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## **1. Why narcissists are using Facebook? – the relationship between narcissism dependent on others and using Facebook among students**

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### **Abstract**

The present study examined the relationship between narcissism dependent on others and styles of using Facebook in order to see what motivates narcissists when using social media. Depending on what is the main motive of regulating self-esteem there are different expressions of narcissism. When the main strategy is comparing to others, narcissists express themselves according to their expectation about their impact on others (Leadership) or about being admired (Self-absorption). Different styles of using Facebook were also proposed varying on the motives of users. Considering the nature of narcissistic personality, it was assumed that they will use Facebook as celebrities of Facebook or aware self-presenters, for whom need for admiration is important. The sample consisted of 275 students (197 women, 75 men, 3 people did not report gender. The mean age of sample was  $M = 21.31$  ( $SD = 4.13$ ) Valid and reliable psychometric tools were applied. Hypotheses were partially confirmed. Celebrities of Facebook and self-presenters were predicted by self-absorption and not by leadership. The results showed that narcissism expression in Facebook use is related only to negative aspects of this trait. The potential implications of the results in the context of Facebook addiction are discussed.

### **1. Introduction**

Facebook remains the network associating the largest number of members (1.39 billion members) and it constantly grows (GlobalWebIndex 2015). Due to the scale of the phenomenon and the role that this website plays in identity construction Facebook became the new and quickly expanding research area.

Social Network Sites like Facebook give opportunities for ordinary people to construct public profile, to identify a list of other users and track other members (Boyd & Ellison 2007). In reference to previous studies three components of 'using Facebook' were proposed: the amount of time which is spent on Facebook, the number of Facebook friends and the frequency of updates of Facebook status (Marshall et al. 2015, Rae et al. 2015, Mehdizadeh 2010). Kuś and Szulżycki (2014) studies are focused on how Facebook users differ from each other and what motivates each person to use Facebook. They proposed a model suggesting six factors including: (1) Facebook as an integral part of life which is related to general intensity of the use of Facebook, (2) Celebrities of Facebook for these people popularity is the most important aspect of the Facebook, they also publish the largest number of posts, (3) Gamers, for these members of Facebook gaming is the most dominant form of using Facebook, (4) Aware self-presenters carefully choose the content published on Facebook, because it is a platform where they can create their own virtual showcase (5), Fanpage members, their main activity on Facebook is to visit their favorite fanpages discussions, (6) Information seekers treat Facebook as a source of information and like Fanpage members they mostly visit fanpages on Facebook but they do it passively.

Facebook on the one hand extends interest and helps to organize free time and on the other hand creates opportunity for self-presentation. What is more, using social network sites seems to be related to personality, especially to extraversion, neuroticism, and conscientiousness (Marshall et al. 2015). Expressing identity on Facebook is connected to extraversion and self-

esteem (Krämer & Winter 2008), therefore, narcissists are particularly active on Facebook. What is more, creating one's profile is often motivated by making an impression on other users (Peluchette & Karl 2010).

According to DSM-V (2013) criteria narcissism is manifested in impairments in self-functioning such as self-exaggerating, the regulation of emotions drawn from their reflection in the mirror (for example another person) and oversensitivity about one's self. Moreover, narcissists are motivated by seeking admiration and attention from others. Their personal standards are unreasonably high. Narcissism is characterized by impairments in interpersonal functioning such as lack of empathy. Furthermore, relationships are superficial and exist in order to satisfy one's needs. In everyday life narcissists are mainly motivated by the need to maintain high self-esteem (Campbell & Foster 2008). Narcissistic individuals build their self-esteem based on independence and autonomy simultaneously seeking admiration from others (Kernberg 1976). Depending on what is the main motive of regulating self-esteem there are different expressions of narcissism. Emmons (1984) proposed four factor model of narcissism including (1) Exploitativeness/Entitlement involves a heavy interpersonal manipulative content, (2) Superiority/Arrogance refers to the delight of self, (3) Leadership/Authority connects with conviction about one's impact on others and (4) Self-absorption/Self-admiration reflects desire to be admired. They combine on two dimensions. The first one consists of Exploitativeness and Superiority where the main regulator of self-esteem is self. The second one contains Leadership and Self-absorption where the main self-regulatory strategy is comparing to others.

