visiting restaurants	.540
Watching sport on TV	.822
Practicing sport	.779
Attending sport plays and events	.658

Notes. Only loadings higher than .30 are shown. Extraction Method: Principal Components. Rotation Method: Varimax with Kaiser Normalization.

Table 2

Collinearity diagnostics (Variance Inflation Factor Values) for the initial and final regression models

	Pop-Culture		Music, Culture & Arts		Movies, TV shows & Internet		Science & Politics		IT		Going out		Sports	
	Initial model	Final model	Initial model	Final model	Initial model	Final model	Initial model	Final model	Initial model	Final model	Initial model	Final model	Initial model	Final model
Step 1														
(Constant)														
Gender (girl)	1.01	1.01	1.01	1.01	1.018	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Age	1.04	1.04	1.04	1.04	1.042	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Type of school (grammar)	1.09	1.09	1.09	1.09	1.096	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
School achievement	1.09	1.09	1.09	1.09	1.098	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Family economic status	1.06	1.06	1.06	1.06	1.064	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Step 2														
(Constant)														
Gender (girl)	1.13	1.08	1.13	1.08	1.130	1.08	1.13	1.08	1.13	1.08	1.13	1.08	1.13	1.08
Age	1.07	1.05	1.07	1.05	1.074	1.05	1.07	1.05	1.07	1.05	1.07	1.05	1.07	1.05
Type of school (grammar)	1.13	1.13	1.13	1.13	1.132	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
School achievement	1.12	1.12	1.12	1.12	1.126	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
Family economic status	1.13	1.11	1.13	1.11	1.136	1.11	1.13	1.11	1.13	1.11	1.13	1.11	1.13	1.11
Security	45.29	1.56	45.29	1.56	45.29	1.56	45.29	1.56	45.29	1.56	45.29	1.56	45.29	1.56
Conformity	46.91	1.84	46.91	1.84	46.91	1.84	46.91	1.84	46.91	1.84	46.91	1.84	46.91	1.84
Tradition	43.50	1.63	43.50	1.63	43.50	1.63	43.50	1.63	43.50	1.63	43.50	1.63	43.50	1.63
Benevolence	26.21	1.34	26.21	1.34	26.21	1.34	26.21	1.34	26.21	1.34	26.21	1.34	26.21	1.34
Universalism	62.93	-	62.93	-	62.93	-	62.93	-	62.93	-	62.93	-	62.93	-
Self-direction	32.14	1.50	32.14	1.50	32.14	1.50	32.14	1.50	32.14	1.50	32.14	1.50	32.14	1.50
Stimulation	44.94	-	44.94	-	44.94	-	44.94	-	44.94	-	44.94	-	44.94	-
Hedonism	44.80	1.50	44.80	1.50	44.80	1.50	44.80	1.50	44.80	1.50	44.80	1.50	44.80	1.50
Achievement	37.07	1.56	37.07	1.56	37.07	1.56	37.07	1.56	37.07	1.56	37.07	1.56	37.07	1.56
Power	50.07	1.53	50.07	1.53	50.07	1.53	50.07	1.53	50.07	1.53	50.07	1.53	50.07	1.53

Note. Initial model – all ten basic values; Final model – Universalism and Power values excluded.

.....

Bazične vrednosti kao prediktori aktivnosti tokom slobodnog vremena među adolescentima

Zoran Pavlović ¹  i Ivana Stepanović Ilić ² 

¹ Odeljenje za psihologiju, Filozofski fakultet, Univerzitet u Beogradu

² Institut za psihologiju i Odeljenje za psihologiju, Filozofski fakultet, Univerzitet u Beogradu

SAŽETAK

Glavni cilj studije je analiza nedovoljno istraženog odnosa između aktivnosti tokom slobodnog vremena i Švarcovih 10 bazičnih vrednosti kod adolescenata. Uzorak je obuhvatio 1.349 srpskih srednjoškolaca (44% dečaka; 62% stručnih škola). Upitnik o slobodnom vremenu sastojao se od grupa pitanja vezanih za hobije, sport, praćenje različitih tema/emisija u medijima (TV, internet, časopisi), slušanje muzike, izlaske, posećivanje kulturnih i sportskih događaja, aktivnosti na internetu i korišćenje društvenih mreža. Vrednosti (samousmeravanje, stimulacija, hedonizam, postignuće, moć, bezbednost, konformizam, tradicija, benevolentnost i univerzalizam) ispitivane su upitnikom PVQ21. Faktorskom analizom dobijeno je sedam faktora slobodnih aktivnosti (45,96% objašnjene varijanse), definisanih sledećim sadržajima: pop kultura; muzika, kultura i umetnost; filmovi, TV emisije i internet; nauka i politika; IT; izlasci; sport. Korelaciona analiza je pokazala da je procena učestosti upražnjavanja različitih aktivnosti značajno povezana sa karakterističnim skupovima bazičnih vrednosti, što je dodatno potvrđeno multiplom regresionom analizom koja uključuje bazične vrednosti kao prediktore i demografske varijable kao kontrolu. Osnovni zaključak istraživanja je da su vrednosti važni motivatori aktivnosti tokom slobodnog vremena i da se različite vrednosti uglavnom izražavaju kroz različite aktivnosti, ali i da različite aktivnosti mogu biti motivisane istim bazičnim vrednostima.

Key words: bazične vrednosti, slobodno vreme, PVQ21, adolescenti, Srbija



Research Article

Validation of the Serbian Adaptation of the Self-Absorption Scale

Senka Kostić   and Dragana Stanojević ¹ 

¹ *University of Priština in Kosovska Mitrovica, Faculty of Philosophy, Department of Psychology*

ABSTRACT

McKenzie and Hoyle made the first Self-Absorption Scale. Since this scale is not available in Serbian, we designed two studies aimed at its adaptation (Study 1, $N = 400$), and validation of the instrument (Study 2, $N = 212$). Results of Study 1 confirmed original two-factorial structure, but without two items on each subscale. The reliability of the public self-absorption was $\alpha = 0.75$; and $\alpha = 0.72$ for the private self-absorption. The factors in both, the original and adapted version, are congruent (measured by Tucker's congruence coefficient). Results of Study 2 showed that self-absorption was positively correlated to the most aspects of pathological narcissism, self-consciousness, depression, stress and anxiety. Also, it was negatively correlated to self-esteem. We can conclude that the Self-Absorption Scale is short, reliable, and valid measure for assessing the pathological aspect of self-focusing on Serbian population.

Key words: public self-absorption, private self-absorption, adaptation, Serbian version

UDC: 159.9.072

DOI: 10.19090/pp.2022.1.121-147

Received: 01.08.2021.

