Validation of two conceptualizations of fragile self-esteem: contingent high self-esteem and incongruent high self-esteem

Bojana Bodroža

Institute for Educational Research, Belgrade, Serbia

The aim of this research was to validate two aspects of fragile high self-esteem: a combination of contingent and high (explicit) self-esteem and a combination of high explicit and low implicit self-esteem (i.e. incongruent high self-esteem), as well as to examine the relationship between these aspects of fragile self-esteem and narcissism. No convergence was found between contingent high and incongruent high self-esteem. The result was consistent regardless of the technique of measurement of implicit self-esteem. There was a limited evidence that individuals with narcissistic personality characteristics were characterized by high self-esteem contingent upon competences, but not by a combination of high explicit and low implicit self-esteem, as an aspect of fragile self-esteem. Also, individuals with low self-esteem more contingent upon competences showed higher levels of narcissistic characteristics than those who were not contingent in this domain.

Keywords: fragile self-esteem, implicit self-esteem, contingent self-esteem, Implicit Association Test, Name Letter Preference, narcissism

Over the last two decades, researchers in the field of self-esteem and identity have focused their attention not only on *levels* of self-esteem, but also on the *quality* of self-esteem. Early research in this field showed that high self-esteem (HSE) is usually more beneficial and adaptive than low self-esteem (LSE). As compared to people with HSE, people with LSE are more prone to

depression (Tennen & Affleck, 1993), anxiety (Battle, Jarratt, Smit, & Precht, 1988; Rawson, 1992), social anxiety (Leary & Kowalski, 1995), loneliness (Vaux, 1988), general variability in emotional states (Campbell, Chew, & Scratchley, 1991), more susceptible to persuasion (Janis, 1954), and generally less satisfied with their life (Diener, 1984; Myers & Diener, 1995). In the seventies HSE was promoted as a kind of "social vaccine", which could prevent a wide range of problems, from drug abuse to juvenile pregnancy (The California Task Force to Promote Self-Esteem and Personal and Social Responsibility, 1990, as in Baumeister, 1998, p. 698) and, therefore, it was highly recommended to parents to foster HSE in their children.

HSE is usually accompanied by self-enhancement tendencies including the "better-than-average" effect – an overestimation of one's positive qualities and underestimation of one's negative qualities relative to others (Brown, 2012) and defensive reactions to ego threats. These cognitions and behaviors were first considered adaptive, because they protect individuals from fluctuations in the sense of self-worth caused by daily negative events (Taylor & Brown, 1988). Nevertheless, research that followed suggested not only that HSE individuals could show maladaptive behaviors (e.g. Baumeister, Smart, & Boden, 1996; McFarlin, Baumeister, & Blascovich, 1984), but also that positive illusions and self-enhancement tendencies were not so beneficial in the long run as was initially thought. Research indicated that, over a longer period, self-enhancement leads to a decrease in self-esteem and well-being, as well as to increased disengagement from academic context (Robins & Beer, 2001). It is also related to the deteriorating pattern of interpersonal perceptions (Paulhus, 1998), poor social skills, and psychological maladjustment (Colvin, Block, & Funder, 1995). From that point on, psychologists started looking for the ways to differentiate between "good" and "bad" forms of HSE.

Secure and fragile self-esteem

"Secure" (also true, genuine, non-defensive, optimal) high self-esteem represents a benign form of high self-esteem. Persons with secure HSE have a solid and realistic base for their feeling of self-worth and are ready to accept themselves with all their imperfections (Zeigler-Hill, Besser, & King, 2011). They do not react defensively after personal failures, their estimate of their self-worth is not dependent on others' liking, living up to others' expectations or meeting certain standards of excellence (Crocker & Wolfe, 2001; Johnson & Blom, 2007; Park & Crocker, 2008), and they do not need to be superior to others (Kernis, 2003).

Contrary to the secure form of HSE, there is a malign form of HSE called "fragile" (also defensive). It involves "positive self-feelings that are vulnerable to challenge and require continual promotion and protection" (Kernis et al., 2005, p. 312). Behavioral and cognitive manifestations of fragile self-esteem include vulnerability of self-image to threats to self-esteem, a constant need for confirmation and validation of one's self-worth, and reliance of self-image upon

some degree of self-deception (Zeigler-Hill et al., 2011). Individuals with fragile self-esteem act defensively after failure or any kind of ego-threat, have a strong need for self-promotion, and show other dysfunctional behavioral patterns (Kernis & Paradise, 2002).

Kernis lists three aspects of HSE that help distinguish its secure and fragile forms: contingency, congruence, and stability of high self-esteem (Kernis, Lakey, & Heppner, 2008; Kernis & Paradise, 2002). *Contingency* of self-esteem refers to feelings of self-worth which are dependent on continual validation, meeting certain standards of excellence (or even being perfect) and/or on living up to others' expectations (Crocker, 2002; Kernis et al., 2005; Kernis & Paradise, 2002). Thus, contingency characterizes fragile HSE, whereas secure self-esteem, which does not depend on the attainment of specific outcomes or the acceptance of others, is non-contingent.

