

The Impact of Social Desirability on Correlation among Factors of Big-five Personality Model

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The theory of the big-five factors of personality proposes that personality can be generally categorized into five independent factors: extraversion, agreeableness, conscientiousness, neuroticism, and openness (Goldberg, 1990). This same structure was found in different cultures around the world (e.g., McCrae & Costa, 1997). However, some studies fail to find the independence of these factors, supporting the claim of some researchers that the big-five factors are part of one or two meta-trait (the general factor, or the big two), which contain two or more big-five's factors (e.g., Digman, 1997). An hypothesis that has been claimed to explain those findings is that the correlations between factors do not represent a real higher order factor, however it could be an artifact derived from some cognitive bias. The biases could represent, for example one self-perceptions in a more positive way, some kind of moralistic bias and the egoistic bias (Paulhus & John, 1998).

Social desirability, that refers to “[...] the need of Ss to obtain approval by responding in a culturally appropriate and acceptable manner” (Crowne & Marlowe, 1960, p.353), could be one of the variables that interfere in self-evaluation questionnaires of personality. Since some personal characteristics are, in our culture, considered more positive and socially desired than others (Ashton, Lee, Goldberg, & de Vries, 2009), individuals tend to respond in a social desirability way and, consequently, this pattern of response will booster the correlation between the factors of personality.

Results

Person product-moment correlation between the big-five factors of personality was computed and Partial correlation was used to explore the relationship between the big-five factors of personality, while controlling for scores on the social desirability scale. Preliminary analyses were performed to ensure no violation of normality, linearity and homoscedasticity. Table 1 shows the correlations coefficients between big-five factors of personality, above main diagonal, and, bellow main diagonal, the partial correlations between Big-Five Factors controlling for social desirability. There was a small, negative, partial correlation between neuroticism and agreeableness, $r = -.19$, and between neuroticism and conscientiousness, $r = -.21$, compared to $r = -.33$, and $r = -.30$, respectively, of the Person product-moment correlation between the two variable. Controlling for social desirability, there was a small, positive, partial correlation between agreeableness and conscientiousness, $r = .14$, versus the zero-order correlation, $r = .22$.

Table 1. *Person product-moment correlations between the big-five factors of personality (above main diagonal) and partial correlations controlling social desirability (bellow main diagonal)*

	1	2	3	4	5
1. Extraversion	--	.09	.25	-.25	.28
2. Agreeableness	.07	--	.22	-.33	-.15
3. Conscientiousness	.24	.14	--	-.30	.07
4. Neuroticism	-.24	-.19	-.21	--	.06
5. Openness	.29	-.15	.09	.05	--

Note. Colored coefficients showed significant differences of other of same color, $p < 0,05$.

Objective

This study aims to verify the correlation of the five factors controlled for social desirability, since it is hypothesizes that this contributes to increase the correlation between the factors.

Method

Participants

A questionnaire was applied to a sample of 4656 people, where 66% was women, 48,2% was undergraduates, having mean age of 27.8 years old ($SD = 9.17$), from all states of Brazil, mostly from South.

Procedures

We collected data via internet, the participants were recruited through invitations by emails and links in social network websites.

Instruments

The questionnaire contained demographic social questions and two scales: the Factorial Personality Battery – FPB (Nunes, Hutz, & Nunes, 2010) and a short Brazilian adaptation of the Marlowe-Crowne Social Desirability Scale – SDS-S (Ribas Jr., Moura, & Hutz, 2004).

FPB was developed in Brazil to measure the big-five personality factors, it's contains 126 affirmatives items that the subject must indicate, using a a 7-Likert Scale, how the affirmatives describes him.

SDS-S aims to assess the tendency to respond in a socially acceptable way to a questionnaire, the SDS-S contains 13 items, that must be answered dichotomously ("true" or "false"), high scores in the scales represents high social desirability.

Conclusion

We conduct a study to verify the correlation of the five factors of personality controlled for social desirability. The results suggest that controlling for socially desirable responding have considerable effect on reducing the strength of the relationship between the personality's factors, indicating that others variables, like social desirability, could be contributing to enhance the correlation between the factors.

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