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Relationships between social support, dark triad and life satisfaction in honorary blood donors. The mediating role of emotional support

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ABSTRACT

Background

The psychological interest in the group of blood donors, in the perspective of worldwide research, is a valuable source of knowledge about variables that may help to attract new blood donors or to maintain the regularity of donations. So far, Polish research in this group has only investigated the state of knowledge about blood donation and has not studied specific psychological predispositions.

The aim

The aim of the presented study was to examine the relationship between the dark triad, social support and life satisfaction in a group of Polish voluntary blood donors.

Material and methods

In order to measure variables of interest, the SD3 scale, the Social Support Scale, and the SWLS were used. The study included a group of 111 voluntary blood donors from different cities in Poland.

Results

The conducted analyses showed positive and significant relationships between social support (informational, material, emotional, and valuational), narcissism, and life satisfaction. Furthermore, linear regression analysis showed that social support and the dark triad explain life satisfaction in the study group by 30%. Mediation analysis showed that emotional support enhances the relationship of narcissism and life satisfaction.

Conclusions

The associations of narcissism, social support and life satisfaction can be explained through Caroll Ryff's theory of psychological well-being, according to which both subclinical narcissism and received social support can be components of a positive assessment of a person's quality of life. The study may provide a baseline for further research in a group of voluntary blood donors - e.g. with an extension of narcissism to include its communal dimension.

Keywords: Honorary blood donorship, dark triad, social support, life satisfaction

INTRODUCTION

Volunteer blood donation is a specific type of disinterested and voluntary assistance to other strangers who, for example, have been injured in an accident, require a surgical operation, or are in need of a blood transfusion. The donation process consists of several steps, the so-called donor pathway, that is (1) registration, (2) haemoglobin test, (3) medical examination/interview, (4) preparation for donation, and (5) the actual donation.

Volunteer blood donation as an approach/idea and blood donors as a research group realising this approach/idea from the perspective of many fields of psychology constitute an interesting and still quite a niche source of scientific research. In the case of international studies, certain trends in empirical interest in the phenomenon of blood donation can be observed. Among the published studies, several categories can be

distinguished. Firstly, the studies concerning the status of knowledge on blood and marrow donation [1–4]. Secondly, the ones on communication, promotion, and motivation of potential and active blood donors to donate [5,6] together with the barriers involved [7,8]. Thirdly, the studies under preparation by various research centres, including Poland, on the personality domain [9]. Others relate to, e.g., anxiety and variables such as self-efficacy [10,11]. The variables that seemed to be of interest for the present study were: social support, dark triad characteristics, and life satisfaction in the group of volunteer blood donors. Life satisfaction may be a sort of indicator that, in the perspective of further research, may be crucial for motivation to sustain regular blood donations.

Social support is understood as a special closeness, dependence or availability of the social environment to the individual [12], which is able to provide for interpersonal needs and assistance in critical situations needs and help in crisis situations [13]. Social support is based on the functioning of the so-called social network - mutual relations between individuals [14]. These links are differentiated by their source. A distinction is made between connections arising from interpersonal closeness - family, friends, strangers, and from context-specific situations - medical personnel or uniformed services officers [13]. Social support is also based on four dimensions - (1) emotional (showing care, building trust), (2) informational (transferring knowledge, information, and advice), (3) instrumental (e.g. providing material benefits), and (4) valuational (providing acceptance, understanding or encouragement). Positive relations with the social environment, viewed through the lens of social support in the light of Carroll Ryff's [15] theory of psychological well-being, are an important component of high quality of life [15,16].

The dark triad is a set of three personality traits - (1)narcissism, (2)machiavellianism, and (3)psychopathy. Seen from a subclinical perspective, they do not constitute a pathology within the personality but should be regarded as a manifestation of its 'healthy' variability [17]. Narcissism is defined as a grandiosic-like behaviour of the subject - a strong belief in self-efficacy and superiority [18]. In the context of the group of volunteer blood donors, the construct of community narcissism [19], related to pro-social activity, approval, and gratification, also becomes interesting. It is noteworthy that a longer experience of blood donation, during which blood donors donate more and more blood, leads to the attainment of successive degrees of Distinguished Volunteer Blood Donor, associated with various forms of gratification, for example out-of-order medical services or reimbursement of medicines. Another component of the dark triad is Machiavellianism, which is understood as the tendency to deceive, manipulate and exploit others in order to achieve one's own goals [20]. The final component of the construct is psychopathy, a set consisting of antisocial traits such as deficits in empathy, grief, impulsivity, or egocentrism.