Congruency of self-esteem refers to a correspondence between conscious and pre– or unconscious beliefs and feelings toward the self. Explicit self-esteem (ESE) is usually defined as a conscious feeling of acceptance, self-worth and self-liking (Zeigler-Hill, 2006) and it is measured by self-report questionnaires (e.g. Rosenberg Self-Esteem Scale; Rosenberg, 1965). On the other hand, implicit self-esteem (ISE) is believed to consist of preconscious, automatic, and overlearned self-evaluations (Greenwald & Banaji, 1995). Since ISE is inaccessible through conscious cognitive processes, researchers have developed special techniques by which to access preconscious aspects of self-regard. The most frequently used instruments for measuring ISE are Self-Esteem – Implicit Association Test (SE-IAT) (Greenwald & Farnham, 2000; Greenwald, McGhee, & Schwartz, 1998) and Name Letter Preference test (NLP) (Koole, Dijksterhuis, & van Knippenberg, 2001; Nuttin Jr, 1985, 1987). When determining congruency between ESE and ISE, researchers take ESE as a reference point. A combination of high ESE and low ISE is called incongruent or discrepant high self-esteem and, as such, it is considered to be a manifestation of fragile SE. A combination of high ESE and high ISE is referred to as congruent self-esteem and represents the secure form of self-esteem.

The third aspect of fragile and secure HSE takes into account *stability* of self-esteem. (In)stability of self-esteem refers to the feeling of self-worth that fluctuates across time and situations (Kernis, Cornell, Sun, Berry, & Harlow, 1993). The greater the magnitude of fluctuations of self-esteem, the more unstable it is. High self-esteem that fluctuates often and to a greater extent is a manifestation of fragile self-esteem, while stable HSE is a manifestation of the secure form of HSE.

Convergent validity of three aspects of fragile self-esteem

Contingent, incongruent, and unstable high self-esteem, although all seen as aspects of fragile HSE, are not considered to be the same or interchangeable constructs. Thus, we would expect these constructs to correlate to a moderate degree. However, not many studies have addressed the question of convergent

validity of the three aspects of fragile self-esteem. The few studies exploring this question have shown that there are significant but quite modest correlations between contingent and unstable self-esteem (Crocker & Wolfe, 2001; Kernis et al., 1993; Kernis & Paradise, 2002).

Kernis and his colleagues (Kernis et al., 2008) examined the correlation between aspects of contingent, implicit and stable SE. They concluded that contingent and instable SE correlate positively, while they both correlate negatively with ISE measured by NLP. In other words, the lower the implicit self-esteem, the higher its contingency and instability. Also, moderate to low correlations between the three suggest that these constructs are not completely redundant. The problem with the results obtained in this research is that Kernis and his colleagues did not compare *combinations* of contingency or stability with the level of self-esteem (i.e. contingent HSE and instable HSE), or the combination of level of explicit and implicit SE, which means that they did not directly validate the construct of fragile self-esteem.

The proof of convergent validity of three aspects of fragile and secure SE usually comes from research on their behavioral correlates, i.e. defensive behaviors after threats to self-esteem. Their similarity lies in the fact that they all have outcomes relevant to the feeling of self-worth.

HSE individuals that base their feeling of self-worth on the acceptance of others, respond to negative feedback with more self-presentational concerns than HSE individuals who are not contingent in this domain (Park & Crocker, 2008). As compared to individuals with high non-contingent SE (i.e. secure SE) and with LSE (whether contingent or non-contingent), individuals with high contingent SE (i.e. fragile SE) experience more negative feelings and a greater decline in state self-esteem after infidelity of their intimate partner or after a professional failure (Zeigler-Hill et al., 2011).

Discrepant HSE is also related to self-enhancement strategies and defensive behaviors. Jordan and colleagues (Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003) found that individuals with discrepant HSE are more prone to in-group bias and rationalization of their decisions as a form of reduction of cognitive dissonance, than individuals with congruent HSE. Also, incongruent HSE was related to unrealistic optimism and self-idealization (Bosson, Brown, Zeigler-Hill, & Swann, 2003), lower tendency to forgive and more readiness to revenge for transgression (Eaton, Struthers, Shomrony, & Santelli, 2007), and more self-handicapping in situations when success was diagnostic of high abilities (i.e. when solving a very difficult task) (Lupien, Seery, & Almonte, 2010).

