



Research Article

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

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## 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

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## 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

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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.

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## 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

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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  $\alpha$ ) 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
$\Delta R^2$	.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,



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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

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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

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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.,

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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

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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  $\alpha$  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

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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

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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.

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## Apendices

### Apendix A

**Table 1**

*Indicators of meaning of dance and related literature*

	Indicators of meaning of dance	of 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

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8	Creativity	Barreiro & Furnham, 2019; Blom & Chaplin, 2000; Fink & Woschnjak, 2011; Grlić, 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

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## Supplement

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

Scale	<i>M</i>	<i>SD</i>	$\alpha$
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***	-.05	.38***	.49***	.10	.52***	.58***	1	
12 Way of seduction	.40***	.41***	.16	.35***	-.02	.49***	.39***	.12	.51***	.47***	.67***	1
13 Entertainment	.14	-.04	-.14	.19	-.23	-.07	-.12	-.03	.05	.39***	.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*

Categories	Machiavellianism			Narcissism			Psychopathy			Sadism		
	1	2	3	1	2	3	1	2	3	1	2	3
Kruskal-Wallis												
H	3.48	8.19	.96	.62	11.56	0.51	4.86	6.25	0.55	2.93	9.23	3.00
df	3	8	3	3	8	3	3	8	3	3	8	3
p	.32	.41	.81	.89	.17	.92	.18	.62	.91	.40	.32	.39

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

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# "Pažnja, molim!": Mračna strana ličnosti plesača

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## SAŽETAK

Cilj ovog rada je da se istraži tamna strana ličnosti plesača. U novijoj literaturi, mračne crte ličnosti su konceptualizovane kao Mračna tetrad 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 priyatnost. 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 tetrad, narcizam, značenje plesa