Life satisfaction is a multidimensional construct that defines a positive evaluation of many areas of the subject's functioning [21]. The evaluation of life satisfaction can be both cognitive - consisting of a positive evaluation of situations or personal achievements, and emotional - feeling positive emotions [22,23]. According to Ryff [15], one of the key components of the overall assessment of the quality of life is satisfactory contact with the social environment. Thus, in the context of the study, the relationship between personality traits, social support, and life satisfaction becomes interesting. This could be the starting point for further, more extensive research in the blood donor group.

METHOD

Aim of research

The aim of the study was to examine the relationship between the traits of the dark triad - narcissism, psychopathy and machiavellianism, social support and life satisfaction in a group of honorary blood donors. For this reason, the following research questions were put forward:

1. Are there relationships between, dark triad characteristics, social support and life satisfaction?
2. Do the traits of the dark triad, and social support matter for perceived life satisfaction and if so, which ones matter most?
3. Can social support mediate the dark triad relationship and life satisfaction?

Based on these questions, the following hypotheses were formulated:

H1: There are positive and statistically significant relationships between components of social support and life satisfaction.

H2: There are negative and statistically significant relationships between Machiavellianism and psychopathy, as well as social support and life satisfaction.

H2a: The relationship of narcissism with social support and life satisfaction is positive.

H3: Dark triad traits and social support are significant in explaining life satisfaction.

H4: Social support has a mediating role in the relationship of dark triad and life satisfaction.

Material and methods

The study included 111 individuals, of whom 72 (64.9%) were female and 39 (35.1%) were male. The mean age for the study group was 29.4 (SD=9.7). The age range covered by the study was from 18 to 65, according to the NCK rules. All the study subjects are volunteer blood donors, of whom 59 (53.2%) hold one or more of the

Distinguished Volunteer Blood Donor badges. Of the study group, 58 persons (52.3%) have a university degree, 52 (46.8%) have secondary education, and one person (0.9%) has primary education. The study group is also characterised by varying lengths of blood : 31 persons (27.9%) have been donating blood for at least 5 years, 17 persons (15.3%) for at least 10 years, 13 (11.7%) for 15 years, 12 (10.8%) for more than one year, 11 (9.9%) for less than one year, 11 (9.9%) for at least 4 years, 9 (8.1%) for a minimum of 2 years, and 7 (6.3%) for 3 years. A purposive selection of the study subjects was made in order to measure the variables of interest. The following research tools were used:

1. Social Support Scale - a tool consisting of 24 items measuring 4 types of social support: (1) informational, (2) material, (3) emotional and (4) evaluative. The respondents used a 5-point scale to indicate the degree of agreement with the given statements (1-to a very low degree, 5- to a very high degree) [24]. Cronbach's α for the current study was 0.95.
2. The SD3 (Short Dark Triad) scale is a 27-item tool that examines three personality traits that make up the so-called dark triad. There are 9 items for each trait examined, which on a 5 - point Likert-type scale determined the subjects' agreement or disagreement with the statements given (1- strongly disagree, 5- strongly agree [17,25]. Cronbach's α for the current study was 0.83.
3. Satisfaction With Life Scale (SWLS) - which is a reflection of cognitive evaluation of life satisfaction, consisting of 5 items concerning the agreement or disagreement with statements evaluating the level of satisfaction with life on a 7-point Likert-type scale (1- I do not agree at all, 7- I agree at all) [26,27]. Cronbach's α for the current study was 0.90.

The survey was conducted remotely by means of Google Forms software. Participation in the study was voluntary. It did not entail any material benefits. The respondents could withdraw from further participation in the study at any time.