Revised: 22.12.2021.


Accepted: 14.01.2021.



Copyright © 2022 The Author(s).

This is an open access article

distributed under the terms of the [Creative Commons Attribution License](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

 Corresponding author email: senka.kostic@pr.ac.rs

Introduction

Self-awareness and Self-absorption

Self-awareness is the ability of an individual to direct attention to itself or at the external environment (Fenigstein et al., 1975). People tend to evaluate themselves against the currently presented standard, for example, if you tell a person "You're really fast", they will start doing the task faster than before (Silvia & Phillips, 2013). Some authors believe that this process takes place automatically and represents attention to oneself, but we need to distinguish between that and self-awareness per se (Silvia & Phillips, 2013). The emphasis is placed on the development of self-awareness as a way of self-realization acceptance of one's own thoughts, needs and feelings (Nystedt & Ljungberg, 2002). We can distinguish between public and private self-awareness, which differ from each other in terms of the direction of the focus of attention. Public self-awareness is characterized by attention that is directed outward and represents a person's awareness of themselves as a social being (other people's opinion of them is important); private self-awareness is focused on inner feelings, that is, what person thinks of themselves. High self-awareness decreases egocentrism when assessing one's own opinion in relation to other people's opinions, attitudes, and reactions (Scaffidi et al., 2016). Although self-awareness is marked as a desirable feature to be developed, research indicates that excessive self-focus is positively associated with depression, anxiety, alcohol abuse, and similar (Ingram, 1990).

Unlike the self-awareness, which is viewed as an adaptive form of behavior, self-absorption can be viewed as a maladaptive (pathological) form of self-awareness (DaSilveira et al., 2011; McKenzie & Hoyle, 2008). Self-absorption predisposes the constructs that encompass a pathological focus on oneself (Öngen, 2015), characterized by excessive thoughts about oneself that interfere with an individual's daily functioning (McKenzie & Hoyle, 2008). Similar to self-awareness, the self-absorption also has two dimensions: public and private. Private self-absorption shares a common core with self-reflection

(part of private self-consciousness). Public self-absorption is characterized by excessive thoughts about what others think of us and how others perceive us and is often positively associated with a critical attitude toward itself (McKenzie & Hoyle, 2008).

Bearing in mind that self-absorption is considered a maladaptive construct, initial research focused on clinical population. Ingram (1990) tested the hypothesis that certain dysfunctions in the domain of self-focus (exaggerated care and self-absorption) may be specific to certain disorders; the results of his work indicate that mood disorders are rooted in self-absorption. Ingram's hypothesis is supported by the results of the research on the people with auditory hallucinations (Ingram 1990; Woodward et al. 2014). These results suggest the positive association between the emotional importance that patients attach to auditory hallucinations and private self-absorption; as well as the positive association between distress caused by auditory hallucinations and public self-absorption (Úbeda-Gómez et al., 2015). People who have auditory hallucinations are concerned with the opinion that the 'actors' of auditory hallucinations have about them. Furthermore, self-absorption, both public and private, is positively associated with depressive symptoms as well as symptoms of social anxiety in a subsample of women diagnosed with anorexia (Zucker et al., 2015). On the other hand, the experience of one's own body was negatively associated with private self-absorption (greater dissatisfaction with one's physical appearance leads to lower scores on the scale of private self-absorption). In addition to the clinical population, healthy subjects with high and low proneness for hallucinations were also examined. The results showed that respondents with a high proneness for hallucinations have significantly higher scores of private and public self-absorption compared to respondents with a low proneness for hallucinations (Perona-Garcelán et al., 2014).

Based on Ingram's thesis, McKenzie and Hoyle make the first Self-Absorption Scale (2008) and validate it on a sample of non-clinical population. In a sample of 900 respondents, they singled out two factors of self-absorption: public and private. The reliability of the factors was satisfactory

(for private self-absorption it was 0.81, and for public 0.89). The testing of gender differences indicated that females had higher scores on the scale of public self-absorption, while these differences were not observed in the domain of private self-absorption. Up until now The Self-Absorption Scale was used in very few research. Barnett and Sharp (2017) conducted a study to examine the nature of public and private self-absorption on a sample of the USA population, the relationship between self-absorption and pathological narcissism, as well as possible gender differences in this causality. The results of their research suggest the existence of differences between males and females in terms of the relationship between self-absorption and pathological narcissism. Among women, pathological narcissism was associated with both public and private self-absorption; while in men, it was associated only with public self-absorption. Further, the results indicate that public self-absorption mediates between pathological narcissism and private self-absorption, with gender as a moderating variable (Barnett & Sharp, 2017). The authors concluded that self-absorption and narcissism have a common component which is reflected in pathological self-absorption.

Outside the English-speaking area, The Self-Absorption Scale has been adopted and used in Brazil, Spain, and Turkey. The Brazilian version of the scale had one item less (subscale private self-absorption) and good reliability $\alpha = 0.83$ (DaSilveira et al., 2011; DaSilveira et al., 2015). The original structure of the factors and the number of items was withheld in the research in Spain, and the internal consistency of the questionnaire measured by the Cronbach's alpha was .91 (Perona-Garcelán et al., 2014). Within the Turkish version of the scale (Öngen, 2015), in the factor analysis of the first order, 4 factors of self-absorption were singled out, but, in the end, a version of the scale was adopted with three items less and a two-factor solution: public self-absorption ($\alpha = .82$) and private self-absorption ($\alpha = .81$). The reliability of the total scale was .87 (Öngen, 2015). The results of that study showed that self-absorption is positively correlated with perfectionism and narcissism. Both public and private self-absorption are positively associated with the dimensions of perfectionism: discrepancy (pathological perfectionism) and a

high standard (normal perfectionism), as well as with internalized self-criticism (Öngen, 2015).

The Self-Absorption Scale is useful for understanding the attitudes towards oneself, both in samples of clinical and non-clinical population. As an aspect of self-focused attention, self-absorption presents significant component of depression, anxiety, substance abuse, schizophrenia, psychopathy, and other psychological disorders (Ingram, 1990). However, some researchers (Perona-Garcelán et al., 2014, pp.1) believe that self-focus becomes dysfunctional when individuals show “the inflexibility or inability to change to an external focus when circumstances require so”. A reliable and valid instrument for assessing the pathological aspect of self-focusing would allow us to better understand the role that this concept plays in maladaptive functioning, as well as design models and strategies aimed at mitigating rigidity and increasing the adaptability of directing attention, in accordance with the circumstances. The scale designed by McKenzie and Hoyle (2008) is brief, self-administered, and give us a possibility to account separate scores for private and public self-absorption. Since this scale was not available in Serbian, we designed two studies. The first one was focused on adapting the Self-Absorption Scale (McKenzie & Hoyle, 2008). In second study, we sought to examine the relationship between private and public self-absorption with some psychological constructs from the domain of personality traits (narcissism, self-consciousness, and self-esteem) and mental health (depression, anxiety, and stress).

