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Brief Report

Gender Differences in the Structure of Narcissism: A Multi-Sample Analysis of the Narcissistic Personality Inventory[1]

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Multi-sample analysis of the Emmons factor model of the Narcissistic Personality Inventory (NPI) was used to test the prediction that exploitive tendencies and feelings of entitlement are less central to the construct of narcissism among females than they are among males. As predicted, the hypothesis of cross-gender equivalence of the Emmons factor variance/covariance matrix was rejected. Follow-up analyses confirmed that this hypothesis was rejected primarily because Exploitiveness/Entitlement showed weaker correlations with the other Emmons factors among females that it did among males. Results are discussed in terms of such factors as norms regarding appropriate sex role conduct, as well as the power differential between males and females.

The Narcissistic Personality Inventory (NPI, Raskin & Hall, 1979), was developed to measure individual differences in the extent to which a grandiose sense of self and a grandiose fantasy life combine with hypersensitivity, exhibitionism, feelings of entitlement, interpersonal exploitiveness, and a lack of empathy for others to form dominant themes of an individual's per-

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sonality. It is the most widely used measure in the area and has demonstrated ample reliability and construct validity (e.g., Emmons, 1984, 1987; Raskin & Terry, 1988). In addition, factor analyses of the NPI (Emmons, 1987; Raskin & Terry, 1988) suggest that it measures the key constituents of the syndrome. For example, Emmons (1987) found that the NPI contained four factors: Leadership/Authority, Self-absorption/Self-admiration, Superiority/Arrogance, and Exploitiveness/Entitlement.

However, some theorists have questioned whether the type of narcissism that is purportedly assessed by the NPI can be validly generalized to both male and female experience (e.g., Akthar & Thompson, 1982; Haaken, 1983; Philipson, 1985). Although only a few investigators (e.g., Carroll, 1987; McCann and Biaggio, 1989) have reported a gender-specific pattern of results in empirical research with the NPI, there is theoretical and empirical reason to believe that the hypothesis of gender differences in narcissism, particularly as it is assessed by the NPI, may be at least in part correct.

Specifically, past research suggests that exploitive tendencies and open displays of feelings of entitlement will be less integral to narcissism for females than for males. For females such displays may carry a greater possibility of negative social sanctions because they would violate stereotypical gender-role expectancies for women, who are expected to engage in such positive social behavior as being tender, compassionate, warm, sympathetic, sensitive, and understanding (Martin, 1987). Indeed, it has been found that women in leadership positions are evaluated negatively if they violate these expectancies by being autocratic and directive (Eagly, Makhijani, & Klonsky, 1992), or by occupying leadership positions which typically require the ability to direct and control people (Butler & Geis, 1990). Moreover, it appears that in order to influence men, women must appear to be sociable, likeable people; whereas men, irrespective of the gender of the target of persuasion, merely must appear to be competent (Carli, Lafleur, & Loeber, 1995).

The above described theory and research led to the prediction that Exploitiveness/Entitlement would be a less well-integrated component of the narcissistic syndrome (as measured by the NPI) for females than it would be for males. Specifically, it was predicted that the correlations of the Exploitiveness/Entitlement factor with the Leadership/Authority, Self-absorption/Self-admiration, and Superiority/Arrogance factors of the NPI would be lower for females than for males.[3]

[3]Raskin and Terry (1988) identified an alternative 7 factor structure for the NPI which included the factors Authority, Exhibitionism, Superiority, Vanity, Exploitiveness, Entitlement, and Self-Sufficiency. We did not use this factor structure in the present research primarily because the large data set on which the analyses were conducted did not include all of the items comprising these factors. Moreover, the Emmons factor structure, due to its greater simplicity, lends itself to a more tractable and straightforward test of the hypothesis under consideration.

To test this prediction, we employed multi-sample analysis, a method by which researchers may test for cross-population invariance in the operation of a given measuring instrument (Jöreskog & Sörbom, 1993). Briefly, multi-sample analysis utilizing LISREL approaches the question of cross-population invariance by testing a series of ordered hypotheses concerning the structure of the data. Only one such hypothesis, the hypothesis of equivalent factor variances/covariances, is directly relevant to the question under consideration in the present study and therefore this hypothesis (to be described in greater detail below) is the only one reported.

