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A Russian adaptation of the Multidimensional Inventory for Religious/Spiritual Well-Being: Psychometric properties for young adults and associations with personality and psychiatric symptoms*

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Running head:

Spirituality and Mental Health in Russian young adults

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Summary

It is intended in this study to present initial reliability and validity data for the Russian adaptation of the Multidimensional Inventory of Religious/Spiritual Well-being (MI-RSWB-R), as being related to personality factors and psychopathology. Therefor the first version of the MI-RSWB-R was applied to a sample of 192 (147 females) non-clinical subjects, together with the NEO Five Factor Inventory and the Symptom-Check-List (SCL-90-R). The original six-factor structure of the scale could be replicated for the MI-RSWB-R, which also provides satisfying psychometric properties. In accordance with previous research the RSWB total score was linked to more favorable personality traits such as Extraversion ($r=.45$), Openness to Experience ($r=.39$), and Agreeableness ($r=.38$), which was paralleled by substantial negative correlations with increased psychopathology. Our findings support the reliability and structural validity of the MI-RSWB-R as a standardized instrument for addressing the spiritual dimension in Russian populations. Further research in clinical surroundings is now recommended.

Keywords: Five factors model, mental health, psychopathology, spiritual well-being, test adaptation

Introduction

Since the 1990s there has been a resurgence of scientific interest for research involving the substantial relation of religiousness and spirituality to various facets of personality and mental health (Miller & Thoresen, 2003). Thus, a mostly health promoting function of the spiritual dimension has been emphasized, although some authors criticized these findings as over interpreted or even ideologically driven (Sloan, Bagiella, & Powell, 1999). Furthermore there is still no consensus for a clear definition of religiousness and spirituality. There is, at least in the literature, a consensus to distinguish religiosity and spirituality from each other while acknowledging their relation; where religiosity is meant to be associated more with religious traditions or institutions, spirituality can be understood more as a free-floating, informal kind of belief system (Pargament, 1999; Zinnbauer et al., 1997). However, both have it in common to refer to a (spiritual) realm of transcendence, which conceptually acts as an enhancement of the immanent area (or bio-psycho-social realm) of perception (Engel, 1977; Sulmasy, 2002). Accordingly some vague definitions such as "... feelings, thoughts, experiences and behaviors that arise from the search for the sacred" (p. 51) are widely accepted (Hill et al., 2000).

Furthermore, suggestions have been made for the enhancement of the classic Five Factor Model (FFM) of personality (Extraversion, Neuroticism, Agreeableness, Openness to experience and Conscientiousness) by means of a sixth major factor "Spirituality" (Piedmont, 1999). Correspondingly, Agreeableness, Conscientiousness, followed by Extraversion have been constantly observed to be associated with at least some aspects of religiousness and spirituality (Saroglou, 2002, 2010; Unterrainer, Ladenhauf, Moazedi, Wallner-Liebmann, & Fink, 2010). For instance experiences that can be best described as mystical, peak or transcendental are mostly related to personality factors such as Extraversion and Openness

(Unterrainer, Lewis, & Fink, 2014). Accordingly, aspects of spirituality turned out to be negatively correlated with personality facets such as Unhappiness or Guilt, although there was no correlation with the main factor Neuroticism (Francis, 1993; Francis & Jackson, 2003). Hence, based on a meta-analytic review, Saroglou (2002) reported the Openness personality factor as to be in line with a more open or mature religiousness and spirituality as well as negatively related with religious fundamentalism.

Dimensions of religiosity and spirituality have also been related to various indicators of mental health and subjective well-being. One good example might be the approach of Spiritual Well-Being (SWB), which was coined by Ellison and Paloutzian (Ellison & Smith, 1991). The original SWB scale is two-dimensional and consists of two subscales: the Religious Well-Being (RWB) subscale and the Existential Well-being (EWB) subscale. SWB was demonstrated to be correlated positively with various indicators of mental health in clinical as well as non-clinical samples (Ledbetter, Smith, Vosler-Hunter, & Fischer, 1991). Based on this initial concept, and also by following the notion that spiritual well-being can be addressed as a multifactorial construct more adequately, the Multidimensional Inventory for Religious/Spiritual Well-Being (MI-RSWB) was developed by an interdisciplinary research group located at the Medical University of Graz, Austria (Unterrainer et al., 2010). By means of this instrument six different dimensions of religious/spiritual well-being (RSWB) can be assessed: Hope Immanent, Forgiveness, Experiences of Sense and Meaning for the measurement of the immanent (or existential) well-being and Hope Transcendent, General Religiosity, and Connectedness for the transcendent (or religious/spiritual) dimension of subjective well-being. Accordingly, RSWB was defined by Unterrainer, Ladenhauf, Wallner-Liebmann, and Fink (2011) as “the ability to experience and integrate meaning and purpose in existence through the connectedness with self, others or a power greater than oneself.” (p. 117). In line with previous research RSWB dimensions were observed to be significantly