Both studies were approved by the Research Ethics Commission of the Faculty of Philosophy in Kosovska Mitrovica under the protocol number 1223 (May 26, 2021).

Study 1

Within the first study we can single out three main goals:

1. To test the two-factor structure of the instrument for measuring self-absorption, which was adopted into Serbian by confirmatory factors analysis (Maximum Likelihood Estimation);

-
2. To determine the reliability of the obtained factors;
 3. To determine the congruence of the original version of the test and the version that has been adopted into Serbian.

Method

Sample

The sample consisted of 400 respondents, aged 18 to 66 ($M = 26.88$; $SD = 8.50$), from Serbia. 68.8% of female respondents participated in the sample. Participants were collected by using snowball-sampling method (Goodman, 1961). The survey was conducted online. Namely, the questionnaire was distributed via email and the social networks, specifically Facebook. In addition, we co-opted our social contacts to further distribute the instrument.

Instrument

The Self-Absorption Scale

Self-absorption was measured by using the Serbian version of The Self-Absorption Scale (McKenzie & Hoyle, 2008) which consists of 17 items; the task of the respondents was to assess on a five-point Likert-type scale how much the statements relate to them (public self-absorption: 9 items; and private self-absorption: 8 items). We have the authors' permission to adapt the scale, but the authors themselves did not participate in the adaptation process. We followed instructions on the cross-cultural adaptation of instruments (International Test Commission, 2017). Four experts (English language teachers) participated in the process. One expert adapted the instrument from English into Serbian, another expert adapted it from Serbian back into English, and the next two assessed the equivalence of the original and the adapted version. When determining the final version of the adaptation, two psychologists, in the field of social and clinical psychology, were asked to assess the content adequacy of the adapted items. The Serbian version of the instrument is given in Appendix 1, while the original version of the instrument is shown in Appendix 2.

Results

At the beginning of this section, we will present descriptive data for both dimensions of self-absorption. The results are shown in Table 1. Having in mind that the values of skewness and kurtosis do not exceed the value of criteria ± 1 (Kline, 2005), except small deviation measures of skewness on dimension private self-absorption, we can conclude that both dimensions are within the allowed values of deviations from the criteria of normal distribution.

Table 1

Descriptive statistics for subscale of self-absorption

Dimension of self-absorption	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>	<i>Sk</i>	<i>Ku</i>
public self-absorption	8	35	15.26	5.24	0.74	0.36
private self-absorption	9	44	19.38	6.61	1.07	0.98

The first objective of the research was to test the two-factorial structure of the Serbian version of the Self-Absorption Scale through confirmatory analysis. In order to analyze if the proposed model fits the data, we used the following fit indexes: the relative χ^2 (χ^2/df) with the values that should not exceed 5 (the value of 2-3 is good); *CFI* (comparative docking index), which should be over .90 (preferably over .95); *TLI* (Tucker-Lewis Coefficient of Fit Index), which should be over .90 (preferably over .95); *RMSEA* (deviation of empirical measures from the population according to the degree of freedom) with a value up to .10 as tolerated (preferably less than .05); and *SRMR* (Standardized Root Mean Square Residual), which should be up to .08 (preferably over .05) (Šram, 2014). All analyses were performed using JASP software (JASP Team, 2021).

The first model (Model 1, Table 2) that we tested was based on the factor structure presented in the original instrument. According to the original version we made a model to include two factors—private self-absorption contains 8, public self-absorption 9 items (the model is similar to model 2

(Figure 1), only holds 2 more items per factor and does not imply correlations of residuals). The results are shown in Table 2. If we consider the characteristics of Model 1, we notice that the model does not have the characteristics of an adequate fit. The model can explain only 88% of the observed covariance. On the other hand, the value of χ^2/df and the value of the parsimony index are within the allowed limits.

Table 2

Fit indexes of two models of the Self-Absorption Scale on Serbian sample

Scale	Significance of fit			Fit index			
	$\chi^2(df)$	p	χ^2/df	<i>CFI</i>	<i>TLI</i>	<i>RMSEA</i>	<i>SRMR</i>
Model 1	422.61 (118)	.001	3.57	.818	.790	.080	.067
Model 2	112.50 (61)	.001	1.84	.953	.940	.046	.040

Due to the poor performance of Model 1, we approached model re-specification by following the recommendations under the Modification Indices option. Firstly, the relationship of items to factors and MI values for individual items was checked; in addition, we have singled out those items whose residuals correlate most with the residuals of other items, even with the residuals of items from another factor. Hence, we singled out 4 items that were the most problematic and decided to delete them, as well as three correlations among the remnants that improved the model. The value MI for relations Public Self-Absorption and Item 2 was 9.15; for factor and Item 8 was 8.02; and for Private Self-Absorption and Item 12 was 20.22, for this factor and Item 15 was 13.48. The values of MI between residuals were for Item 16 and Item 17 was 25.17; for Item 1 and Item 3 was 15.53 and for Item 4 and Item 11 was 11.09. The results of CFA for new model (Model 2) are shown in Table 2 and Figure 1.