This study aims to explore convergent validity of two aspects of fragile HSE: contingent HSE and incongruent HSE (a combination of high ESE and low ISE). To measure ISE, two best validated techniques, SE-IAT and NLP (Bosson, Swann Jr, & Pennebaker, 2000), were used. Previous research has shown that these two measures do not correlate with each other (Bosson

et al., 2000; Buhrmester, Blanton, & Swann Jr, 2011; Rudolph, Schröder-Abé, Schütz, Gregg, & Sedikides, 2008). The lack of correlation has several possible explanations regarding the measurement and the construct of ISE: a) ISE as a construct is non-existent, b) only one of these instruments measures ISE, while the other does not, c) none of the instruments measures ISE, d) ISE is heterogeneous and different instruments measure its different aspects (Bosson et al., 2000; Rudolph et al., 2008). Buhrmester (Buhrmester et al., 2011) also suggested that SE-IAT measures implicit affect towards the self, while NLP measures implicit egotism. Despite somewhat discouraging evidence of its construct validity, research on ISE is flourishing. The continuing use of measures of ISE was justified by their ability to capture the pronounced positive bias towards the self, their satisfactory psychometrical characteristics, and their ability to predict spontaneous, uncontrolled and non-verbal behaviors, as well as others' ratings of the individual's behavior, even beyond the variance predicted by explicit measures (Asendorpf, Banse, & Mücke, 2002; Conner & Barrett, 2005; Robinson & Meier, 2005; Rudolph, Schröder-Abé, Riketta, & Schütz, 2010; Spalding & Hardin, 1999). This is the reason why both measures of ISE – SE-IAT and NLP were included in this study.

Narcissism and fragility of self-esteem

The early theories on narcissism describe some of the features of fragile self-esteem as an important aspect of narcissism. Kohut (1966) argues that behind an overt grandiosity of narcissists, there is the covert feeling of insecurity and inferiority. This description of the dynamics of narcissism unequivocally resembles the interplay of the automatic and preconscious ISE and conscious ESE. Contemporary research confirms these assumptions, showing that narcissists have high explicit self-esteem, which disguises low implicit self-esteem (Jordan et al., 2003). Also, correlation between discrepant HSE and narcissism has been found in a few studies (Jordan et al., 2003; Zeigler-Hill, 2006), but the results seem to be inconsistent (for review see Bosson et al., 2008). Other aspects of fragile self-esteem, such as the need for continual promotion and confirmation of one's self-worth, are also relevant for narcissism. Research has shown that the subtype of narcissism called vulnerable narcissism is related to global contingency of self-worth, whereas grandiose subtype is more domain specific. Grandiose narcissists are more contingent upon being better than others, but less on others' approval (Zeigler-Hill, Clark, & Pickard, 2008).

Having in mind the theoretical significance of features of fragile self-esteem for the concept of narcissism and somewhat inconsistent research findings regarding their relationship, we decided to address this topic in the current research. The second goal of this study was to examine the relationship between the two aspects of fragile self-esteem – incongruent and contingent HSE, on the one hand, and narcissism on the other.

Method

Sample

The sample consisted of 305 first and second year psychology students from the University of Novi Sad and the University of Belgrade. This study was carried out in three phases (described in detail in the Procedure section), which is why the number of participants in each phase was different. The number of participants who answered every instrument is presented in Table 1. Out of the total number, 269 participants took part in phases 1 and 2, 279 in phases 1 and 3, and 241 participants in phases 2 and 3. The average age of all respondents included in the study was 20.10 years (SD=1.81, ranging from 18 to 30 years), with 82.1% of the sample being female.

Procedure

The research was carried out as a part of a larger study. It was organized in three phases in which the participants completed different questionnaires. In the first and the third phase the participants answered the questionnaires in paper-and-pencil form, while in the second phase they participated in computer-based testing in groups of up to 20 persons (every respondent was seated individually at the computer). At the beginning of every phase, the respondents were told that participation in the research was voluntary and all of them agreed to participate. As for the instruments used, Rosenberg Self-Esteem Scale and NLP were used in phase 1, SE-IAT in phase 2, and Contingent Self-Esteem Scale and Narcissist Personality Inventory in phase 3.

Instruments

Contingent Self-Esteem Scale (Johnson & Blom, 2007) measures the extent to which a person's feeling of self-worth is based on two sources: personal competences and relations with others. Competence based Self-Esteem (abbr. CBSE; 12 items, α=.78) refers to self-attitude contingent upon meeting personal standards of success, being perfect and avoiding failures. Relation based Self-Esteem (abbr. RBSE; 14 items, α=.83) refers to the feeling of self-worth which depends on the acceptance and love of others. The items are answered on 5-point Likert scale. The correlation between two subscales is r=.44.

The General Self-Esteem Scale (Opačić & Bodroža, in preparation) is an adapted and extended version of Rosenberg Self-Esteem Scale (Rosenberg, 1965) which consists of 30 items. The scale includes equal number of positively (e.g. "I feel that I have a number of good qualities.") and negatively (e.g. "I feel I do not have much to be proud of.") worded items. The respondents choose the degree to which each statement refers to them on 5-point Likert scale (1 – not at all, 5 – yes, completely). Internal consistency of the scale is α=.91.

