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Positive Orientation and the Five-Factor Model

Abstract: The aim of the present study was to investigate the relationship between positive orientation (PO) defined as a basic predisposition to perceive and evaluate positive aspects of life, the future and oneself and the Five-Factor Model of personality (FFM). Hypotheses postulated positive correlations between PO and extraversion, conscientiousness, agreeableness and openness; a negative correlation was predicted between PO and neuroticism. Two hundred Polish students completed the following measures: SES (Self-Esteem Scale, Rosenberg), SWLS (The Satisfaction with Life Scale; Diener, Emmons, Larson & Griffin), LOT-R (The Life Orientation Test – Revised; Scheier, Carver & Bridges) and NEO-FFI (NEO Five Factor Inventory, Costa & McCrae). The results confirmed correlations between PO and extraversion, conscientiousness, and neuroticism; correlations with openness and agreeableness were not supported. According to canonical correlations, PO shows a clear affinity to the FFM.

Key words: positive orientation, Five-Factor Model, Big Five, optimism, self-esteem, satisfaction with life

Introduction

Current development of positive psychology allowed scientists for identification of a number of various variables referring to well-being and optimal functioning. In popular work *The Handbook of Positive Psychology* (Snyder & Lopez, 2002) there are described nearly 40 concepts representing various psychological domains put together under one umbrella of the well-being concept. A plethora of investigated phenomena enables better understanding of different forms human optimal functioning may manifest in. However, there is an opposite approach concentrating on seeking basic/general factors explaining a common part of various constructs. This approach is justified both empirically (most of variables referring to well-being are usually significantly correlated) and theoretically (it focuses on the most general and overriding feature of optimal functioning). Recently, Caprara (2009) has proposed a concept of *positive orientation* referring to higher-order

factor explaining variance shared among three most frequently investigated ‘positive’ phenomena, namely self-esteem, satisfaction with life and optimism. *Life satisfaction* refers to one’s overall evaluation of ultimate gratifications drawn from various activities and relationships that occurred in one’s life and made it worth living (Diener, 1984). *Self-esteem* is characterized by one’s global self-regard and the extent to which she/he accepts herself/himself (Harter, 1999). *Optimism* pertains to one’s view of the future – namely forthcoming personal and social events – such that one expects an abundance of good and a scarcity of bad things (Carver & Scheier, 2002).

These three variables, often serving as alternative indicators of well-being, were treated in many studies separately, although results showed consequent and significant correlations between them (Caprara, 2010). Empirically proved relationship between self-esteem, satisfaction with life and optimism, as well as a theoretical resemblance to the opposite of cognitive triad of depression (Beck, 1967) allowed

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for introducing positive orientation as a general tendency to think and evaluate positively oneself, one's life and one's future. Such conceptualization implies that people with high level of positive orientation have a general inclination to positive thinking and responding to life experiences with a positive attitude (Caprara, 2009, 2010).

Review of research on positive orientation, which is often operationalized as a latent variable derived from Self-Esteem Scale (Rosenberg, 1965), Satisfaction with Life Scale (Diener, Emmons, Larson & Griffin, 1985) and Life Orientation Test – Revised (Scheier, Carver & Bridges, 1994), allows a formulation of a few general conclusions. First, positive orientation has a substantial amount of heritability (Caprara et al., 2009). Second, positive orientation was confirmed across several populations (Caprara, Alessandri, Trommsdorff et al., 2012). Third, the level of positive orientation is relatively stable in the course of life (Caprara, 2010). Fourth, positive orientation is a strong predictor of the lack of depressive symptoms, positive and negative affectivity, quality of friendship, and health as indicators of optimal functioning in one's private and professional life (Caprara, 2009, 2010). Moreover, results showed better prediction on several dependent variables by latent variable of positive orientation than by self-esteem, satisfaction with life and optimism treated as independent variables altogether (Alessandri, Caprara, & Tisak, 2012).

All these reasons justify trait-like status of positive orientation and allow to look for possible relationships between PO and the Five-Factor Model (McCrae & Costa, 1987). What are relationships between basic personality traits and positive orientation? To what extent do basic personality traits explain variance of positive orientation? Is positive orientation function of specific basic traits structure (providing high amount of variance explained, for example about 50%) or is it relatively independent variable only moderately connected to the traits (providing not more than one fourth of variance explained)?