Statistical analyses were performed by means of Jamovi software version 2.0[28].

RESULTS

First, descriptive statistics were calculated for the study variables, the results are presented in Table 1:

Table 1.

Descriptive statistics for the distribution of the variables.

	<i>M</i>	<i>Me</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>	<i>Skewness</i>		<i>Kurtosis</i>	
						<i>SKE</i>	<i>SE</i>	<i>K</i>	<i>SE</i>
Age	29.44	27	8.741	19	57	0.9285	0.229	0.1545	0.455
IS	89.51	89.00	11.187	64.00	115.00	0.0426	0.229	-0.5120	0.455
MS	80.72	81.00	12.900	50.00	107.00	-0.0718	0.229	-0.4340	0.455
ES	89.22	91.00	16.026	40.00	120.00	-0.5659	0.229	0.6193	0.455
VS	82.41	82.00	13.968	43.00	111.00	-0.4166	0.229	0.1183	0.455
NAR	25235	20486	0.654	44866	16163	0.3679	0.229	-0.0502	0.455
PSY	44744	2.00	0.630	1.00	12145	0.7060	0.229	0.6892	0.455
MAC	35462	3.00	0.776	44866	5.00	0.0816	0.229	-0.4368	0.455
LS	21.29	23.00	6.938	5.00	33.00	-0.4528	0.229	-0.6218	0.455

IS – informational support, MS – material support, ES – emotional support, VS – valualional support, NAR – narcissism, PSY – psychopathy, MAC – machiavellianism, LS – life satisfaction.

Source: Authors' own study

As a second step, Pearson's r - correlation coefficients were calculated for the study variables, the results are presented in Table 2:

Table 2

Pearson's r correlations between the variables.

	1	2	3	4	5	6	7	8
1 IS	—							
2 MS	0.704 ***	—						
3 ES	0.636 ***	0.638 ***	—					
4 VS	0.610 ***	0.661 ***	0.840 ***	—				
5 NAR	0.231 *	0.255 **	0.391 ***	0.424 ***	—			
6 PSY	-0.280 **	-0.114	-0.200 *	-0.152	0.234 *	—		
7 MAC	-0.200 *	-0.080	-0.177	-0.127	0.259 **	0.560 ***	—	
8 LS	0.361 ***	0.244 **	0.471 ***	0.404 ***	0.278 **	-0.334 ***	-0.297 **	—

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

Source: Authors' own study

The correlational analysis showed positive and statistically significant relationships between informational support, material support, emotional support, appraisal support, narcissism, and life satisfaction. The remaining traits of the dark triad, i.e. Machiavellianism and psychopathy, correlated negatively and statistically significantly with the level of life satisfaction. Additionally, psychopathy correlated negatively and statistically significantly with informational and emotional support, while Machiavellianism correlated negatively and statistically significantly with informational support.

In the next step, a linear regression analysis was performed to investigate to what extent social support and the dark triad characteristics explain life satisfaction in the studied group of blood donors. The results showed that the applied model explained 32% of the variance in life satisfaction (see Table 3):

Table 3

Linear regression coefficients for life satisfaction as dependent variable and social support and dark triad as predictors.

		B	SE	β	t	p	R²	ΔR²	F
1	NAR	4.333	.905	.409	4.789	.000	.283	.263	(3,107) = 14.067 p = .000
	PSY	-3.267	1.095	-.297	-2.985	.004			
	MAC	-2.116	.894	-.237	-2.366	.020			
2	NAR	2.802	1.023	.264	2.738	.007	.350	.306	(7,103) = 7.936 p = .000
	PSY	-2.445	1.106	-.222	-2.211	.029			
	MAC	-1.583	.883	-.177	-1.793	.076			
	IS	.058	.076	.093	0.757	.451			
	MS	-.07	.067	-.129	-1.037	.302			
	ES	0.137	.067	.317	2.038	.044			
	VS	-.001	.078	-.002	-.015	.988			

Source: Authors' own study

In the next step, a mediation analysis was performed for the explanation of life satisfaction by the dark triad, with the inclusion of all studied types of social support as mediators. The analysis showed significant results for emotional support as a mediator of the relationship between narcissism and life satisfaction. Therefore, a simple mediation model was established (see Figure 1). The mediation effects and paths between the variables in the model were estimated (see Table 4):

Figure 1: A proposed simple mediation model of the relationship between narcissism and life satisfaction with emotional support as mediator.