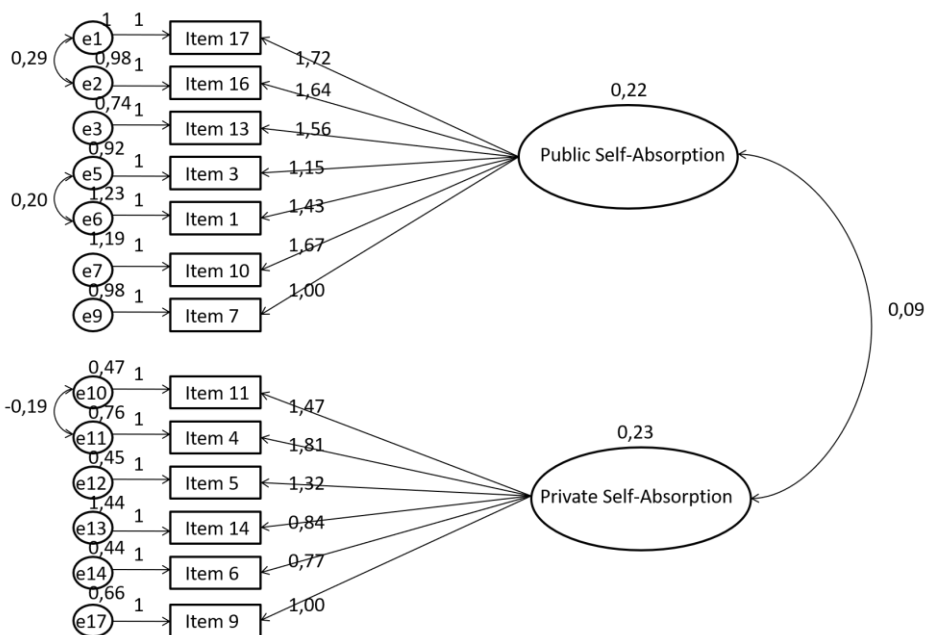


Figure 1. Presentation of the respecified model of the Self-Absorption Scale

The obtained model is significantly better than the original one and it can explain 96% of the observed covariance. The value of χ^2/df and the value of the parsimony index is within the allowed limits (the value of *RMSEA* is .046 which is good). The respecified model differs from the original one in the number of items by factors. Unlike the first model where the concept of public self-absorption encompasses 9 items, in Model 2 we exclude the following items: “I have difficulties focusing on what others are talking about because I wonder what they are thinking of me” and “I am very aware of what others think of me, and it bothers me”. Regarding the factor of private self-absorption, we omitted the following items: “When I think about my life, I keep thinking about it so long that I cannot turn my attention to tasks that need to be done” and “Sometimes I am so deep in thoughts about my life that I became unaware of my surroundings”. We accepted Model 2 for any future analysis. The correlation between public and private self-absorption was $r = .26, p < .01$.

The second goal of the Study 1 was to test the reliability of the isolated factors. We tested the reliability of the factors obtained in Model 2 by calculating Cronbach's α values: the reliability of public self-absorption $\alpha = .75$, and private self-absorption $\alpha = .72$. We also calculated McDonald's ω and presented the results in Table 3.

Table 3

Value of McDonald's ω for two factors of the Self-Absorption Scale on Serbian sample

	Estimate	ω
Private Self-Absorption	Posterior mean	.719
	95% CI lower bound	.677
	95% CI upper bound	.760
Public Self-Absorption	Posterior mean	.776
	95% CI lower bound	.742
	95% CI upper bound	.809

The third goal of the research was to examine the congruence of the original and the adopted version of The Self-Absorption Scale. To examine this, we calculated Tucker's congruence coefficient to compare factor structures to different samples. Value of Tucker's congruence coefficient for public self-absorption was .99; private self-absorption .99. Considering that values of the congruence coefficient range from -1 to +1, and that it is accepted that a value above .80 is sufficient for the factors to be considered identical (Fulgosi, 1979), we can conclude that the isolated factors in both the original and the adopted version are congruent.

Discussion

The first aim of the research was to test the two-factor structure of the instrument in the Serbian language. On a sample of 400 respondents, in the first phase of the testing, we set up a model identical to the one provided

in original study (McKenzie & Hoyle, 2008). As the initial model did not fully meet the indicators of a good fit, we followed the instructions for modification of the model. Re-specification of the model implied the removal of two items from both factors, so in the final version a two-factor solution with a total of 13 items was retained (7 items saturate the factor of public self-absorption, and 6 items does the same for the factor of private self-absorption), and this model had good fit characteristics.

In the case of deleted items, we think the problem may be a lack of understanding the point of the item. For example, two of the items ("I have difficulties focusing on what others are talking about because I wonder what they are thinking of me"; and "When I think about my life, I keep thinking about it so long that I cannot turn my attention to tasks that need to be done") are very long and participants may not be able to follow the meaning of these sentences. Also, the item "I am very aware of what others think of me, and it bothers me" can be confusing in terms of interpretation, because it is not clear whether it is assumed that others have a bad opinion of us, and this bothers us; or it bothers us at all why others think of us (whether good or bad). For the item "Sometimes I am so deep in thoughts about my life that I became unaware of my surroundings" we think it may measure imagination, not private self-absorption. When it comes to correlations between residuals, there is a possibility that the correlations between items are stronger than the correlations of items with a factor. Another explanation is that the mentioned items whose errors correlate may share some other common factor; for example, items 4 and 11 may also measure some kind of imagination.

The reliability of the isolated factors is still satisfactory, although somewhat lower than in the original study (McKenzie & Hoyle, 2008) or in the Turkish study (Öngen, 2015). The values of Tucker's coefficients of congruence of the factor structure, for both private and public self-absorption factors, are .99, which indicates its congruency for both the original and the adopted version.

Study 2

The first goal of this study was to examine the validity of the model 2 presented in study 1 (figure 1), as well as to check the reliability of the factors. Since the concept of self-absorption is relatively new and The Self-Absorption Scale (McKenzie & Hoyle, 2008) was not used in Serbia, the next goal was to examine the convergent validity of the scale. Taking into account that the concept of self-absorption is a maladaptive form of self-awareness, we tried to examine the nature of the relationship of self-absorption with some variables relevant to this concept (maladaptive: pathological narcissism (Barnett & Sharp, 2017), self-consciousness (McKenzie & Hoyle, 2008), depression (DaSilveira et al., 2015; McKenzie & Hoyle, 2008), stress and anxiety (DaSilveira et al., 2015; McKenzie & Hoyle, 2008); adaptive: self-esteem (McKenzie & Hoyle, 2008).

Method

Sample

The sample consisted of 212 respondents, aged 18 to 66 ($M = 27.64$, $SD = 10.27$), from Serbia. 58.5% of female respondents participated in the sample. Participants were collected by using snowball-sampling method (Goodman, 1961). Similarly, to Study 1, the questionnaire was distributed via email and Facebook and additionally spread by our social contacts.

Hypotheses

H1: We expect that the set Model 2 from Study 1 will be confirmed on the data from this study, with the good reliability.

H2: Based on Ingram's assumption and the results of previous research indicating that self-absorption is a maladaptive construct (Barnett & Sharp, 2017; Ingram, 1990; McKenzie & Hoyle, 2008; Öngen, 2015), we expected that public and private self-absorption are positive correlates with both dimensions of pathological narcissism—vulnerable (self-sacrificing self-

enhancement, contingent self-esteem, devaluing, and hiding the self) and grandiose (entitlement rage, exploitativeness, grandiose fantasy)—depression, stress, and anxiety; and negative correlates with self-esteem. Also, following the result of the original study (McKenzie & Hoyle, 2008), we expected moderate positive correlations between private and public self-absorption and private and public self-consciousness.