Additional reason to investigate possible relationships between positive orientation and Five Factor Model is an obvious difference between basic traits which are recognized mainly by stable patterns of behavior and the positive orientation which belongs rather to inner reality of the person and is not easily observable. The only reliable source of knowledge about it, for example self-esteem or optimism, is the person herself/himself (Caprara, 2010).

In other words, the basic traits reflect patterns of behaviors, thoughts and affects whereas positive orientation reflects patterns of experiences. This means that behavior – the best indicator of trait – is not necessarily a good source of information about well-being or internal experience. Therefore, it is not surprising that traits have poor value in terms of predicting health or success (Pervin, 1996). On the contrary, positive orientation is a predisposition that correlates with such psychological variables as health or well-being (Caprara, 2010). A broad area of human functioning that refers to positive orientation (i.e., self-esteem, optimism and life satisfaction) cannot be sufficiently explained by traits.

According to the results of research on a large sample of Italian participants ($N = 3589$, 58% women) aged 17 to 75 years ($M = 39.01$), all dimensions of the Five-Factor Model correlated with positive orientation (Caprara, Alessandri, Eisenberg et al., 2012). The methods used in the study were: The Positivity Scale (a short measure of positive orientation) (Caprara, Alessandri, Eisenberg et al., 2012) and a short version of the Big Five Questionnaire (BFQ) (Caprara, Barbaranelli & Borgogni, 1993). Results showed positive correlations between positive orientation and: energy (equivalent of extraversion; .38), emotional stability (reverse of neuroticism; .30), agreeableness (.29), conscientiousness (.25) and openness (.19) (all $p < .01$) (Caprara, Alessandri, Eisenberg et al., 2012). Very similar results were obtained in a multicultural study with samples originating from Italy ($N = 689$, 56% women; mean age $M = 19.21$), Spain ($N = 302$, 64% women; mean age $M = 28.02$), and Japan ($N = 282$, 60% women; mean age $M = 19.54$). Personality traits and positive orientation were measured by Italian versions of the same assessment tools. Results confirmed consistency of correlations between positive orientation and the personality traits (energy: .37–.44, conscientiousness: .24–.28, friendliness: .14–.29, emotional stability: .27–.31, and openness: .17–.24; all $p < .01$) (Caprara, Alessandri, Eisenberg et al., 2012). Summing up, the results suggest that positive orientation is correlated with all of the basic personality traits.

Research Question and Hypotheses

Since the theory of positive orientation is relatively new, only a few studies on how it correlates with personality traits have been published. Moreover, the Polish population was not represented in any of the previous studies. The research question in this study was: what is the relationship between positive orientation and the Five-Factor Model of personality? This question refers both to the particular traits and to their structure. Thus, the aim of this study was twofold: (a) replication of the previous results gathered in different national groups, and (b) exploration of possible affinity between Five-Factor Model (as a whole) and the positive orientation.

According to the previous findings (Caprara, Alessandri, Eisenberg et al., 2012), we hypothesized that (H1) positive orientation positively correlates with all personality traits except neuroticism, and positive orientation negatively correlates with neuroticism. Simply put, we expected replication of previous findings in the Polish sample. In reference to the second goal of this study we expected (H2) moderate canonical correlation between positive orientation and the basic traits, explaining not more than 40% of common variance according to the differences between both sets of variables (namely traits and the three variables constituting positive orientation).

The Five-Factor Model assumes that traits are orthogonal, however a number of studies showed at least weak correlations among most of the traits. Moreover, according to the previous results, only neuroticism and extraversion strongly correlate with positive orientation,

while the remaining traits are correlated much more weakly. Although each trait might be, in some aspect, conceptually connected with PO, it is interesting to check if other traits, especially openness and agreeableness, are correlated with positive orientation when controlling for neuroticism and extraversion.

Method

Participants

The participants were Polish young adults ($N=200$) aged 19–31 years ($M=22.77$; $SD=2.39$). The average age of women ($N=100$) was $M=22.89$ ($SD=2.35$) and the average age of men ($N=100$) was $M=22.65$ ($SD=2.43$). Most participants were single (93.5%) what is typical in this age group, nowadays; more than half of the participants were students (56.5%) and the rest were postgraduates. They represented different academic majors and different regions of Poland.