METHOD

Participants

Data on the NPI were collected from students from several introductory psychology classes at the University of Utah. These students participated in mass testing sessions conducted at the beginning of the quarter during the 1992-93 and 1993-94 academic years. Among these students, only those who had no missing data on any of the NPI items and who had indicated their gender were used in the analyses reported in this study. Our sample thus consisted of 1029 females and 1060 males. Although we do not have exact data about the precise ethnic make-up of our sample, the introductory psychology classes tend to be representative of the state as a whole. Specifically, the 1990 United States Bureau of the Census reports that 93.8% of Utah's population is White, no more than 5% of whom are Hispanic. The remainder of the population is largely composed on non-White Hispanics, Asians and Pacific Islanders, Native Americans, and African Americans.

All of these participants received credit towards their introductory psychology class for their participation.

Instrument

The particular version of the NPI contained the 37 items which had loadings of .35 or greater on at least one of Emmons' (1987) 4 factors (Rhodewalt & Morf, 1995).

Statistical Analyses

We evaluated the cross gender equivalence in the factor structure of the NPI by conducting multi-sample analysis using LISREL 8 (Jöreskog &

Table I. Means and Standard Deviations of the Emmons Factors and the NPI as a Function of Gender[a]

	Gender			
	Females		Males	
	M	SD	M	SD
L/A	5.49	2.05	5.76	1.98
S/S	4.22	1.62	4.49	1.64
S/A	3.40	1.72	3.98	1.88
E/E	2.28	1.73	2.58	1.82
NPI	15.40	4.84	16.82	5.06

[a]L/A, Leadership/Authority; S/S, Self-absorption/Self-admiration; S/A, Superiority/Arrogance; E/E, Exploitiveness/Entitlement; NPI, Narcissistic Personality Inventory. All mean gender differences, using the Tukey test, were significant at $p < .01$.

Sörbom, 1993). Inter-item polychoric coefficients served as the basis for the variance-covariance matrices generated by PRELIS (Jöreskog & Sörbom, 1990). The parameters of LISREL's factor analyses were estimated by the method of maximum likelihood using the variance-covariance matrices as input. The metric of the Emmons factor model was fixed by setting the item for which he reported the highest factor loading equal to one on its associated factor.

The procedures for testing the gender invariance hypotheses entail comparing a model in which certain parameters are constrained to be equal across genders with a less restrictive model in which these parameters are free to take on any value. Because the more restrictive models (i.e., the factor variances/covariances were constrained to be equal across gender) were nested within the less restrictive models (i.e., the factor variances/covariances were not constrained to be equal across gender), differences in chi-square between the two models could be used to test the null hypotheses that the restrictions were true in the population. A more restrictive model nested within a less restrictive model is rejected if the difference in chi-square were significant.

RESULTS AND DISCUSSION

Before testing the hypothesis of interest in this study, factor means and standard deviations, as well as the mean and standard deviation of the NPI, were calculated for each gender. As can be seen in Table I, although our large sample size lent us sufficient power to detect that all of the means were significantly higher for the males than they were for the females, the differences between the means across genders were nonetheless small.

Table II. Matrix of Correlations among Emmons NPI Factors as a Function of Gender[a]

			Factors				
Factors	L/A		S/S		S/A		E/E
L/A	1.00						
	F	M					
S/S	.44	.50	1.00				
	F	M	F	M			
S/A	.82	.83	.58	.50[b]	1.00		
	F	M	F	M	F	M	
E/E	.38	.53[c]	.25	.44[c]	.62	.73[c]	1.00

[a]L/A, Leadership/Authority; S/S, Self-absorption/Self-admiration; S/A, Superiority/Arrogance; E/E, Exploitiveness/Entitlement. F, Females; M, Males.
[b]The gender difference between the correlations was significant at p .05.
[c]The gender difference between the correlations was significant at $p < .01$.

More important for this research was that the standard deviations for each of the factors were also of similar magnitude across genders. Therefore, it is unlikely that any gender differences found in the covariations of Exploitiveness/Entitlement with the other factors could be due to a population-specific restriction in range on one or more of the factors.