Facebook use is motivated by the need to belong and the need for self-presentation. The need to belong is related to the need for acceptance. Need for self-presentation refers to creating self-image (Nadkarni & Hoffman 2012). These two motives are combined with the narcissistic self. What is more, narcissists implementing these motives behave in a specific way. They spend more time on Facebook and they are more likely to publish self-promotional photos enhanced by the use of Photoshop (Mehdizadeh 2010). Previous studies showed that using Facebook is positively associated with narcissism (Buffardi & Campbell 2010), but it is not clear what motivates narcissistic individuals dependent on others and what are the characteristics of their activity on Facebook. Data from prospective research indicate that Facebook acts as the mirror in which narcissists may admire their profile constantly upgrading it. Furthermore, they can track their followers which makes using Facebook more significant activity. Publishing information about themselves and the meticulous creation of own image intend to make an impression on others (Peluchette & Karl 2010, Bergman et al. 2011). In this way narcissists dependent on others to increase their self-esteem.

On the basis of previous research and theoretical frameworks it is hypothesized that leadership and self-absorption are positively associated with celebrities of Facebook (H1); leadership and self-absorption are positively associated with aware self-presenters (H2).

## **2. Methods**

*Participants.* Two hundred seventy five students took part in this study: 197 women (71.6%), 75 men (27.3%), 3 people (1.1%) did not report gender. The mean age of sample was  $M = 21.31$  ( $SD = 4.13$ ). Participants were from the University of Gdańsk, the Nicolaus Copernicus University in Toruń and technical high school in Włocławek. Students were from different faculties, courses of study, years and modes of study. One hundred thirty one (47.6%) individuals completed the questionnaire online.

*Measures.* Leadership and Self-Absorption which are two factors of narcissism belonging to the dimension where the main self-regulatory strategy is comparing to others were measured with *Narcissistic Personality Inventory (NPI)* (Bazińska & Drat-Ruszczak 2000). Respondents provided answers on a five-point Likert scale, from (1) *it's not me* to (5) *it's me*. It showed adequate validity and reliability, as well as good psychometric properties in previous studies (Bazińska & Drat-Ruszczak 2000). In this study Cronbach's alpha coefficients were .87 for Leadership and .87 for Self-Absorption.

*Intensity of using Facebook questionnaire* (Kuś & Szulżycki 2014), is a scale created to differentiate between Facebook users and types of motivation for using Facebook. Celebrities of Facebook and Aware self-presenters are two of six factors included in the model developed by the authors of the questionnaire. The response alternatives range from (1) *disagree strongly* to (4) *agree strongly*. It showed good validity and reliability in the previous studies. In the present sample the Cronbach's alpha reliability coefficient was of .74 for Celebrities of Facebook and .79 for Aware self-presenters (Kuś & Szulżycki 2014).

Five Factor Model of personality was measured with the Polish version of *Ten Item Personality Inventory* (TIPI) (Gosling et al. 2003). Respondents provided answers on a seven-point Likert scale, from (1) *disagree strongly* to (7) *agree strongly*. Each of the Big Five factors is measured with two items, one for its positive extremity and one for its negative extremity. The measure showed good validity and reliability, taking into account its extreme brevity. In the present sample Spearman-Brown reliability coefficient was of .74 for Extraversion, .56 for Agreeableness, .62 for Conscientiousness, .68 for Neuroticism and .35 for Openness to experience.

*Procedure.* Data collection used convenience sampling. Students were invited to participate anonymously in the study during lectures or classes, all of them agreed to do so. Part of sample completed the questionnaire featured on social network (Facebook). Participation in the study was anonymous and no monetary or other material rewards were offered.