Measures

Five questionnaires were used in the study. First, the Self-Esteem Scale (SES) by Rosenberg (1965) in Polish adaptation (Dzwonkowska, Lachowicz-Tabaczek & Łaguna, 2008) was used to measure self-esteem as a stable characteristic disclosing in self-report. It consists of 10 items and for each item, a respondent must choose one answer out of four: ('strongly agree,' 'agree,' 'disagree' and 'strongly disagree'). The measure has satisfactory psychometric parameters, i.e., internal consistency (Cronbach's α coefficient equals .83 for the Polish version and varies from .77 to .88 for the original version) and test-retest stability: .79-.88. The mean score for the Polish standardization sample was $M=29.49$ ($SD=4.28$).

The Satisfaction with Life Scale (SWLS) by Diener, Emmons, Larson & Griffin (1985) in Polish adaptation (Juczyński, 2001) was used to measure life satisfaction and was constructed by means of factor analysis. The scale consists of five items and respondents have to assess each of the items on a scale of 1–7. Factor validity (one factor) was confirmed for the Polish sample. It has satisfactory reliability (Cronbach's α is .81 for Polish version and .87 for original version); test-retest stability varies from .82 to .86.

The Life Orientation Test-Revised (LOT-R) by Scheier, Carver & Bridges (1994) in Polish adaptation (Juczyński, 2001) consists of 10 items (6 are diagnostic) and measures dispositional optimism, i.e., the extent to which people have positive expectations about their future. The measure has a 5-points response scale (1–5). LOT-R has good psychometrical parameters, i.e., reliability (Cronbach's $\alpha = .76$) and validity (confirmed one-factor structure).

The Positivity Scale (P-Scale) by Caprara et al. (2012) in Polish adaptation (Łaguna, Oleś & Filipiuk, 2011; Heikamp, Alessandri, Laguna, et al., 2014) consists of 8 items and has a 5-points response scale. It has satisfactory reliability, Cronbach's α from .77 to .84, and test-retest stability (.84) is very good. The P-Scale has a confirmed one-factor structure.

Finally, the NEO Five Factor Inventory (NEO-FFI) by Costa & McCrae (1992) in Polish adaptation (Zawadzki, Strelau, Szczepaniak & Śliwińska, 1998) is a 60-item inventory that provides a comprehensive measure of the traits constituting the Five-Factor Model. The NEO-FFI is characterized by good reliability (Cronbach's α : conscientiousness: .82, neuroticism: .80, extraversion: .77, openness: .68, agreeableness: .68) as well as validity (assessed on the basis of: relationship between inventory results and observers' ratings; or correlations with other domains of personality and temperament).

Procedure

Most participants were recruited using snowball sampling. Every participant gave her/his assent to take part in the research (being free to refuse participation). They were not compensated for participation, and time for completing the tests was not limited. There were 248 questionnaires distributed in total, 211 returned and 11 were rejected because they were incomplete; thus our final sample was $N=200$.

Data Analysis

Positive orientation was represented as a latent variable, namely factor score extracted by means of principal component factor analysis on the results of three relevant scales: SES, SWLS and LOT-R. Structural Equation Modeling (SEM) was used to confirm the model of positive orientation. Pearson product-moment correlation coefficients (Pearson's r) and canonical correlation analysis were used to verify hypotheses and to check mutual correspondence between the Five-Factor Model and positive orientation.

Results

Descriptive Statistics

Comparison of results obtained from women and men show that if a significant difference between mean scores exists, the effect size of sex is not considerable (see Table 1). For this reason, the total sample was used in further computations.

Model of Positive Orientation

The model of positive orientation is presented in Figure 1. Variables named "par 1" and "par 2" are parcels including 50% of items each. The selection of items for parcels was random in the case of SWLS, but for SES and LOT it was controlled, i.e., the first parcel included straight scored items and the second parcel included reverse scored items. The model of positive orientation, including self-esteem, life satisfaction and optimism, fits well to the data, confirming results obtained in previous research (e.g., Alessandri et al., 2012, Oleś et al., 2013). Moreover, positive orientation as the factor score highly correlates with the same variable measured by the Positivity Scale (see Table 2), which supports validity of both measures.