Instruments

Modified Serbian version of the Self-Absorption Scale

Modified Serbian version of the Self-Absorption Scale consists of 13 Likert-type items (1. *Does not apply to me*, 2. *Partly does not apply to me*, 3. *Neither applies nor does not apply to me*, 4. *Partly applies to me*, 5. *Completely applies to me*) and measures the concept of public self-absorption (7 items; $Sk = 0.80$, $Ku = 0.91$) and private self-absorption (6 items; $Sk = 0.91$, $Ku = 0.27$).

The Pathological Narcissism Inventory (PNI)

The Pathological Narcissism Inventory (*PNI*; Pincus et al., 2009; for Serbian adaptation see Dinić & Vujić, 2019). The instrument measures 7 dimensions: entitlement rage $\alpha = .83$; exploitativeness $\alpha = .77$; grandiose fantasy $\alpha = .82$; self-sacrificing self-enhancement $\alpha = .76$; contingent self-esteem $\alpha = .89$; devaluing $\alpha = .82$ and hiding the self $\alpha = .75$. There are a total of 52 Likert-type items (1. *Does not apply to me*, 2. *Partly does not apply to me*, 3. *Neither applies nor does not apply to me*, 4. *Partly applies to me*, 5. *Completely applies to me*).

Short version of Self-Consciousness Scale (S-C S)

Short version of Self-Consciousness Scale (*S-C S*; Scheier & Carver, 1985; for Serbian adaptation see Matanović, 2015) measures two dimensions of self-consciousness (private and public) and the dimension of social anxiety. The scale consists of 22 Likert-type items (0. *Not like me*; 1. *A bit like me*; 2. *Mostly like me*; and 3. *Very much like me*), of which 9 items measure private self-consciousness, 7 items measure public self-consciousness and 6 items

that measure social anxiety. In the sample of Serbian respondents, the reliability of individual dimensions is public self-consciousness $\alpha = .84$, private self-consciousness $\alpha = .75$, and the dimension of social anxiety $\alpha = .79$.

The Rosenberg Self-Esteem Scale (RSE)

The Rosenberg Self-Esteem Scale (*RSE*; Rosenberg, 1965; for Serbian adaptation see Opačić, 1993) measures global self-esteem. It consists of 10 Likert-type items (1. *I completely disagree*; 2. *I generally disagree*; 3. *I mostly agree*; and 4. *I completely agree*) in a one-dimensional model. The Cronbach's internal consistency coefficient is .86.

Depression, Anxiety and Stress Scale (DASS-21)

Depression, Anxiety and Stress Scale (*DASS-21*; Lovibond & Lovibond, 1995; for Serbian adaptation see Jovanović, Gavrilov-Jerković et al., 2014) consists of a total of 21 Likert-type items (0. *Never*; 1. *Sometimes*; 2. *Often*; and 3. *Almost always*), measures 3 dimensions: depression, anxiety and stress. The internal consistencies of the subscales are acceptable and range from .77 to .86. The reliability of individual dimensions is depression $\alpha = .86$, anxiety $\alpha = .84$, and stress $\alpha = .85$.

All analyses were performed using JASP software (JASP Team, 2021).

Results

The first goal of the research was to test the validity of Modified Serbian version of the Self-Absorption Scale set out in Study 1. Results of the confirmatory analysis from Study 2 confirmed two-factorial structure: $\chi^2(61) = 76.20$, $p < .05$, $CFI = .974$, $TLI = .967$, $RMSEA = .034$, $SRMR = .076$ (Figure 2). Reliability of the instrument in study 2 for public self-absorption $\alpha = .75$ and private self-absorption $\alpha = .72$. We also calculated McDonald's ω and presented the results in Table 4.

Table 4

Value of McDonald's ω for two factors of the Self-Absorption Scale on Serbian sample

	Estimate	ω
	Posterior mean	.739
Private Self-Absorption	95% CI lower bound	.686
	95% CI upper bound	.793
	Posterior mean	.752
Public Self-Absorption	95% CI lower bound	.702
	95% CI upper bound	.803

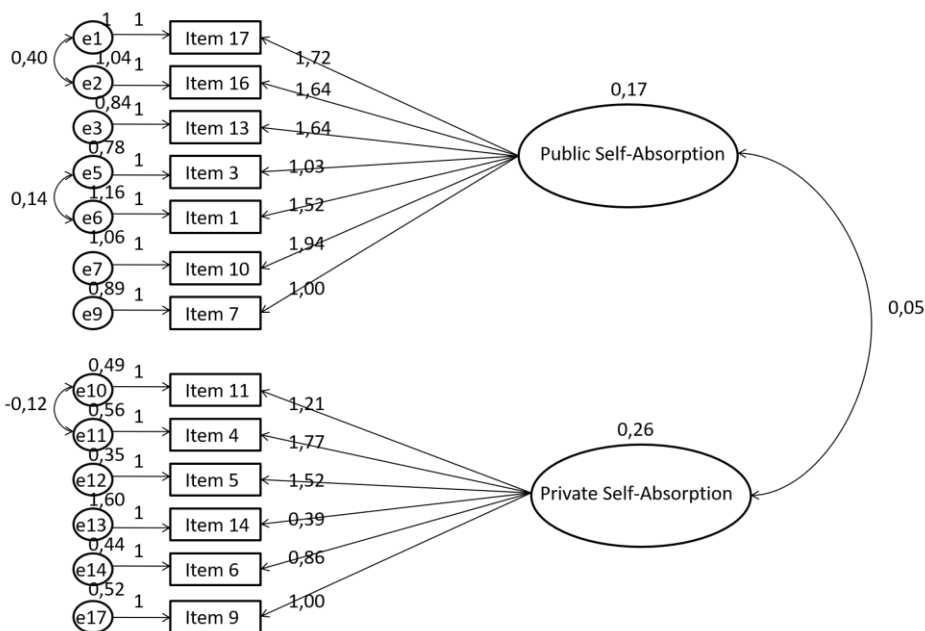


Figure 2. Modified Serbian version of the Self-Absorption Scale

In order to test the convergent validity of Modified Serbian version of the Self-Absorption Scale, we calculated the correlations of the given subscales with the constructs with which correlation is expected, positively or negatively. As a measure of interpretation of the correlation value, we used

Cohen's recommendation (1988): .1 - .29 is a small correlation; .3 - .49 is the moderate correlation, while .5 - 1 is a high correlation.