Self-Esteem – Implicit Association Test (SE-IAT; Greenwald & Farnham, 2000; Greenwald et al., 1998) measures the automaticity of association between the self and positive attributes. The more automatized (i.e. faster) the association of the self with positive attributes as compared to negative attributes, the higher the implicit self-esteem. The participants were asked to categorize combinations of words from categories *me / not me* and *pleasant/ unpleasant* by pressing one of the two buttons as fast and as accurately as they could. As suggested by the authors of the instrument (Greenwald & Farnham, 2000; Greenwald et al., 1998), the participants were randomly assigned to one of the two versions of SE-IAT – one with congruent blocks (me + pleasant) coming first, and the other with incongruent blocks (me + unpleasant) coming first. Cohen's d indicated strong SE-IAT effect (the difference between mean latency for incongruent and congruent blocks; d=1.175).

To calculate the measure of SE-IAT effect, D algorithm, which controls for respondents' mean latency, was used (Greenwald, Nosek, & Banaji, 2003)[1]. The analysis revealed the difference in SE-IAT effect between the two versions (t(239)=4.892, p<.001, AM_{congr}=.331, $AM_{incongr}$=-.258). To annul the effect of the version, regression analysis was performed with SE-IAT score as the criterion and version as the predictor variable, and the residual was saved as the final SE-IAT measure. This measure was used in all analyses.

Name Letter Preference (NLP; Koole et al., 2001; Nuttin Jr, 1985, 1987) test is based on the phenomenon of implicit egotism – a more pronounced preference for anything related to oneself (in this case, personal name initials) over things not related to oneself (all other letters). The participants rated 30 letters of Serbian alphabet on the 9-point scale (1 – don't like it at all, 9 – like it very much). Following Nuttin Jr (1985) and Koole et al. (2001), the participants were told that the research was concerned with people's aesthetic judgments of simple stimuli like the letters of the alphabet. The respondents were encouraged to answer intuitively, without much thinking. The letters were presented in random order. NLP effect was calculated separately for the name and the surname initial, using I-algorithm proposed by LeBel and Gawronski (2009). The correlation between the two was only r=.38, so we decided to use first name and second name initial preference separately in the analyses to avoid the possibility of type II error[2]. Strong effect of implicit egotism was registered – preference for personal initials was stronger than for non-initial letters (name initial: t(278)=20.24, p<.001, AM_{name}=7.21, $AM_{other.letters}$=4.89; surname initial: t(278)=20.07, p<.001, $AM_{surname}$=7.30, $AM_{other.letters}$=4.89).

Narcissistic Personality Inventory (NPI–16; Ames, Rose, & Anderson, 2006) is a shortened version of NPI–40 (Raskin & Terry, 1988), which consists of 16 items. The authors of this instrument conceptualize narcissism as a personality trait rather than a personality disorder. The respondents are presented with pairs of statements and asked to decide which one of these describes them better. Internal consistency of this instrument is somewhat below the satisfactory level (α=.66).

Results

Descriptive statistics for all variables are presented in Table 1. In accordance with the previous research that showed positive bias of explicit self-regard among non-clinical population, i.e. a tendency of psychologically healthy individuals to show rather high levels of self-esteem (Baumeister, Tice, & Hutton, 1989; Schimel, Arndt, Pyszczynski, & Greenberg, 2001; Taylor & Brown, 1988), the measure of ESE has negative standardized skewness. Negative standardized skewness was also registered for all ISE measures. For the purpose of planned statistical analyses, the distributions of these variables were normalized using Blom's formula.

1   Initial analyses revealed low split-half reliability (.44). Since low reliability of measures can lead to type II error in planned analyses (hierarhical regressions with interaction effects), we decided to lower the error variance by calculating SE-IAT effect as was suggested by Cunningham, Preacher, & Banaji (2001) and Nosek & Smyth (2007). Sixty trials from practice blocks and critical blocks were divided into 4 sets of 15 trials. Four D measures were calculated for every set and then principal components analysis was performed on these four variables. The participants' scores on the first principal component (48% of variance explained) were taken as the SE-IAT measure.

2   Some research suggests that it is possible that NLP_{name} and $NLP_{surname}$ tap into somewhat different constructs (Stieger & Burger, 2010). Namely, peoples' first name initial is more closely linked to their personal self-esteem, whereas surname initial is more closely linked to collective self-esteem (Pelham, Mirenberg, & Jones, 2002).

Table 1
Descriptive statistics of all variables

	N	Min	Max	AM	SD	Standard. Skewness	Standard. Kurtosis
ESE	305	53	150	114.57	15.26	–4.91	4.35
CBSE	279	13	51	32.00	6.73	1.00	.13
RBSE	279	18	68	40.34	8.49	-.06	.38
SE-IAT	290	–3.60	2.68	0.00	1.00	–3.94	2.12
NLP_{name}	279	–3.09	7.79	3.44	2.08	–5.19	.60
$NLP_{surname}$	279	–4.65	7.64	3.12	2.37	–6.05	1.43
Narcissism	279	0	16	6.32	3.13	2.36	–1.15

Legend: ESE –explicit self-esteem; CBSE – Competence based Self-Esteem; RBSE – Relation based Self-Esteem; SE-IAT – Self-Esteem – Implicit Association Test; NLP_{name} – Name Letter Preference effect for name initial; $NLP_{surname}$ – Name Letter Preference effect for surname initial.

