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OPENNESS TO CHANGE OF UKRAINIAN AND ROMANIAN STUDENTS

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Abstract: *This study makes use of Schwartz's Portrait Values Questionnaire (PVQ; Schwartz, 1994; Schwartz et al., 2001) to examine the psychometric properties of Openness to Change (OC) factor in large student sample from Romania and Ukraine. Additional purpose is to examine value differences across cultures by applying a one-factor model focused on OC as salient process of personality development. Participants were 383 students aged from 18 to 45 years from Romania (n = 183) and Ukraine (n = 200). Results support for the generalizability of the one-factor model on openness to change in Ukraine and Romania. Implications for the study of personality value across these two national contexts are discussed.*

Key words: *values, openness to change, Ukrainian and Romanian groups, PVQ.*

1. Introduction

To live in a modern and rapidly changing world, it is important to have an internal core values that ensure coordinated actions and planned behaviours. This co-ordination involves values as supervising principles of human life that can operate people's activity. Values are the point of reference for all actions embedded in daily experience and behavior [5, 10]. Values have been traditionally studied by employing the Portrait Values Questionnaire (PVQ) [11- 12] which is a commonly used self-report questionnaire based on Schwartz Values Theory [14]. The PVQ is often used to compare individuals and groups and is applied here to explore values of Ukrainian and Romanian students' space of socialization. However, in order to be valid across different cultural groups, the questionnaire must measure identical constructs with the same theoretical structure across groups. Stated otherwise, the factor structure (i.e., factor loadings, and intercepts/thresholds) should be identical over different groups, which is called measurement invariance. When measurement invariance is not demonstrated, groups or subjects respond differently to the items [17]. Consequently, factor means cannot reasonably be compared across groups. Yet, it is unclear whether the PVQ and Openness to Change factor (OC), which is the core interest in this study, shows measurement invariance across different countries. Openness to change emphasizes independent action, thought, feeling and readiness for new experience. Openness to change has also been defined as support for change and positive affect that people experience

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about the consequences of change [9]. In order to offer a thorough evaluation of the OC, the first aim of the current study was to test the OC factor structure in a sample of Ukrainian and Romanian students and to examine measurement invariance. Having determined measurement invariance, future studies will be able to compare the occurrence, determinants, and consequences of OC values between these ethnic groups and countries.

2. The Present Study

This study was designed to examine the psychometric properties of the Openness to Change (OC) factor in a large student sample from Romania and Ukraine. Additional purpose is to examine values' becoming across cultures by applying a one-factor model focused on OC as salient process of personality development and test whether groups from these two countries (Ukraine and Romania) with a similar post-communist history differ in their levels of openness to change and if such value domains may vary across groups/national contexts.

We focus on Ukraine and Romania because both countries have undergone a difficult period of economic and political transition following the fall of the communism in the late 1980s. Therefore, such important life transitions may also have influenced the development and salience of values and particularly with regards to openness to change. Hence, we aimed to investigate these relevant value processes for students from two very interesting contexts for the study of values. In so doing, we address two primary research questions:

(1) Is there evidence for a one-factor values model of OC in the personality development of Ukrainian and Romanian groups? In line with prior work [12] we test a one-factor model on OC across groups/countries. Hence, according to the hypothesized model and previous research, we expect to find a one- factor solution of OC in both groups.

(2) Do groups from two countries (Ukraine and Romania) differ from each other with respect to their values and OC processes? Due to the exploratory nature of the study, we do not advance specific predictions in that regard.

3. Method

Participants. The sample consisted of 200 Ukrainian (55% female) and 183 Romanian university students (61.7% female). The age ranged from 18 to 45 years in the Ukrainian sample (M = 20.50, SD = 1.60) and from 18 to 45 years in the Romanian sample (M = 20.82, SD = 2.15). Both samples consisted of students from bachelor and master degree courses. The socio-economic status of the Ukrainian and Romanian samples ranged from low, middle and high status groups. Study programs of Ukrainian sample were Management (58%) and Finance (42%). Study programs of Romanian sample were Engineering (21.3%) and Social Sciences (78.7%).