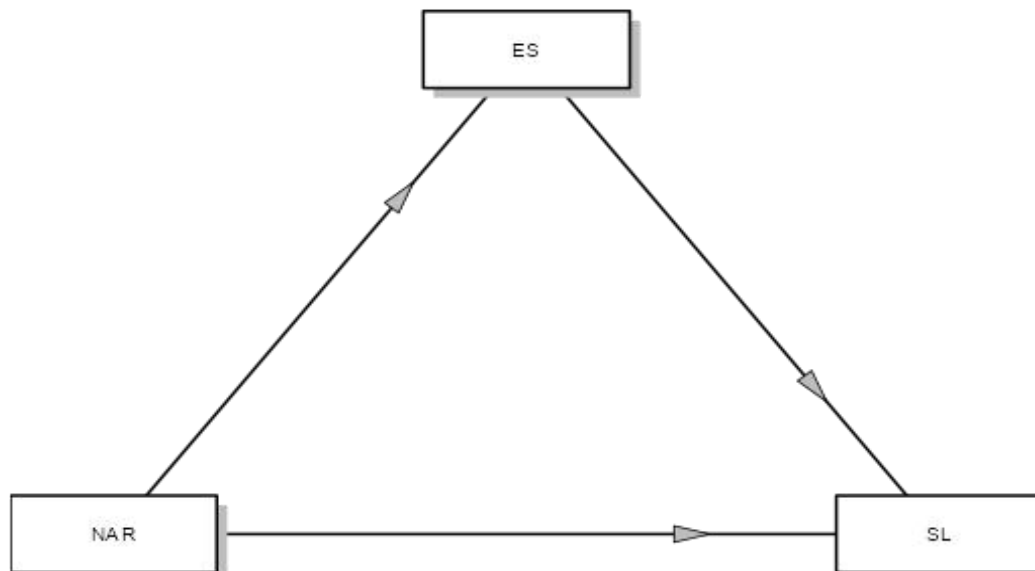


Table 4

Results of the applied simple mediation model of the impact of narcissism on life satisfaction with the mediating role of emotional support.

Type	Effect	B	SE	95% C.I.		β	z	p
				L	U			
<i>Indirect</i>	NAR \Rightarrow ES \Rightarrow LS	1.772	.5543	.680	2.853	.167	43891	.001
	NAR \Rightarrow ES	9.576	2.1427	5.337	13.736	.391	17258	<.001
	ES \Rightarrow LS	.185	.0401	.107	.264	.427	22737	<.001
<i>Direct</i>	NAR \Rightarrow LS	1.174	1.0347	-.851	3.204	.111	41275	.256
<i>Total</i>	NAR \Rightarrow LS	2.946	.9715	1.042	4.850	.278	44623	.002

Source: author's own study

The model used to explain the dependent variable with the independent variable is statistically significant, $F(2,108)=16.302$; $p=.000$, and explains 23% of the variance. The results indicate that narcissism enhances emotional support (path a - $\beta=.39$; $z=4.47$, 95%CI [5.337; 13.736], $p<.001$), and emotional support enhances life satisfaction (path b - $\beta=.427$, $z=4.62$, $p<.001$, 95%CI [0.107; 0.264]). Multiple mediation analyses by bootstrapping showed that the indirect effect of narcissism on life satisfaction through emotional support was significant: $\beta=.167$ (95%CI [0.680; 2.853]). The total effect of narcissism related to emotional support was significant: $\beta=.278$ (95%CI [1.042; 4.850]) $p<.002$, and was reduced to non-significant after the mediator inclusion (the direct effect - $\beta=.111$., $p=.256$).

DISCUSSION

The purpose of this study was to determine the relationship between the dark triad traits, social support, and life satisfaction in a group of volunteer blood donors, and to investigate whether social support plays a mediating role in the relationship between narcissism and life satisfaction.