Test for the Cross-Gender Invariance of the Factor Covariances

For the test of this hypothesis, the model was estimated using starting values for the females, and the equality constraints were subsequently imposed upon the males. Also factor loadings, error variances/covariances, and factor variances/covariances were constrained to be equal across genders. We then looked for a change in χ^2 from a model in which the factor loadings and error covariances were constrained to be equal across genders. Consistent with predictions, the hypothesis of cross-gender invariance of factor covariances proved to be untenable, $\Delta\chi^2(10) = 21.23$, $p < .02$. In order to examine the nature of the gender differences for covariances between factors, corresponding factor correlations were compared across gender using Fisher's r to Z transformation. Table II presents the correlations among the factors for each gender. As can be seen in this table, there were significant gender differences on all the covariances that involved the Exploitiveness/Entitlement factor.[4]

[4]An unexpected contribution to the rejection of the hypothesis of cross-gender invariance of NPI factor covariances appeared to be the significant tendency for Self-absorption/self-admiration to correlate more strongly with Superiority/Arrogance among females than among males.

Thus the main hypothesis that Exploitiveness/Entitlement would be less well-integrated with the other components of narcissism females than it would be for males was supported.[5]

Conclusions

As stated in the introduction, we suspect that the reason Exploitiveness/Entitlement is not as well-integrated into the narcissistic syndrome for females as it is for males is because such behaviors are not sanctioned when displayed by females because they violate culturally held expectations regarding appropriate female behavior (Butler & Geis, 1990; Eagly et al., 1992; Martin, 1987).

However, it must be emphasized that the generality of our results may be limited to narcissism as measured by the NPI. Also, they may not generalize to the factor model of the NPI proposed by Raskin and Terry (1987). Moreover, it is possible that the strong influence of the Mormon church (which discourages females from assuming positions of leadership) on the people in our sample produced greater gender differences than might otherwise be found among the American population in general. Notwithstanding, the findings on gender differences in effective leadership style (e.g., Eagly et al., 1992), obtained from non-Mormon populations and on which our predictions were based, suggest that our results may be replicable in other populations.

Despite these caveats, there are some intriguing aspects of our findings. First, male and female narcissists in general showed striking similarities in the manner in which most of the facets of narcissism were integrated with each other (note the overall cross-gender similarities in factor correlations displayed in Table II). Second, standing out as figure against the ground of these similarities, were the predicted and theoretically important gender differences in the manner and extent to which exploitiveness and entitlement were integrated with the other facets of narcissism. In light of

[5]In the process of conducting a multi-sample analyses in LISREL 8, we were able to obtain indices of the goodness-of-fit of the Emmons model. These indices tended to indicate that the model was a relatively poor-fitting model. For example, the values for the adjusted goodness-of-fit index, the non-normed fit index, and the comparative fit index were all .60 or lower, or substantially less that what has been suggested as a criterion (i.e., .90) for a reasonable fit to the data (Bentler & Bonnet, 1980). However, it may be that the poor fit of the Emmons model simply reflects that a structure that allows for a number of secondary loadings, rather than a simple structure, should have been specified. Despite the weak fit, however, it is a theoretically interesting model of narcissism. First, Emmons (1984, 1987) has demonstrated this factor structure is replicable, and, second, Rhodewalt and Morf (1995) provided some evidence for the construct validity of the Exploitiveness/Entitlement factor. Thus, we believe that the reported gender differences represent meaningful gender differences in the structure of narcissism.

our findings, we recommend that future attempts be made to explicate the differential processes by which males and females either do or do not incorporate feelings of entitlement and exploitive tendencies into the narcissistic syndrome. For example, though this speculation goes a bit beyond our current findings, we suspect that research on narcissism looking at more *internal* and underlying psychological phenomenology (e.g., lack of internalized self, problems with self-esteem regulation, etc.) is likely to obtain similar outcomes for both genders. However, research involving *behavioral manifestations* of exploitiveness and entitlement should expect to obtain gender differences.

Finally, we would also like to suggest that our research demonstrates the value of using multi-sample analyses or other similar covariance structure analyses for examining gender differences among various theoretically interrelated psychological constructs and processes. For example, an inspection of the gender differences on the means on the Emmons factors would lead one to conclude that males are uniformly more narcissistic than females (see Table I). However, our multi-sample analysis suggests that the matter is more complex: males and females are likely to show both similar and different *patterns of relationships* between and among the various facets of narcissism.

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