Instruments. Openness to Change. We employed the PVQ-40 items [12] to assess the one-factor OC model in both countries. We make used of the 21-item PVQ version, as applied in the European Social Survey in Ukraine and Romania. The items which were not included in the standardized 21-item version of PVQ were translated in Ukrainian and Romanian applying a back translation procedure. The measure consists of items rated on a response scale ranging from 1 (*not like me at all*) to 6 (*very much like me*). The PVQ is the most widely used and reliable measure grounded upon the Schwartz's human values theory. The values model of Shalom Schwartz and his measure own

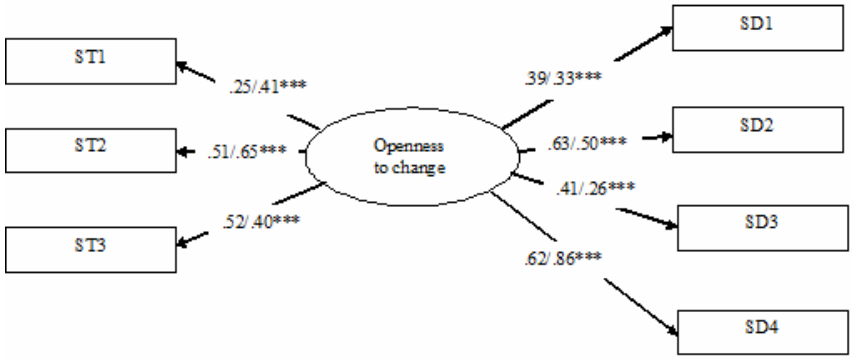
their popularity for two main reasons: they are based on one of the most comprehensive models and the PVQ has been extensively validated cross-culturally. Besides tremendous amount of research on PVQ validity across different cultures and nations, the European Social Survey (ESS) also considers the Schwartz's measure as an important constituent in conducting a systematic study of values, attitudes, and behaviors within Europe [8]. Additionally, in his seminal work on validation of the PVQ, the author points out that this instrument has been developed to be more concrete and less cognitively complex than the traditionally employed a single method of measurement, namely the Schwartz Value Survey (SVS), hence usable with populations for which the SVS was not suitable. According to the author, PVQ differs substantially from the SVS or related measures in its format and tasks by providing an independent test of the theory of value content and structure [15]. Further support for the validity of PVQ is provided by strong evidence on its discriminant validity using multitrait–single method correlations and high internal and test-retest reliability indicated by Crochbach's alpha coefficient [15]. Additional studies using confirmatory factor analysis (CFA) on data of the PVQ have supported the full Schwartz's model of human values across different cultures and samples [13-14]. Therefore, we aimed at replicating the validity of PVQ in our student samples. For the purposes of the present study we employed self-direction and stimulation items only. Self-direction was measured with four items like "She/he likes to do things in her own original way". Stimulation comprised three items such as "She/he always looks for new things to try". The questionnaire was administered in two versions, one for female and the second for male students. The versions were identical except for the words that indicated the gender of the respondents. Reliability of the subscales was found to be adequate for our samples. The internal reliabilities of Cronbach's alpha (α) were .70 for both Romanian and Ukrainian samples.

Statistical Analyses. In order to compare the results across countries, it is important to ensure that the underlying structure is equal across countries. To this aim, an established procedure was used [6, 17], testing for equality of factor loadings across groups. The first step is to specify the model (adequate structure) of the instrument for each country separately using confirmative factor analyses (configural invariance). The second step is to check if the best fitting factor model is adequate and equal across groups. Single and multiple group confirmatory factor analysis were analyzed using the software AMOS [1]. A robust weighted least squares estimator (WLSMV) was used in combination with full information maximum likelihood estimation to deal with missing data [3, 7]. To assess model fit, we used the comparative fit index (CFI) and the root mean square error of approximation (RMSEA). Cut-off values for fit were considered adequate if CFI and values are > 0.90 and RMSEA < 0.08.

4. Results

The results of path models for both samples are shown in Table 1. Two separate models were tested in the Romanian and Ukrainian groups, respectively. As can be seen from Table 1, the models showed a very good fit.

The CFA model estimated via SEM is shown in Figure 1 and was analyzed for the Romanian data set $\chi^2(14, N = 382) = 26.03$, $p = .026$, CFI = .939, RMSEA = .069) and for the Ukraine data set $\chi^2(13, N = 382) = 25.91$, $p = .017$, CFI = .929, RMSEA = .071) separately.