Table 5

Correlations between public and private self-absorption with other tested variables

	Public self-absorption	Private self-absorption
Private self- consciousness	.27**	.23**
Public self- consciousness	.24**	.11
Self-Esteem	-.23**	-.24**
Depression	.34**	.28**
Anxiety	.34**	.29**
Stress	.45**	.29**
Exploitativeness	.16*	.10
Self-sacrificing self-enhancement	.41**	.06
Hiding the self	.46**	.20**
Grandiose fantasy	.44**	.16*
Devaluing	.53**	.30**
Entitlement rage	.52**	.28**
Contingent self-esteem	.59**	.26**
Vulnerable narcissism	.60**	.25**
Grandiose narcissism	.49**	.24**

Note. *p < .05; **p < .01

The results of the research indicate a moderate positive correlation between the factors of public self-absorption and depression. The greatest positive correlation (moderate in the context of correlation height) was obtained between public self-absorption and stress. Observed in the two

domains of the pathological narcissism, the results indicate high positive correlation between both dimensions, grandiose and vulnerable, in public self-absorption. If we analyze subdimensions of the pathological narcissism, we can see the high positive correlation was obtained between contingent self-esteem, entitlement rage, and devaluing with the concept of public self-absorption. Also, there was a moderate positive association of the dimensions of grandiose fantasy, hiding the self, and self-sacrificing self-enhancement with the factor of public self-absorption and a low correlation between exploitativeness and public self-absorption.

On another hand, results indicate a low negative correlation between public self-absorption and self-esteem, and low significant positive correlation between public self-absorption and private and public self-consciousness.

The results indicate a small positive correlation between private self-absorption and private self-consciousness, and a subscale of depression, anxiety, and stress. In addition, a low negative correlation between private self-absorption and self-esteem was noted. Small positive correlation was noted between grandiose and vulnerable narcissism in private self-absorption. In terms of the relationship between the subdimensions of pathological narcissism and private self-absorption, the results indicate small positive association with the dimensions of contingent self-esteem, entitlement rage, grandiose fantasy, and hiding the self, as well as the moderate positive association of private self-absorption with devaluing. Other correlations are not statistically significant.

Discussion

The results show that the model set up in Study 1 has good fit characteristics verified by confirmatory analysis in Study 2. The Modified Serbian version of the Self-Absorption Scale consists of 13 items and measures two dimensions, public and private self-absorption. The reliability of factors is satisfactory. Private self-absorption is characterized by a pathological focus on oneself, a person thinks intensively about themselves,

evaluates themselves and that hinders them from performing daily activities. On the other hand, public self-absorption is directed outwards, it is characterized by excessive concern about how others see and what others think of us.

Since the concept of self-absorption is considered maladaptive, we checked its convergent validity by calculating the correlations of private and public self-absorption with maladaptive characteristics such as depression, anxiety, stress, subdimensions of pathological narcissistic inventory, but also with an adaptive construct such as self-esteem.

The results indicate on positive correlations between public and private self-absorption and the dimensions of anxiety, as well as between public and private self-absorption and depression. Our results are consistent with results from previous studies (McKenzie & Hoyle, 2008; Zucker et al., 2015). However, when it comes to relationship between maladaptive narcissism, our hypothesis is not completely confirmed. We obtained greatest positive correlation between public self-absorption and dimensions of pathological narcissism (grandiose and vulnerable), and these results are consistent with previous research (Barnett & Sharp, 2017; Öngen, 2015). On closer look into the correlation of private self-absorption with subdimension, we noted positively correlates with hiding the self, grandiose fantasy, devaluing, entitlement rage, and contingent self-esteem. No significant association was obtained with self-sacrificing self-enhancement and exploitativeness. The lack of connection between exploitativeness and private self-absorption can, to some extent, be explained by the conceptual definition of the dimension of exploitativeness. As it relates to manipulative interpersonal orientation, it is clear that it is more outward-oriented, while private self-absorption shares a common core with self-reflection. When it comes to self-sacrificing self-enhancement, it refers to "purportedly altruistic acts to support an inflated self-image" (Pincus et al., 2009, pp. 368), and as such, it would be expected to be positively associated with private self-absorption. On the other hand, public self-absorption is characterized by

excessive thoughts about what others think of us and how others perceive us, so the connection with the pathological dimensions is expected and clear.

In the present research, we obtained negative correlations between public and private self-absorption and self-esteem. Such results were expected because self-esteem is an adaptive and self-absorption a maladaptive construct. These results are consistent with results obtained in previous research (McKenzie & Hoyle, 2008).

The obtained results show that there is a positive correlation between public self-absorption and private and public self-consciousness. These results are coherent with the results from the original study, although we obtained a low positive correlation, in comparison to McKenzie and Hoyle (2008) where these values are of moderate strength. Small correlations between the dimensions of self-absorption and self-consciousness may indicate not that self-consciousness is a maladaptive form of self-absorption but perhaps that these are different constructs.

Having in mind the results of the analysis, we can conclude that self-absorption is a maladaptive construct, where the concept of public self-absorption is more related to measured maladaptive components than the concept of private self-absorption. Although the results give the impression that public self-absorption is a less adaptive construct than private one, there is a possibility that it is such a choice of constructs that they are indicative for checking the convergent validity of public self-absorption rather than for private self-absorption. The issue is whether public self-absorption is a less adaptive construct than private, or the choice of concept is inadequate, in which case the question remains which constructs would be good for checking the convergent validity of private self-absorption.

We assume that both concepts are equally maladaptive; hence, bearing in mind that private self-absorption refers to expressive thoughts about oneself that interfere with a person's daily functioning, we assume that in some future research we should check the relationship of this dimension with some constructs in domain of clinical psychology.

Conclusion

In this research, we intended to adapt The Self-Absorption Scale and to examine its validity by testing factorial structure of the scale and its correlations with appropriate psychological constructs.

We adopted the final version of the scale without four items, two from each subscale. This solution showed good fit of the model and is very similar to original factorial structure (McKenzie & Hoyle, 2008) and the Turkish adaptation (Öngen, 2015). This can suggest that two-factor structure of self-absorption is prone to replication across different cultures and languages. The Modified Serbian Version of the Self-Absorption Scale coefficient of congruence with the original scale.

The concept of self-absorption is maladaptive, subscales of public and private self-absorption are positively associated with depression, anxiety, and stress, as well as with the dimensions of the pathological narcissism. On the other hand, both dimensions are negatively related to self-esteem. We can conclude that this scale shows good validity and can be used in research on the Serbian adult population.

Limitations

The first limitation of this study is reflected in a relatively small sample in Study 2. Another disadvantage is that both samples are from general population. In the future research, this construct should be tested on clinical samples, taking into account those disorders that are considered to be an important aspect / dimension of self-absorption. In any case, we believe that the importance of enabling this scale to be used in the Serbian population, as well as further validation of the instrument in other cultures, goes beyond these limitations.