Table 1. Descriptive statistics

Variable	Total (N=200)				Women (N=100)		Men (N=100)		Sex Differences	
	M	SD	Min.	Max.	M	SD	M	SD	t	d
Self-esteem	30.30	4.54	17.00	40.00	29.74	4.88	30.85	4.12	-1.74	–
Life Satisfaction	20.91	5.72	6.00	35.00	20.65	5.84	21.16	5.62	-.63	–
Optimism	15.61	4.66	4.00	24.00	15.64	4.55	15.58	4.79	.09	–
PO _{PS}	29.75	4.97	14.00	40.00	29.74	4.84	29.76	5.11	-.03	–
PO _F	.00	1.00	-2.91	2.03	-.08	1.04	.08	.95	-1.19	–
Neuroticism	21.02	9.27	.00	46.00	23.30	9.37	18.73	8.63	3.59**	.49
Extraversion	28.34	7.01	9.00	44.00	28.78	6.54	27.89	7.45	.90	–
Openness	26.43	6.50	7.00	44.00	27.21	6.43	25.65	6.51	1.71	–
Agreeableness	28.26	5.90	1.00	41.00	28.70	6.30	27.82	5.48	1.05	–
Conscientiousness	30.55	6.93	6.00	46.00	30.58	6.87	30.51	7.02	.07	–

Note.

PO_{PS}: positive orientation as a score in Positivity Scale

PO_F: positive orientation as a factor score (self-esteem, life satisfaction and optimism)

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

t: Test t for equality of means ($df=198$)

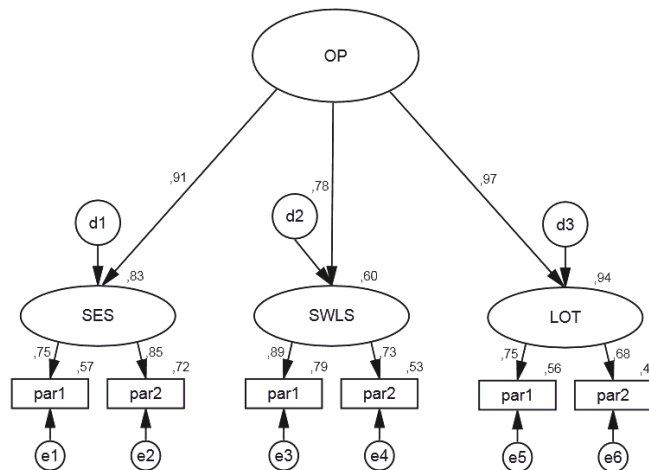
d: absolute value of Cohen's d; .2–.5 = small to medium effect size

Relationship between Positive Orientation and the Five-Factor Model

Correlations between positive orientation and personality traits were checked for two independent measures of positive orientation: a score on the Positivity Scale (PO_{PS}), and a factor score computed from self-esteem, life satisfaction and optimism (PO_F) (see Table 2).

There is a rather strong negative correlation between PO_F as well as PO_{PS} and neuroticism. Positive orientation and extraversion are moderately correlated and there is a low correlation between positive orientation and conscientiousness; a very low correlation between PO_F and openness was observed, while PO_{PS} do not correlate with agreeableness.

Figure 1. Structural Model of Positive Orientation including Self-esteem (SES), Life Satisfaction (SWLS) and Optimism (LOT)



Chi2=7,663 p<=,264 Chi2/df=1,277
CFI=.997 GFI=.987 AGFI=.956
TLI=.991 RMSEA=.037

Table 2. Correlations between variables

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1. Self-esteem	1									
2. Life Satisfaction	.56**	1								
3. Optimism	.65**	.55**	1							
4. PO _{PS}	.74**	.66**	.64**	1						
5. PO _F	.92**	.78**	.84**	.80***	1					
6. Neuroticism	-.74**	-.44**	-.55**	-.53**	-.70**	1				
7. Extraversion	.50**	.49**	.51**	.57**	.59**	-.46**	1			
8. Openness	.14*	.07	.14*	.12	.14*	-.02	.10	1		
9. Agreeableness	.00	-.02	.19**	.05	.05	-.05	.18**	-.15*	1	
10. Conscientiousness	.38**	.32**	.25**	.33**	.37**	-.31**	.35**	.02	.07	1

Note.

PO_{PS}: positive orientation as a score in Positivity Scale

PO_F: positive orientation as a factor score (self-esteem, life satisfaction and optimism)

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

To answer a general exploratory question about the mutual relationship between the Five-Factor Model and positive orientation, a canonical correlation analysis was conducted using the five personality traits as predictors and self-esteem, life satisfaction and optimism as criteria. The analysis provided three functions with squared canonical correlations of .624, .096 and .073 (see Table 3). Although all three functions were statistically significant (in each case $p < .002$), the second and the third explained only 9.6% and 7.3% of the remaining variance (unexplained by the first one). Therefore, only the first function, explaining 62.4% of the total shared variance between the two variable sets, was considered in further analyses.