Test of SEM
Model of the Openness to Change Factor
Fig. 1. *Path Model for Openness to Change of Ukrainian and Romanian Students*

Note. First parameter on the arrow is the coefficient for the Ukrainian sample; the second coefficient refers to the Romanian sample. SD = Self-Direction items; ST = Stimulation items. All parameters are significant at $p < .001$

The stimulation item loadings within both groups were all statistically significant associations of self-direction and (Figure 1). Additionally, we applied a MANCOVA with group (2 levels) as independent variable, Openness to change (self-direction and stimulation) as dependent variables and gender and age as covariates. The analyses revealed a significant group effect for self-direction and stimulation. Specifically, Ukrainians reported higher self-direction (M = 4.62, SD = .66) and stimulation (M = 3.99, SD = .88) compared to Romanians self-direction (M = 1.69, SD = .47) and stimulation (M = 2.23, SD = .82).

Table 1

	χ^2	df	p	CFI	RMSEA
Romanian sample	26.03	14	.026	.939	.069
Ukrainian sample	25.91	13	.017	.929	.071

5. Discussion and Conclusions

The main objective in this study was to examine values of openness to change of students from two former communist countries, namely Ukraine and Romania.

Specifically, we aimed at examining the psychometric properties of Openness to Change (OC) factor in large student sample from the two countries. Additionally, we examined values differences across cultures by applying a one-factor OC model.

The results showed a consistent relation between factor loadings for OC one-factor model in Ukrainian and Romanian groups. We found support for path models for both samples testing two separate models in the Romanian and Ukrainian groups, respectively. The results of the models fit statistics were largely satisfactory. The CFA model also showed that the item loadings of self-direction and stimulation within both groups were all statistically significant. This set of findings provides additional evidence to previous studies on values using PVQ by replicating these in a sample of Ukrainian and Romanian

groups. We can conclude that OC factor can be reliably measured in Ukrainian and Romanian samples.

We also found group differences, in that OC factor domains differed significantly in Ukraine and Romania. Ukrainian participants, showed higher self-direction and stimulation. We reasoned that Ukrainian rather than Romanian students may be subjected to a context that is more favorable to issues related to their openness to change options. Ukraine became an independent state after the end of the communism and the dissolution of the former USSR. Consequently, in the last decades there has been a flourishing of independent political activities (e.g., The Orange Revolution) and openness toward the European Union [4]. It may well be that these recent processes had affected the Ukrainians to a higher degree than their Romanian counterparts. Arguably, the context of dynamic change of the Ukrainian group in this study may explain group differences in values related to openness to change. Therefore, students in Ukraine may have more turbulent environment that stimulates their openness to change options to a greater extent than in Romania. It may also be that in Ukraine, there is a longer history of independence struggles and political tensions compared to Romania. Therefore, Ukrainian students may be more supportive and engaging in openness to change as a reaction to their national context circumstances.

This study has some limitations that need to be acknowledged in order to stimulate further research. First, our findings are limited to Ukrainian and Romanian contexts and further research is needed to be able to generalize our results to other ethnic groups and national contexts. Future studies may examine the OC factor in other countries to see how self-direction and stimulation are perceived among students in other countries. Second, future studies may include large community samples rather than student samples only. Third, we need to add additional measures to the study of personality values and openness to change in particular. For example, longitudinal data show that openness to change is strongly related to job satisfaction, anxiety and depression [2]. Future studies are needed to address the role of individual differences and context-specific predictors of personality values and openness to change across national contexts. Lastly, we are aware of the relatively small samples that may affect the external validity of our results in relationship to the target population in both countries. However, while we used a convenience student samples that are most widely employed in cross-cultural psychology research, we paid careful attention to factors that may affect the representativeness of our groups (e.g., issues related to sample design and coverage of the general student population in both settings). Also, the ratio of number of participants and items was satisfactorily for CFA and measurement invariance techniques. Although our results from this study can be generalized with confidence to the population of interest in both cultures, future studies, employing large community samples may improve the confidence in our findings.

Despite these limitations, we can conclude that this study provides support for the generalizability of the one-factor model on openness to change in Ukrainian and Romanian samples. We also provide evidence that strong self-direction and stimulation as core aspects of openness to change are more salient for Ukrainian compared to Romanian groups. These results portray important insights with implications for openness to change and the potential effects of the consequences of change across two national contexts in Europe.

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