*Statistical analysis.* Means, standard deviations and correlation coefficients were calculated. Two hierarchical regression analysis were conducted. In both models independent variables were the same. The depended variables were celebrities of Facebook in the first model and aware self-presenters in the second model. In the first step, sex and age were added. Independent variables added in the second step were the Big Five personality traits (neuroticism, extraversion, openness to experience, agreeableness, conscientiousness). In the third step leadership and self-absorption were added. All tests were two-tailed and the significance level was set to  $\alpha = .05$ . For all linear regression analyses, preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity and multicollinearity. Standardized regression coefficients were reported. All statistical analyses were conducted in IBM SPSS 23.

### 3. Results

Tab. 1 presents mean scores, standard deviations and percentages for the study variables as well as interrelationships between them.

**Tab. 1** Mean scores and standard deviations, percentages, and Pearson correlation coefficients between the study variables.

	<i>M (SD)/%</i>	2	3	4	5	6	7	8	9	10	11
1 Age	21.31 (4.13)	-.33**	-.09	.14*	.00	.01	-.02	.13*	.12	.04	.10
2 Sex <sup>a</sup>	27.3% <i>men</i>		.07	-.07	.00	-.09	.13*	-.07	-.17**	-.08	-.14*
3 Neuroticism	8.03 (3.31)			-.40**	-.01	-.20**	-.20**	.21**	-.01	-.10	.04
4 Extraversion	10.02 (3.12)				.23**	.13*	.12*	.41**	.35**	.23**	.29**
5 Openness to experience	9.87 (2.25)					-.07	-.06	.29**	.13*	-.05	.08
6 Agreeableness	10.17 (2.58)						.18**	.20**	-.19**	.06	.01
7 Conscientiousness	9.79 (2.92)							-.02	-.04	.07	-.12*
8 Leadership	32.61 (9.07)								.65**	.13*	.17**
9 Self-absorption	29.84 (8.84)									.26**	.33**
10 Celebrities of Facebook	15.62 (4.33)										.34**
11 Aware self-presenters	17.19 (4.48)										

Point-biserial correlation coefficient (0 = *women*, 1 = *men*).

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

In the first model the regression analysis for celebrities of Facebook showed that the independent variables added in step 1 explained 0.7% of variance ( $F_{2,235} = .85$   $p = .428$ ). Five independent variables added in step 2 explained 6.5% of variance ( $\Delta F_{5,230} = 3.24$   $p < .05$ ). Two independent variables added in step 3 explained 7.6% of variance ( $\Delta F_{2,228} = 10.24$   $p < .001$ ). The independent variables explained a total of 14.9% variance of celebrities of Facebook ( $F_{9,228} = 4.44$ ). Significant independent variables in Step 3 were extraversion ( $\beta = .23$ ) and self-absorption ( $\beta = .18$ ) (Table 2).

The regression analysis for aware self-presenters in second model showed that the independent variables added in step 1 explained 3.6% of variance ( $F_{2,233} = 4.32$   $p < .05$ ). Five independent variables added in step 2 explained 13.4% of variance (variance ( $\Delta F_{5,228} = 7.38$   $p < .001$ ). Two independent variables added in step 3 explained 5.1% of variance ( $\Delta F_{2,226} = 7.35$   $p = .001$ ). The independent variables explained a total of 22.1% variance of aware self-presenters ( $F_{9,226} = 7.11$ ). Significant independent variables in Step 3 were extraversion ( $\beta = .41$ ) and self-absorption ( $\beta = .15$ ) (Table 2).

**Tab. 2.** Results of hierarchical multiple regression analyses in which age, sex, Big Five personality traits, narcissism (leadership, self-absorption) were regressed upon the scores on styles of using Facebook (celebrities of Facebook and aware self-presenters) (unstandardized regression coefficients are reported).