As shown in Table 4, the first canonical variable representing positive orientation is loaded by self-esteem (to a very high degree: -.98), optimism (rather high: -.77) and life satisfaction (moderate: -.67), this emphasizes a little bit of a different aspect of positive orientation in comparison to the previous results introduced for the structural model (see Figure 1) (negative coefficients are due to specificity of canonical correlation). This canonical variable represents 67% of the variance shared by all three scales (SES, LOT-R, and SWLS). The opposite canonical variable created by specific pattern of personality traits, represents 33% of the variance shared by all five traits, and loaded mainly with neuroticism (.93), extraversion (-.70), and conscientiousness

(-.49). Both openness and agreeableness have low canonical loadings (-.19 and -.04 respectively).

Positive orientation and the specific trait structure have much in common; 62% of shared variance is substantial. The redundancy analysis shows that the latent variable, positive orientations, explains 21% of traits variability whereas the particular pattern of traits explains 42% of self-esteem, life satisfaction and optimism. To conclude, positive orientation corresponds to emotional stability, resistance to stress, energy, and interpersonal activity (low Neuroticism and high Extraversion, in principle). People high in positive orientation are also more prone to achieve their goals and adequately regulate their behavior (Conscientiousness). Agreeableness did not predict positive orientation.

Discussion

The aim of this research was twofold: (a) to replicate results (Caprara, Alessandri, Eisenberg et al., 2012) concerning correlations between traits and positive orientation in a Polish sample, and (b) to explore a possible affinity between positive orientation and the Five-Factor Model as a whole.

First, the current study confirmed the original structure of positive orientation. Both confirmatory factor analysis,

Table 3. Canonical correlations for each function separately

Canonical function	Canonical correlation	Canonical R^2	Wilks λ	p
1	.79	.624	.311	.001
2	.31	.096	.839	.001
3	.27	.073	.929	.002

Table 4. Canonical results

	Loadings	Cross-loadings	Percent of variance of the set variables explained by:	
			their own canonical variable	the opposite canonical variable
<i>Criterion set</i>			67%	42%
Self-esteem	-.98	-.78		
Life Satisfaction	-.67	-.53		
Optimism	-.77	-.61		
<i>Predictor set</i>			33%	21%
Neuroticism	.93	.74		
Extraversion	-.70	-.55		
Openness	-.19	-.19		
Conscientiousness	-.49	-.38		
Agreeableness	-.04	-.03		

as well as canonical correlation, supported the model with the general factor of positive orientation explaining a sizeable amount of variability of self-esteem, optimism and life-satisfaction. It further legitimates analysis using factorial index of positive orientation.

Second, our research only partially replicated results obtained by Caprara and colleagues (2012); as previously mentioned, the strongest correlations were between positive orientation, neuroticism and extraversion. Conscientiousness correlated positively and significantly, but the relationship was weak, as in the original research. However, a different pattern of relationships was observed in the case of openness and agreeableness. While the correlation between openness and factor scores of positive orientation were positive and weak (as expected), the same correlation using the total score of the Positivity Scale was insignificant. In the case of agreeableness, neither measure of positive orientation significantly correlated with it; this explicitly contradicts the results obtained in other countries.

The ambiguity of connections between openness and the two measures of positive orientation may reflect methodological issues. Openness and positive orientation, as previous research also showed, are rather weakly correlated with each other. To detect such subtle relationships, measures must have small measurement error. Factorial index of positive orientation, as a latent variable, is more reliable than the total score of the positivity scale, which is a very short scale. Therefore, the larger measurement error inherent in this scale might have obscured the results.

A more interesting question refers to different patterns of relationships between positive orientation and agreeableness observed in this and previous research (Caprara, Alessandri, Eisenberg et al., 2012). It seems improbable that the problem resides in the different methods used to

measure traits. The Big Five Questionnaire (BFQ) used by Caprara and the NEO Five Factor Inventory (NEO-FFI) are strongly correlated with each other. Moreover, in both methods, intercorrelations between agreeableness (friendliness in BFQ) and main predictor of positive orientation – emotional stability in BFQ – are weak (about .25–.26) but significant (Costa and McCrae, 1992; Caprara, Barbaranelli, Bermudez, Maslach & Ruch, 2000). However, different patterns of relationships between the variables might have a source in some unspecified cultural differences.

