Personality and well-being: Toward a comprehensive structural theory of the non-cognitive domain of personality

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Abstract

Background
The recent research of the higher-order factors of personality, including the general factor of personality (GFP), raised new questions and problems in the understanding of the relations between personality and well-being. The current investigations indicate a strong connection between the GFP and the general factor of well-being (GFWB). Therefore, a hypothesis could be formulated suggesting a comprehensive structural hierarchy that integrates the basic dimensions of the personality and well-being.

Aims of study
A multivariate study was designed in order to establish the structural relations of the basic dimensions of personality and well-being.

Methods
Different multivariate analyses were performed including factor analyses, cluster analyses and analyses based on the structural equation modelling (SEM).

Results and conclusions
The multivariate analyses of personality and well-being revealed a clear structural hierarchy of the shared dimensional space. A powerful general factor at the apex of the pyramidally shaped structural hierarchy loaded all most important dimensions of personality and well-being. This factor subsumes both GFP and GFWB and probably represents a very general personality dimension underlying the entire non-cognitive part of the personality. Very probably, this dimension is cross-culturally stable and has also deep biological roots manifested in the evolutionary, genetic, and neurophysiologic aspects.

Introduction

Personality research and research of well-being have a long history in psychology. According to the vast empirical evidence, both domains are significantly interrelated. Therefore, we may expect that the dimensions of both domains are substantially related including the most general dimensions like GFP and GFWB. The present study was thus designed to elucidate the common structure of major dimensions of both domains.

It is quite possible that abovementioned general factors of both domains appear unified in the common space of personality and well-being, as indicated in previous studies (Musek, 2007, 2008). In this case, a very general overall dimension could be expected on the top of common structural hierarchy.

Consequently, a new structural paradigm in personality theory could be proposed with the overall personality general factor (OPg) at the apex of the structural hierarchy of personality and well-being dimensions. It seems probable that OPg reflects a large general factor underlying all important non-cognitive domains of personality, including personality in the narrower sense (Big Five for example), well-being, emotionality, motivation, coping etc.
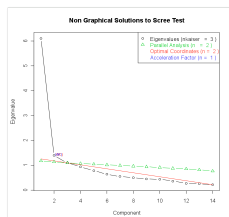
Fig. 1. Different graphical and non-graphical solutions to the Scree Test (including Kaiser criterion, Parallel Analysis, Optimal Coordinates and Acceleration Factor) indicate the plausibility of one-factor, two-factor and three-factor solution. First factor accounts for 43,5 % of variance.

Methods

- The research was performed as a multivariate study focused on the dimensional space of well-being and personality.
- 14 variables were included into the research model: Big Five (E, A, C, N. O), positive affect (POSAF) negative affect (NEGAF), satisfaction with life (SATLIFE), relatedness (PWBREL), autonomy (PWBAUT), mastery (PWBMAST), growth (PWBGROW), purpose (PWBPURP), self-acceptance (PWBSELF).
- The sample included 918 participants, 667 females and 251 males. The mean age of participants was 34.13 (SD=10.89).
- The participants fulfilled the Slovenian versions of the Positive Affect and Negative Affect Schedule (PANAS), Satisfaction with Life Scale (SWLS), Psychological Well-being Scale (PWBS) and Big Five Inventory (BFI).
- The collected data were analyzed using the statistical program PASW Statistics 18.0 (release 18.0.0) and R program language (R Development Core Team (2009).

Loadings:	PC1			Loadings:	PC1	PC2	PC3
SATLIFE	0.67			SATLIFE	0.99	-0.25	0.07
POSAF	0.70			POSAF	0.30	0.57	0.03
NEGAF	-0.65			NEGAF	-0.16	0.12	0.76
PWBREL	0.69			PWBREL	0.50	0.07	-0.22
PWBAUT	0.59			PWBAUT	0.17	0.46	-0.11
PWBMAST	0.84			PWBMAST	0.83	-0.04	-0.13
PWBGROW	0.55			PWBGROW	0.25	0.70	0.29
PWBPURP	0.80			PWBPURP	0.82	0.09	0.04
PWBSELF	0.83			PWBSELF	0.86	0.06	0.01
E	0.67			E	-0.04	0.58	-0.33
A	0.48			A	-0.21	0.05	-0.83
C	0.46			C	0.28	-0.04	-0.28
N	-0.69			N	-0.04	0.04	0.87
O	0.45			O	-0.33	1.00	0.01