Conflict of interest

We have no conflicts of interest to disclose.

Research data statement

Both datasets are publicly available at: <https://data.mendeley.com/datasets/trsgzbdmtz/1> (Kostić, 2021).

References

- Barnett, M. D., & Sharp, K. J. (2017). Narcissism, gender, and evolutionary theory: The role of private and public self-absorption. *Personality and Individual Differences*, 104, 326–332. <https://doi.org/10.1016/j.paid.2016.08.008>
- Cohen, J.W. (1988). *Statistical power analysis for the behavioral sciences (2nd end)*. Hillsdale: NJ: Lawrence Erlbaum Associates.
- DaSilveira, A. C., DeCastro, T. G., and Gomes, W. B. (2011). Adaptation of the self-absorption scale to Brazilian adults [adaptação da escala de autoabsorção para adultos brasileiros]. *Interação em Psicologia*, 15, 5–30. <https://doi.org/10.5380/psi.v15i1.17472>
- DaSilveira, A., DeSouza, M. L., & Gomes, W. B. (2015). Self-consciousness concept and assessment in self-report measures. *Frontiers in Psychology*, 6, 930. <https://doi.org/10.3389/fpsyg.2015.00930>
- Dinić, B. M., & Vujić, A. (2019). The Pathological Narcissism Inventory: Measurement invariance across Serbian and USA samples and further validation. *European Journal of Psychological Assessment*. (Supplemental) <https://doi.org/10.1027/1015-5759/a000537>
- Fenigstein, A., Scheier, M. F., & Buss, A. H. (1975). Public and private self-consciousness: Assessment and theory. *Journal of Consulting and Clinical Psychology*, 43, 522–527. <https://doi.org/10.1037/h0076760>
- Fulgosi, A. (1979). *Faktorska analiza*. Zagreb: Školska knjiga.
- Goodman, L. A. (1961). Snowball sampling. *Annals of Mathematical Statistics*, 32, 142–70. <https://doi.org/10.1214/aoms/1177705148>
- Ingram, R. E. (1990). Self-focused attention in clinical disorders: Review and a conceptual model. *Psychological Bulletin*, 107, 156–176. <https://doi.org/10.1037/0033-2909.107.2.156>
- International Test Commission. (2017). *ITC Guidelines for Translating and Adapting Tests (Second Edition)*, Version 2.4. <https://doi.org/10.1027/1901-2276.61.2.29>
- JASP Team (2021). JASP (0.15) [Computer software]
- Jovanović, V., Gavrilov-Jerković, V., Žuljević, D. & Brdarić, D. (2014). Psihometrijska evaluacija Skale depresivnosti, anksioznosti i stresa–21 (DASS–21) na uzorku

- studentata u Srbiji. *Psihologija*, 47(1), 93–112.
<https://doi.org/10.2298/PSI1401093J>
- Kline, R. (2005). *Principles and practices of structural equation modeling (2n ed.)*. Guilford Press.
- Kostić, S. (2021). *Self-Absorption Scale Data from Serbia* (Mendeley Data; Version V1) [Data set]. Mendeley Data. <https://doi.org/10.17632/trsgzbdmtz1>
- Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the Depression Anxiety Stress Scales*. Sydney: Psychology Foundation.
- Matanović, J. (2015). *Značaj demografskih i psiholoških odlika za realno i nameravano ponašanje potrošača (Doktorska disertacija)*. Novi Sad: Filozofski fakultet.
- McKenzie, K. S., & Hoyle, R. H. (2008). The Self-Absorption Scale: Reliability and validity in non-clinical samples. *Personality and Individual Differences*, 45(8), 726–731. <https://doi.org/10.1016/j.paid.2008.07.020>
- Nystedt, L., & Ljungberg, A. (2002). Facets of private and public self-consciousness: Construct and discriminant validity. *European Journal of Personality*, 16, 143–159. <https://doi.org/10.1002/per.440>
- Öngen, D. E. (2015). The Relationships Among Self-absorption, Self Criticism and Perfectionism. *Procedia - Social and Behavioral Sciences*, 191, 2559–2564. <https://doi.org/10.1016/j.sbspro.2015.04.273>
- Opačić, G. (1993). *Porodичne varijable i koncept o sebi kod adolescenata (Magistarska teza)*, Beograd: Filozofski fakultet.
- Perona-Garcelán, S., García-Montes, J., López-Jiménez, A., Rodríguez-Testal, J., Ruiz-Veguilla, M., Ductor-Recuerda, M., Pérez-Álvarez, M. (2014). Relationship between Self-Focused Attention and Mindfulness in People with and without Hallucination Proneness. *The Spanish Journal of Psychology*, 17, E20. <https://doi.org/10.1017/sjp.2014.23>
- Pincus, A. L., Ansell, E. B., Pimentel, C. A., Cain, N. M., Wright, A. G. C., & Levy, K. N. (2009). Initial construction and validation of the Pathological Narcissism Inventory. *Psychological Assessment*, 21(3), 365–379. <https://doi.org/10.1037/a0016530>
- Rosenberg, M. (1965). Rosenberg self-esteem scale (RSE). *Acceptance and commitment therapy. Measures package*, 61(52), 61–68.
- Scaffidi Abbate, C., Boca, S., & Gendolla, G. H. E. (2016). Self-awareness, Perspective-taking, and Egocentrism. *Self and Identity*, 15(4), 371–380. <https://doi.org/10.1080/15298868.2015.1134638>

- Scheier, M. F. & Carver, C. S. (1985). The self-consciousness scale: A revised version for use with general populations. *Journal of Applied Social Psychology*, 15(8), 687–699. <https://doi.org/10.13072/midss.613>
- Silvia, P. J., & Phillips, A. G. (2013). Self-awareness Without Awareness? Implicit Self-focused Attention and Behavioral Self-regulation. *Self and Identity*, 12(2), 114–127. <https://doi.org/10.1080/15298868.2011.639550>
- Šram, Z. (2014). Eksplorativna i konfirmatorna faktorska analiza skale nacionalističkog sindroma (sns-1). *Političke perspektive*, 4(10), 7–30.
- Úbeda-Gómez, J., León-Palacios, M. G., Escudero-Pérez, S., Barros-Albarrán, M. D., López-Jiménez, A. M., & Perona-Garcelán, S. (2015). Relationship between self-focused attention, mindfulness and distress in individuals with auditory verbal hallucinations. *Cognitive Neuropsychiatry*, 20(6), 482–488. <https://doi.org/10.1080/13546805.2015.1089225>
- Woodward, T. S., Jung, K., Hwang, H., Yin, J., Taylor, L., Menon, M., ... Erickson, D. (2014). Symptom dimensions of the psychotic symptom rating scales in psychosis: A multisite study. *Schizophrenia Bulletin*, 40, S265–S274. <https://doi.org/10.1093/schbul/sbu014>
- Zucker, N., Wagner, H. R., Merwin, R., Bulik, C. M., Moskovich, A., Keeling, L., & Hoyle, R. (2015). Self-focused attention in anorexia nervosa. *International Journal of Eating Disorders*, 48(1), 9–14. <https://doi.org/10.1002/eat.22307>