The results of canonical correlation showed significant correspondence between positive orientation and the basic traits. A common variance, contrary to expectation, exceeds 60% and shows a clear affinity between two sets of variables. Inclination for positive thinking called positive orientation is definitely anchored in personality structure described in terms of basic traits. Amount of variance of positive orientation explained by the basic traits is two times higher than amount of variance of the traits explained by the positive orientation (42% and 21% respectively).

The basic traits are represented by neuroticism (reverse), extraversion, conscientiousness and openness. Such a pattern of traits can be interpreted as a modified version of a general factor of personality (Rushton, & Irwing, 2008). A common base for positive evaluations of oneself, the future and life shows affinity to such organization of personality in which emotional stability, extraversion and (to some extent) conscientiousness are crucial. Costa and McCrae (1992, 2000) proposed that each of five traits could be paired with each other to form several personality styles referring to 10 different domains of psychological functioning. In this classification, low level of neuroticism together with high levels of extraversion and conscientiousness is typical for people that are unbeaten optimists and go-getters.

The findings from this study suggest that if we know the level of the person's personality traits we can have some idea about her/his level of positive orientation. Conversely, if we know the level of positive orientation of the person, we can pose some hypotheses about selected traits of her/his personality (this is important for reasons mentioned later on). However, a more crucial point of the discussion is a hypothetical status of positive orientation. Hereditary of positive orientation is a considerable argument for its trait-like status. As Caprara argued, positive orientation fulfills important biological functions, for example it underlies an individual's need to grow, to flourish, to successfully cope with life in spite of occurring adversities, failures, and losses, as well as to keep on caring about living in the face of aging and closeness of death (Caprara et al., 2009; Caprara, Alessandri, Trommsdorff et al., 2012). Positive orientation is not a trait but it probably represents the same level of personality – basic dispositions or processes (Larsen, & Buss, 2005; McAdams, & Pals, 2006; McCrae & Costa, 2010). As a general tendency to interpret a broad scope of experiences concerning the self, the world and the future (and maybe something else) in a positive (or negative) way seems very important element of multifaceted description of personality.

The possibility to measure positive orientation in addition to the traits is important for several reasons. In addition to basic traits it enriches description and explanation of these aspects of functioning, which refer more to the interpretation of inner experiences than observable behaviors. While searching for individual differences between people, psychologists tend to refer to personality traits and skills. However, traits are necessary but not sufficient predictors of many important areas of human life, for example it is hard to predict job performance on the basis of traits (Pervin, 1996). On the contrary, positive orientation is a good predictor of optimal functioning at work or/and at school. Moreover, positive orientation also predicts lack of depression and somatic health (Caprara, 2010; see also: Kardum & Hudek-Knezevic, 2012; Kinnunen et al., 2012; Lamers, Westerhof, Kovács & Bohlmeijer, 2012; Ha & Kim, 2013; Womble, Labbé & Cochran, 2013). Another argument refers to psychological practice: For psychotherapists it is important not only to know how their clients behave, but also how they experience themselves, and what they think about their life and future. However, a sizeable affinity (60% of common variance) between positive orientation and the Five-Factor Model indicates that personality traits reflect something more than just patterns of behaviors. Although in theoretical models traits represent mainly behaviors, in real life particular pattern of behaviors might be strictly related to particular kind of experiences. The data about the relationship between positive orientation and personality traits might enrich knowledge about these relevant issues and therefore benefit psychological practices aiming at inspiring people to lead full and creative lives.

There are some limitations of this study. First it is strictly correlational study based on self-reports. Second, the sample consisted only of young adults from one

country. However, the fact that they represented different kinds of academic education and came from different areas of the country increased the legitimacy of generalization of the findings. Another limitation is that making comparisons between findings from this study and findings from studies described by Caprara (2012) is not very accurate as different (but equivalent) measures of the Five-Factor Model were used (NEO-FFI and BFQ). Making such comparisons would be more methodologically correct if the measures of traits were the same.

A better understanding of the relationship between positive orientation and the Five-Factor Model requires further explorations. In addition to replication on a bigger and more diversified sample, the next step might be to investigate the relationship between positive orientation and the facets of the five basic traits (measured by NEO-PI-R). This may cast some light on what aspects of traits are related to positive orientation in a higher or lesser degree. It seems probable that during the times when positive psychology is in full bloom, this kind of research will be conducted in the near future.

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