Correlations between two measures of contingent self-esteem (CBSE and RBSE), three measures of implicit self-esteem (SE-IAT, NLP_{name}, $NLP_{surname}$), and explicit self-esteem (ESE) were first analyzed. The results show that none of the ISE measures correlates significantly with contingency of self-worth (Table 2). Out of the three measures of ISE, only NLP_{name} correlates positively with explicit self-esteem. Therefore, the positivity of self-regard is accompanied by a stronger preference for the first name initial as compared to all other letters. Both CBSE and RBSE correlate negatively with ESE, suggesting that the more one's feeling of self-worth is based on meeting certain standards of success or being loved and accepted by others, the lower their explicit self-esteem is.

Table 2
Intercorrelations between variables

	1	2	3	4	5	6
1. CBSE						
2. RBSE	.440**					
3. SE-IAT	-.054	.005				
4. NLP_{name}	.000	-.097	.007			
5. $NLP_{surname}$	.055	.057	.066	.384**		
6. ESE	–.324**	-.449**	.071	.156*	-.007	
7. Narcissism	.007	-.236**	-.054	.195**	-.006	.402**

** Correlation is significant at the $p \leq .01$ level (2-tailed);

Legend: CBSE – Competence based Self-Esteem; RBSE – Relation based Self-Esteem; SE-IAT – Implicit Association Test; NLP_{name} – Name Letter Preference effect for name initial; $NLP_{surname}$ – Name Letter Preference effect for surname initial; ESE –explicit self-esteem.

The next step was to examine the relationship between CSE and a combination of ISE and ESE. Separate hierarchical regression analyses were

carried out, with two measures of contingent self-esteem as criterion variables and measures of ISE, ESE and their interaction term – ISExESE as predictor variables (as suggested by Aiken & West (1991), predictors were first centered and then the interaction term was calculated). Since three ISE measures showed no correlation or low correlation with each other, they were entered simultaneously in the regression analysis. Simple effects of predictors were entered in Step 1 of regression analysis and the interaction terms of ESE with measures of ISE in Step 2. The results of these analyses are presented in Table 3.

In both analyses only the first model, with simple effect of ISE and ESE as predictors, was statistically significant, and the only significant predictor of CBSE and RBSE was ESE. Adding the interaction term of ESE and all three measures of ISE in Step 2 did not improve the predictive power of regression models. Thus, regardless of the measure of ISE used, analyses do not support the idea that a combination of high ESE and low ISE, i.e. discrepant high self-esteem is related to contingent self-esteem.

Table 3
Hierarchical regression models predicting subdimensions of contingent self-esteem

Criterions Predictors	CBSE			RBSE		
	ΔR^2	β	r	ΔR^2	β	r
Step 1	.120***			.199***		
ESE		-.347***	-.338		-.441***	-.445
SE-IAT		-.008	-.045		.044	-.001
NLP$_{name}$		.066	.020		-.048	-.073
NLP$_{surname}$		.023	.053		.119	.111
Step 2	.010			.006		
SE-IAT x ESE		-.006	-.002		-.029	-.031
NLP$_{name}$ x ESE		.032	.043		.078	.114
NLP$_{surname}$ x ESE		-.107	-.110		-.033	.016

*** $p \leq .001$

Legend: CBSE – Competence based Self-Esteem; RBSE – Relation based Self-Esteem; ESE – explicit self-esteem; SE-IAT – Implicit Association Test; NLP$_{name}$ – Name Letter Preference effect for name initial; NLP$_{surname}$ – Name Letter Preference effect for surname initial.

Nevertheless, the analyses reported above did not directly test the hypothesis that the *combination* of high ESE and high CSE (i.e. contingent *high* SE) was related to the combination of high ESE and low ISE. Since there is no analysis that makes it possible to test the relationship between two interactions (ESE x CSE and ESE x ISE), the decision was made to use a less optimal approach of carrying out analyses on the subsample of HSE individuals. The participants were ranked by their score on ESE and only the upper 50% of the sample was selected (n=119). All analyses are repeated on the subsample of HSE individuals. The correlations between CBSE and RBSE, on one hand, and three measures of ISE, on the other hand, are all non-significant (rs$\leq|\pm.108|$, ps>.05).

The same hierarchical regression analyses were then carried out on the subsample of HSE participants. The simple effects of predictors (ESE, SE-IAT, NLP_{name}, and $NLP_{surname}$) were entered in the first step, while the interaction terms of ESE and all measures of ISE were entered in the second step of regression analyses predicting CBSE and RBSE. When CBSE was used as a criterion variable, neither the first nor the second regression model was significant (first model: R^2=.046, p>.05, second model ΔR^2=.018, p>.05). When RBSE was used as the criterion, only the first model was statistically significant (R^2=.110, p=.01), while the interaction terms entered in the second step did not improve the predictive power of the regression model (ΔR^2=.026, p>.05). Consistent with the results of the analyses performed on the whole sample, ESE is the only significant predictor of RBSE on the subsample of HSE individuals (β=-.328, p<.001).