Appendix 1

	Items	Response				
		1	2	3	4	5
1	I find myself wondering what others think of me even when I don't want to.	1	2	3	4	5
2	I have difficulty focusing on what others are talking about because I wonder what they're thinking of me	1	2	3	4	5
3	I feel like others are constantly evaluating me when I'm with them.	1	2	3	4	5
4	I think about myself more than anything else.	1	2	3	4	5
5	When I try to think of something other than myself, I cannot.	1	2	3	4	5
6	When I have to perform a task, I do not do it as well as I should because my concentration is interrupted with thoughts of myself instead of the task.	1	2	3	4	5
7	I wish others weren't as critical of me as they are.	1	2	3	4	5
8	I am very aware of what others think of me, and it bothers me.	1	2	3	4	5
9	My mind never focuses on things other than myself for very long.	1	2	3	4	5
10	When I start thinking about how others view me, I get all worked up.	1	2	3	4	5
11	I cannot stop my head from thinking thoughts about myself.	1	2	3	4	5
12	Sometimes I am so deep in thought about my life I am not aware of my surroundings.	1	2	3	4	5
13	It upsets me when people I meet don't like me.	1	2	3	4	5
14	I do not spend long amounts of time thinking about myself.	1	2	3	4	5
15	When I think about my life, I keep thinking about it so long I cannot turn my attention to tasks that need to be done.	1	2	3	4	5
16	When I'm about to meet someone for the first time, I worry about whether they'll like me.	1	2	3	4	5
17	After being around other people, I think about what I should have done differently when I was with them	1	2	3	4	5

Appendix 2

1. Uopšte se ne odnosi na mene
2. Delimično se ne odnosi na mene
3. Niti se odnosi niti se ne odnosi na mene
4. Delimično se odnosi na mene
5. U potpunosti se odnosi na mene

	Tvrdnje	Odgovor				
1	Pitam se šta drugi misle o meni čak i kad to ne želim.	1	2	3	4	5
2	Teško mi je da pažljivo slušam ono o čemu drugi pričaju, jer se u tom trenutku pitam šta misle o meni.	1	2	3	4	5
3	Osećam se kao da me drugi neprestano ocenjuju kada sam sa njima.	1	2	3	4	5
4	O sebi razmišljam više nego o bilo čemu drugom.	1	2	3	4	5
5	Teško mi je da razmišljam o nečemu drugom osim o sebi.	1	2	3	4	5
6	Kad moram da obavim zadatak, ja ga ne radim onako kako bi trebalo, jer umesto o zadatku, ja razmišljam o sebi.	1	2	3	4	5
7	Voleo/la bih da drugi nisu toliko kritički nastrojeni prema meni.	1	2	3	4	5
8	Jako sam svestan/na onoga što drugi misle o meni, i to mi smeta.	1	2	3	4	5
9	Nikada ne razmišljam o stvarima duži vremenski period, osim kada razmišljam o sebi.	1	2	3	4	5
10	Kada počnem razmišljati o tome kako me drugi gledaju, to me zamara/nervira.	1	2	3	4	5
11	Ne mogu da prestanem da razmišljam o sebi.	1	2	3	4	5
12	Ponekad se toliko prepustim razmišljanju o svom životu da nisam svestan/na svoje okoline.	1	2	3	4	5
13	Uznemirim se kada se ne sviđam ljudima koje upoznajem.	1	2	3	4	5
14	Ne provodim dugo vremena razmišljajući o sebi.	1	2	3	4	5
15	Kad razmišljam o svom životu, toliko dugo razmišljam da ne mogu usmeriti pažnju na zadatke koje je potrebno obaviti.	1	2	3	4	5
16	Kada treba da upoznam nekoga, brinem da li ću mu/joj se svideti.	1	2	3	4	5

17	Nakon što sam bio/la u prisustvu drugih ljudi, razmišljam o tome šta je trebalo da učinim drugačije dok sam bio/la sa njima.	1	2	3	4	5
----	------------------------------------------------------------------------------------------------------------------------------	---	---	---	---	---

.....

Validacija Srpske adaptacije skale samookupiranosti

Senka Kostić ¹  i Dragana Stanojević ¹ 

¹ *Univerzitet u Prištini sa privremenim sedištem u Kosovskoj Mitrovici, Filozofski fakultet, Odsek za psihologiju*

SAŽETAK

Samookupiranost se najšire definiše kao patološki forma samosvesti, a karakteriše je patološki fokus na sebe, preokupiranost mislima o sebi koje ometaju svakodnevno funkcionisanje pojedinca. Ove preokupacija može biti usmerena na samoevaluaciju (privatna samookupiranost) ili preokupirane misli o sebi u kontekstu kako nas drugi doživljavaju (javna samookupiranost) Prvu operacionalizaciju konstrukta ponudili su MeKenzi i Holi. Skara je adaptirana na turski, španski i portugalski (uzorak iz Brazila) jezik. Pošto ova skala nije dostupna na srpskom jeziku, osmislili smo dve studije koje su imale za cilj njenu adaptaciju (Studija 1, $N = 400$) i validaciju (Studija 2, $N = 212$). Rezultati studije 1 potvrdili su originalnu dvofaktorsku strukturu, s tim što su iz srpske verzije instrumenta isključene po dve stavke na obe dimenzije. Pouzdanost javne samookupiranosti bila je $\alpha = .75$, a privatne samookupiranosti $\alpha = .72$. Strukturalna invarijantnost dve verzije potvrđena je preko Takerovog koeficijenta kongruencije (Takerov koeficijent i za javnu i za privatnu samookupiranosti iznosi .99). Rezultati studije 2 ukazuju na pozitivnu povezanost samookupiranosti sa patološkim narcizmom, privatnom i javnom samosvesti, depresijom, stresom i anksioznošću; i negativnu povezanost sa samopoštovanjem. Možemo zaključiti da je Srpska adaptacija Skale

samookupiranosti kratka, pouzdana i validna mera za procenu patološkog aspekta samosvesnosti.

Ključne reči: javna samookupiranost, privatna samookupiranost, adaptacija, srpska verzija