The H1 hypothesis assumed the presence of positive and statistically significant relationships between social support and life satisfaction in volunteer blood donors. In line with H1, the correlational analysis demonstrated positive and statistically significant relationships between narcissism and social support with life satisfaction, and negative and statistically significant relationships between Machiavellianism and psychopathy with life satisfaction. The results partially confirmed the H2 hypothesis on negative and statistically significant relationships between Machiavellianism, psychopathy, social support, and life satisfaction. The linear regression analysis showed that the dark triad and social support were significant for the explanation of life satisfaction. This provides partial support for hypothesis H3. Among the examined predictors, emotional support and narcissism were statistically significant for life satisfaction. The results obtained, showing a positive relationship between narcissism and life satisfaction (H1), as well as the statistical significance of narcissism for life satisfaction (H3), are consistent with previous studies [29,30]. The study presented by Womick et al. [29] indicates that narcissism correlates positively with subjective well-being. This may suggest that narcissism, as reported by Watts et al. [31], is likely to be a source of benefit for an individual. In light of other studies [32,33], narcissism may enhance self-esteem or goal pursuit. A positive and statistically significant relationship between narcissism and life satisfaction was also demonstrated in a study conducted by Kumpasoğlu et al. [30] in a group of 364 individuals between 18 and 35 years of age, using the SD3 and SWLS scales. A higher saturation of narcissistic traits in volunteer blood donors may be important for deriving satisfaction from donating blood. With the awareness of helping others, higher self-esteem and higher self-assessment are evident in the subjective perception of life satisfaction.

The mediation analysis showed that only emotional support mediates the relationship between narcissism and life satisfaction. Thus, hypothesis H4, assuming that all types of social support play this role, is partially confirmed. The mediating role played by emotional support in the relationship between narcissism and life satisfaction seems to be justified in the literature. The enhancement of support by narcissism, life satisfaction by support, and satisfaction by narcissism is confirmed by other studies [32–34]. It can be argued that perceived support, hence a sense of belonging to a particular group that appreciates the activities of an volunteer blood donor, may be important for greater saturation of narcissistic traits as well as enhancing perceived life satisfaction. Social support, a construct that determines the degree of closeness to the social environment, in the

light of research [35–37] is an important component of higher levels of life satisfaction. Volunteer blood donations supported by the environment may be crucial for the perception of life satisfaction in the blood donor group.

The results obtained in the correlation and mediation analyses showed the existence of a relationship between narcissism and social support, as well as the reinforcement of social (emotional) support by narcissism. The study by Gaşiorowska et al. [34] revealed the link between the community dimension of narcissism and greater social support, which indicates that higher levels of narcissism may enhance perceived social support, and its emotional component, in particular.

CONCLUSION

The current study showed positive relationships between social support, the dark triad trait of narcissism, and life satisfaction. The relationships can be integrated with Carroll Ryff's [15] theory of well-being. In its view, the examined relationships may be considered as expressions of traits of the selected dimensions of well-being. Saturation of narcissistic traits may be seen as an element of self-acceptance as well as mastery over the environment and autonomy [38]. Social support may determine positive relationships with others [38]. In light of this theory, narcissistic traits should be analysed in the context of community narcissism, in the positive category. Also, higher levels of narcissism in blood donors, significant for greater life satisfaction and reinforced by emotional support, may be important for the blood donation system, as well as attracting new donors.

LIMITATIONS

There were some limitations to the present study, namely the size of the surveyed group, the remote form of conducting the survey, and the use of the SWLS scale, which only examines the cognitive-declarative assessment of life satisfaction. However, given the results and conclusions of the study, these and other limitations do not negatively affect their significance. In fact, any limitations are a possible motivating factor for further scientific research in the group of voluntary blood donors. Such research could mainly focus on the features of community narcissism and, for example, self-esteem, a sense of self-efficacy, authenticity, or motivation to donate blood regularly. On the other hand, the measurement of satisfaction itself could be extended by using multidimensional tools.

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