To sum up, discrepant SE was not related to contingent self-esteem when all participants (LSE and HSE) were included in the analyses. But more importantly and contrary to the theoretical expectations, discrepant SE did not converge with contingent SE of HSE individuals. Thus, this research does not provide evidence of convergent validity of the two aspects of fragile self-esteem – discrepant self esteem and high contingent self-esteem.

Relationship between aspects of fragile self-esteem and narcissism

The second goal was to examine the relationship between aspects of fragile SE and narcissism. Simple Pearson correlation (Table 2) shows that RBSE is negatively correlated to narcissism, saying that narcissists do not have a need to be accepted in order to feel good about themselves. They might even feel that others' non-acceptance is a sign of envy, which proves narcissists' superiority. Narcissists also have higher ESE. Out of three measures of implicit self-esteem, only NLP_{name} correlates with narcissism. So, narcissists manifest implicit egotism considering their name initial, but not their surname initial.

Finally, hierarchical regression analyses were carried out to examine if combinations of ISE and ESE, as well as CSE (i.e. subdimensions of CBSE and RBSE) and ESE predict narcissism. Again, all three measures of ISE – SE-IAT, NLP_{name}, and $NLP_{surname}$ were entered in the same regression analysis. Simple effects of predictors were entered in the Step 1, and their interaction terms with ESE in the Step 2 (predictors were first z-transformed).

In regression analyses where measures of ISE (SE-IAT, NLP_{name}, and $NLP_{surname}$), ESE, and the interaction term of ESE with ISE measures were used as predictors of narcissism, only the first model with simple predictor effects was significant (Table 4). In accordance with the Pearson correlations reported in Table 2, only ESE and NLP_{name} predicted narcissism. Models with interaction terms did not reach the significance level, which leads to the conclusion that the participants with congruent and incongruent levels of self-esteem have similar levels of narcissism.

Table 4
Hierarchical regression model predicting narcissism based on explicit and implicit self-esteem and their interactions

Predictors	ΔR^2	β	r
Step 1	.173***		
ESE		.365***	.402
SE-IAT		-.102	-.055
NLP$_{name}$		.141*	.195
NLP$_{surname}$		-.078	-.006
Step 2	.007		
SE-IAT x ESE		.011	-.009
NLP$_{name}$ x ESE		.050	-.038
NLP$_{surname}$ x ESE		-.078	-.055

*p<.05; ***p<.001

Legend: ESE – explicit self-esteem; SE-IAT – Implicit Association Test; NLP$_{name}$ – Name Letter Preference effect for name initial; NLP$_{surname}$ – Name Letter Preference effect for surname initial.

Further, narcissism was regressed on ESE, CBSE and RBSE in Step 1 and the interaction term of ESE with both dimensions of contingent self-esteem in Step 2. The first model was statistically significant, while the model with interaction terms was marginally significant (Table 5). Except for ESE and RBSE that predict narcissism in the same way as indicated by Pearson correlations (Table 2), CBSE is also a significant predictor of narcissism. The suppression effect of CBSE – the discrepancy of non-significant zero-order correlation and significant β coefficient, was registered. It suggests that, when ESE and RBSE were leveled across participants, narcissists' feeling of self-worth was also contingent upon avoiding failures and meeting high personal standards.

In the second regression model, the interaction effect of RBSE and ESE was not significant, but the interaction effect of CBSE and ESE was. The simple slope test found that the slope of line representing the association between CBSE and narcissism is significant for the participants with low ESE (β=.29, p<.001), and marginally significant for HSE individuals (β=.14, p=.067) (the levels of ESE are fixed at ±1SD). The predicted values for interaction are presented in Figure 1. The individuals with low self-esteem who are highly contingent upon proving their competences show significantly higher levels of narcissism than those with low, but non-contingent self-esteem. Also, high self-esteem individuals with the feeling of self-worth that is contingent upon being successful and competent have higher levels of narcissism than non-contingent high self-esteem individuals. In accordance with the theoretical expectations, the group of participants with high contingent self-esteem shows the highest level of narcissism of all groups. Nevertheless, it should be noted that the registered interaction effect is also the suppressor effect (zero-order correlation for the interaction effect is non-significant), which means that only after participants have been leveled by ESE, CBSE, and RBSE, can the combination of ESE and CBSE additionally predict narcissism.

Table 5

Hierarchical regression model predicting narcissism based on dimensions of contingent self-esteem, explicit self-esteem and their interactions

Predictors	ΔR^2	β	r
Step 1	.209***		
ESE		.416***	.402
CBSE		.268***	.007
RBSE		-.139*	-.236
Step 2	.018†		
CBSE x ESE		-.161*	-.025
RBSE x ESE		.055	-.003

*p<.05; ***p<.001; †p=.054.