Step	Predictor	Model 1		Model 2	
		$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$
1	Age	.01	.007	.08	.036*
	Sex <sup>a</sup>	-.75		1.46*	
2	Age	-.02	.065*	.04	.134**
	Sex <sup>a</sup>	-.71		-1.23*	
	Neuroticism	.05		.24*	
	Extraversion	.37**		.52**	
	Openness to experience	-.15		.03	
	Agreeableness	.01		-.01	
	Conscientiousness	.06		-.17	
3	Age	-.02	.076**	.04	.051**
	Sex <sup>a</sup>	-.16		-.78	
	Neuroticism	-.03		.17	
	Extraversion	.23*		.41**	
	Openness to experience	-.09		.07	
	Agreeableness	.10		.07	
	Conscientiousness	.05		-.18*	
	Leadership	-.07		-.06	
	Self-absorption	.18**		.15**	
Total $R^2$			.149**		.221**

<sup>a</sup> 0 = women, 1 = men.

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

#### 4. Discussion

Hypothesis 1 was partially confirmed. The scores on the dimension celebrities of Facebook were predicted by self-absorption, whereas it was not predicted by leadership. According to the results narcissists dependent on others will use Facebook features as a tool for self-regulation only by the creation of environment where they can be admired and not by making

an impact on other users, who serve only as an audience (Peluchette & Karl 2010). Facebook users are relatively equal in their positions so it may be difficult to manipulate other people. For narcissistic celebrities the attention they crave and finally gain with Facebook may become the primary way to increase their unstable self-esteem

Hypothesis 2 was also partially supported. The significant predictor of aware self-presenters style was self-absorption and not leadership. It may be explained by the fact that the purpose of the content published by the narcissists is to make an intended impression on others and to gain a validation for their own image (Marshall et al. 2015) rather than affect other people in any way, for example by shaping their worldview, which would not contribute to the narcissistic self-esteem.

Furthermore, extraversion was positively related to both celebrities of Facebook and aware self-presenters. It suggests that their Facebook self-expression may be focused on social interactions motivated by their outgoing personality, so their activity may not be significant *per se*, as it is the social feedback in the form of admiration that is essential (Bergman et al. 2011). What is more, dimension of aware self-presenters is negatively associated to conscientiousness which is a trait that consist of discipline, caution and responsibility. Since intensive activity on Facebook seems to require some level of diligence, the results may suggest that aware self-presenters may express above-mentioned traits in their Facebook activity, but not necessarily in their life outside the Internet. Other life domains such as responsibilities might be neglected, because being successful on social media demand regular if not constant activity (Andreassen et al. 2012). Future studies should explore these relations in the context of Facebook addiction.

The measures used in the study were standardized and showed satisfactory psychometric properties. However, the research has some limitations. Sample was not representative and study participants were predominantly female, therefore, the results may be generalized to the population with some reservation. Moreover, self-report measures were used, consequently the results may suffer from general weakness related to this methodology. Additionally, the study was cross-sectional, thus it is impossible to clearly identify causes and effects. Future studies should overcome these limitations. In addition, the potential role of Facebook addiction should be investigated.

The present study enables to specify the characteristic of Facebook use of narcissists dependent on others and shows the role of Facebook in their self-esteem regulation mechanism. Even though narcissism is related not only to negative but also to positive traits such as self-efficacy, bravery or confidence in own skills (Bazińska & Drat-Ruszczak 2000), the results showed that in the context of Facebook the primary aspects of narcissism are passivity and being dependent on others, which are negative. The role of social media in shaping our personality should be considered, especially in the case of young people who are exposed to Internet from the early ages of their lives and are not able to imagine the world without it. The studies are conducted to see how individual differences condition the ways social media are used, however, it should be explored how it works other way around. The results emphasize the danger coming from omnipresence of social media in our everyday life and its possible negative influence on developing healthy personality that can regulate its relation to environment properly.

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