	PC1				PC1	PC2	PC3
SS loadings	6.092			SS loadings	3.77	2.46	2.38
Proportion Var	0.435			Proportion Var	0.27	0.18	0.17
				Cumulative Var	0.27	0.45	0.62

Table 1. Loadings of higher-order factors on Big Five and well-being dimensions. Loadings of the OPg are in the left subtable and loadings of three primary factors are in the right subtable.
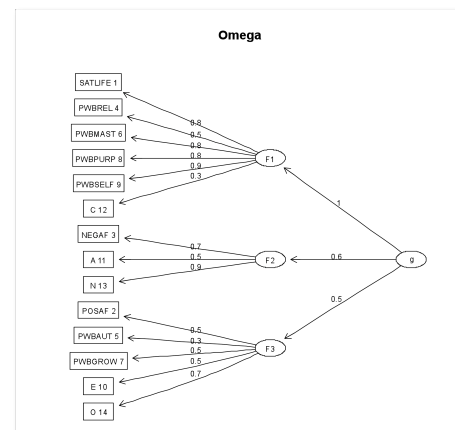
Fig. 2. Structural hierarchy of personality and well-being as specified by the Schmid Leiman transformation. The model subsumes the overall general factor or OPg at the most general level (g), broad dimensions of satisfaction (F1), stability (F2) and plasticity (F3) on the next level of generality and 14 source variables on the most specific level.

Results and discussion

Exploratory and confirmatory factor analyses confirmed the existence of general factor of personality or GFP (The Big One; Musek, 2007) and Big Two (Digman, 1997) in the personality domain and a strong general factor of well-being (GFWB) and two broad well-being primaries in the well-being domain (Musek, 2008). The correlations of the personality and well-being variables were highly factorizable (KMO = 0.904; Cronbach Alpha = 0.89; McDonald's hierarchical Omega = 0.77) and the factor extraction criteria suggested one-, two- and five-factor solutions (Figure 1). The overall multivariate analyses of both domains yielded a clear hierarchical structure with a well-established general factor (overall general factor of personality, OPg) at the apex and three broad factors on the next level of the hierarchy (interpreted as dimensions of satisfaction, plasticity and stability) (Figure 2). The loadings of these factors on the personality and well-being variables are displayed in the Table 1. The structural model of the variables in both domains was further confirmed by SEM analyses and Schmid Leiman transformation (Figure 3).

The OPg was interpreted as a very large basic disposition underlying both personality and well-being domain. Moreover, it very probably integrates all major non-cognitive psychological dimensions. It is substantially correlated with almost all important non-cognitive psychological variables including personality, well-being, satisfaction with life, self-esteem, social desirability, emotionality, motivation, coping etc. It also may have deep biological roots, evolutionary, genetic, and neurophysiologic. As an evolutionary based, highly heritable general disposition it represents the fundamental measure of personal adaptation with a predictive power that exceeds practically all others possible non-cognitive predictors in personality domain.
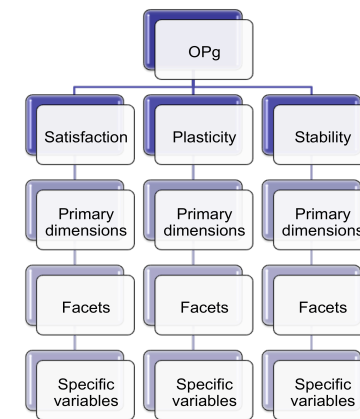
Fig. 3. Multivariate analyses including exploratory and confirmatory factor analyses confirmed the hypothesized pyramidal structure of personality. The proposed new model comprises at least five levels of structural hierarchy: GFP at the top level, two broad factors of personality (stability and plasticity) on the next level, Big Five dimensions and their facets on the next two intermediate levels and the specific personal characteristics at the bottom level.

Conclusions

◆ The results confirmed the existence of strong highest-order factors of personality (GFP and the Big Two) and well-being (GFWB and two BFWB).

◆ The dimensions of both domains (personality and well-being) share a vast amount of the variance in the model.

◆ The variables in the model show a stable hierarchical structural pattern with the OPg at the apex.

◆ According to the results, a new pyramidal model of the non-cognitive domains of the personality in the broader sense can be proposed.

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