Legend: CBSE – Competence Based Self-Esteem; RBSE – Relation Based Self-Esteem; ESE – explicit self-esteem.
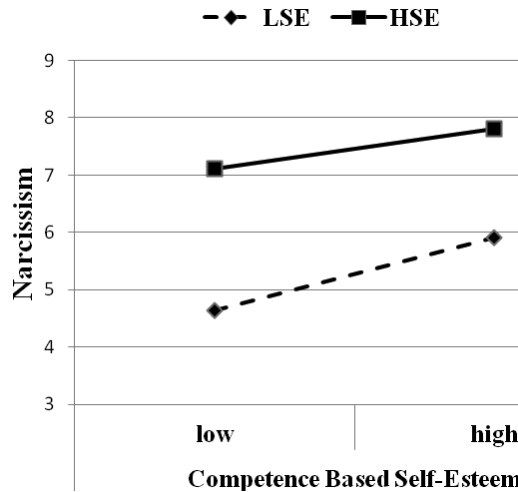

Figure 1. Narcissism as a function of explicit self-esteem and competence based self-esteem

Discussion

This study set out to find evidence of convergent validity of two aspects of fragile self-esteem: contingent high self-esteem and incongruent high self-esteem (i.e. a combination of high explicit and low implicit self-esteem). Contrary to theoretical expectations, the results have shown no convergence between these aspects of fragile self-esteem. That means that incongruent high self-esteem is not necessarily dependent on the acceptance of others and proving one's own competences at the same time. These findings imply that the concept of fragile self-esteem, in the sense it is understood now, has several

different aspects. Previous research found only limited evidence of convergence of some aspects of fragile self-esteem. Researchers found modest correlations between contingent, implicit, and unstable self-esteem (Crocker & Wolfe, 2001; Kernis et al., 1993; Kernis & Paradise, 2002; Kernis et al., 2008), but significant correlations between contingent and implicit self-esteem have not been found in the present study. More importantly, in the previous research interactions of level of self-esteem with its contingency, stability or congruency with implicit self-esteem were not properly tested. To our knowledge, this research is the first to test the relationship of *high* contingent and *high* incongruent self-esteem. The results obtained are not promising from the perspective of the construct validity of fragile self-esteem.

The results of this study call into question the concept of fragile self-esteem. Is it justifiable to consider two completely unrelated patterns of cognition as aspects of the same psychological phenomenon? The empirical evidence presented here does not provide support for such an interpretation. Even if we accept the construct of fragile self-esteem to be valid, but highly diverse, we should be careful when interpreting the results of the studies that used different aspects of fragile self-esteem to predict certain behaviors.

Defensive behavior after ego threat is the most frequently examined consequence of fragile self-esteem. Research has shown that all aspects of fragile high self-esteem: stability, contingency and incongruency can predict self-enhancing and defensive reactions to ego threats (Bosson et al., 2003; Eaton et al., 2007; Jordan et al., 2003; Lupien et al., 2010; Kernis et al., 1993; Park & Crocker, 2008; Zeigler-Hill et al., 2011). Nevertheless, it should be questioned whether that is enough to consider them the aspects of the same psychological phenomenon.

What makes the comparison of results even more complicated is that the defensive reactions to ego threats measured in previous research were very diverse in nature. Some of them were cognitive, some affective, and some behavioral. Also, they differed in the way of measurement and included self-reported, indirect behavioral, as well as other-reported measures (Robinson & Meier, 2005; Rudolph et al., 2010). The heterogeneity of self-enhancing and defensive reactions measured in previous research makes it difficult to compare the findings. It is possible that different aspects of fragile self-esteem predict defensive reactions of different kinds. For example, Buhrmeister (Buhrmester et al., 2011) concluded that SE-IAT measures implicit affect. As a consequence, this measure of implicit self-esteem may be better at predicting affective reactions to ego threats than cognitive ones. The research in which all three aspects of fragile self-esteem would be used to predict the set of diverse defensive reactions would be a very useful step in the validation of this construct and differentiation between its aspects.

We cannot disregard important limitations of the analyses presented in this paper. To our knowledge, there is no statistical analysis that makes it possible to directly test the relationship between two interaction effects − interaction of

contingency and the level of explicit self-esteem, and interaction of the level of explicit and implicit self-esteem. Having that in mind, as well as the fact that our theoretical hypotheses were related only to high self-esteem individuals, we chose to perform additional analyses only on this subsample. Such a procedure led not only to the restriction of range of explicit self-esteem, but also to lower statistical power of statistical tests. Future research should seek for alternative statistical approaches, which would better suit this kind of data.

Our second goal was to determine if fragile self-esteem characterizes individuals with narcissistic personality characteristics. Students with highest narcissism were found to have higher levels of explicit self-esteem than non-narcissistic students, but to care less about the acceptance of others. More interestingly, individuals with high levels of explicit self-esteem who feel worthy only if they meet high standards of excellence or if they achieve success, manifested the highest levels of narcissist personality trait. The results are largely consistent with those of Zeigler-Hill who found that individuals with grandiose narcissism have a strong need to be better than others, but do not care about others' acceptance and others' opinions about themselves (Zeigler-Hill et al., 2008). However, our findings suggest that competence based contingency is related to narcissism only if it is accompanied by high levels of explicit self-esteem[3]. In other words, narcissist personality characteristics are highest among high self-esteem students whose feeling of self-worth depends on being successful. To conclude, the results show that high self-esteem of individuals with narcissistic personality characteristics is secure in the sense that it is not dependent upon others' approval, but is fragile and sensitive to the proof of their competences and success. However, it should be noted that this research was conducted on the sample of students for whom competences and success might be especially important. Replication of this finding on the sample representative for general population is, thus, needed. Another limitation of the present study is related to the fact that the obtained interaction effect is the suppression effect. Therefore, further research on this topic is necessary.

This research showed that among low self-esteem individuals, those who have higher levels of self-esteem contingency in the domain of competences are characterized by higher levels of narcissist personality characteristics (although not as high as in the group of high self-esteem individuals). That means that individuals who have a strong need for confirmation of their personal competences and who base their feeling of self-worth on personal success develop less self-critical and less psychologically healthy attitude toward the self, even if their general self-regard is negative.

Discrepant high self-esteem, i.e. a combination of high explicit and low implicit self-esteem, was not found to be a feature of persons with narcissistic characteristics. This result should not be considered surprising or unusual.

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3   The questionnaire Narcissist Personality Inventory (NPI), which was used in this study, measures grandiose, but not vulnerable type of narcissism (Zeigler-Hill et al., 2008). Moreover, Zeigler-Hill and colleagues used NPI for measuring grandiose narcissism, which makes our results directly comparable.

Bosson and colleagues (Bosson et al., 2008) reviewed a large body of research on this topic and concluded that the relationship between narcissism and incongruent self-esteem is highly inconsistent. However, our study indicated that one out of three measures of implicit self-esteem was related to narcissistic personality trait. Inflated preference for one's name initial, but not for the surname initial, was related to higher narcissism. It seems that individuals with the highest narcissism self-enhance through identification with their name initial as the symbol of themselves as individuals, but not with their surname initial, although it symbolically represents the group they belong to – their family. This is consistent with the idea that the fist name initial is closely related to personal self-esteem, whereas the last name initial is more closely related to collective self-esteem (Pelham et al., 2002). However, it should be noted that some research failed to find the relationship between narcissism and both NLP and SE-IAT measures of implicit self-esteem (Zeigler-Hill, 2006).

It can be concluded that there is no clear evidence that fragile self-esteem is the feature of narcissistic personalities. Our research offers limited evidence that narcissistic personality characteristics are characterized by high self-esteem contingent upon success, but not by discrepant high self-esteem.

Although this research did not focus on the validity of implicit self-esteem measures, it is worth mentioning that IAT did not correlate to any other self-reported measure included in this study. Such results usually imply doubtful validity of the instrument. Nevertheless, a number of previous studies showed that IAT predicts spontaneous, uncontrolled, non-verbal, and other-reported behaviors better than self-reported measures (Asendorpf et al., 2002; Conner & Barrett, 2005; Robinson & Meier, 2005; Rudolph et al., 2010).

On the other hand, Name-Letter Preference test (i.e. only NLP for first name initial), which is a self-report measure, correlated significantly but weakly with explicit self-esteem and narcissism. The meta-analysis on the relationship between NLP and explicit self-esteem showed comparable results (Krizan & Suls, 2008), although the NLP measures included in this study averaged for the name letter and surname letter. Although the participants in the present study expressed implicit egotism for both name and surname initials, only pronounced preference for name initial was related to explicit self-esteem and narcissistic characteristics. In accordance with the conclusion of Pelham (Pelham et al., 2002), it might suggest that, while the surname initial is a symbol of the group participants belong to – their family, the name initial is a personal symbol and, thus, relates more closely to the feeling of personal worth.

Conclusion

The present study does not offer proof of convergence between two aspects of fragile self-esteem: contingent high self-esteem and discrepant high self-esteem. Further research on the validity of this construct should also include the third aspect of self-esteem fragility – stability of self-esteem. Previous research

on fragile self-esteem as predictor of defensive reactions to ego threats included a wide range of different reactions (affective, cognitive, and behavioral) and the ways of their measurement (direct, indirect, self-reported, other-reported, etc). This field would benefit from the research in which all three aspects of fragile self-esteem would be compared as the predictors of the same set of defensive reactions. Future research on narcissism and fragility of self-esteem should also focus on other aspects of fragile self-esteem (e.g. unstable high self-esteem) or, even better, to all three aspects together.

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