interconnected with more favorable personality factors as well as with varying indicators of psychological well-being and more adequate stress-coping (Unterrainer et al., 2010; Unterrainer et al., 2014). However, more recently it was observed, that General Religiosity, when paired with a disrupted personality structure, to be the strongest predictor of Religious Fundamentalism (Unterrainer et al., 2016). Meanwhile the original Austrian-German version of the scale has been successfully adapted into several different languages such as Bosnian (Malinovic, Fink, Lewis, & Unterrainer, 2016), English (Unterrainer, Nelson, Collicutt, & Fink, 2012), Italian (Stefa-Missagli, Huber, Fink, Sarlo, & Unterrainer, 2014) and Mexican-Spanish (Berger, Fink, Perez, Lewis, & Unterrainer, 2015). Moreover several additional studies in clinical surroundings were conducted by investigating various groups of general medical as well as psychiatric patients (Unterrainer et al., 2014).

Based on these previous results, we predict that the Russian version of the MI-RSWB (MI-RSWB-R) questionnaire will also reveal appealing characteristics, corresponding with the previous adaptations of the scale. Furthermore for initial validation purposes, we assume a substantial positive relationship between the RSWB dimensions and more favorable personality factors and decreased symptoms of psychopathology in a sample of non-clinical Russian young adults.

Methods

Participants and Procedure

In total 192 (147 females [76.6%] and 45 [23.4%] males) Russian undergraduate students were investigated. There was an age range of 18 to 30. The mean age of the sample was 20.7 years ($SD=2.2$). All of the participants stated Russian as their first language. There were no further inclusion or exclusion criteria for this sample. The students were all enrolled at the Universities of Moscow and Lipetsk and were listed as psychology and/or philology

students. All of the participants were psychometrically assessed in different sized groups, ranging from 5 to 60 participants. All testing was undertaken over a period of 60 days. The testing sessions lasted approximately between 45-60 minutes. There was always a research supervisor present during the surveys in order to thoroughly explain and answer any questions. The whole study protocol was approved by the Ethics board of the University of Moscow.

Psychometric Instruments

The *Multidimensional Inventory for Religious/Spiritual Well-Being* - Russian version (MI-RSWB-R) consists of six distinct dimensions, with eight items per dimension, for a total of 48 items. There is a six point Likert scale ranging from 1 - "totally disagree" to "6" - totally agree. The six dimensions can be further explained by means of the marker items as follows: Hope Immanent (HI): "I view the future with optimism."; Forgiveness (FO): "I have forgiven those who have hurt me."; Experience of Sense and Meaning (SM): "I have experienced true friendship."; "Hope Transcendent" (HT): "All hope ends with death.*" (coded inversely); General Religiousness (GR): "My faith gives me a feeling of security." and "Connectedness" (CO): "There are people with whom I feel a supernatural connection." (Unterrainer et al., 2010). As a first step of the adaptation process the items of the English version of the MI-RSWB (Unterrainer et al., 2012) were translated into the Russian language by a native speaking Russian psychologist (V.A.). They were then back-translated into English [22] by two other translators independently. All previous adaptations of the scale have shown highly satisfying internal consistencies with a Cronbach α of at least .88 for the total scale and at least .66 for all the sub-scales (Unterrainer et al., 2014). Please contact the corresponding author for details about the full list of Russian items (including a short manual in Russian language).

The *NEO Five Factor Inventory (NEO-FFI)* (Martin, Costa Jr, Oryol, Rukavishnikov, & Senin, 2002) in Russian was used to measure the “Big Five” personality traits; “Neuroticism” (N), “Extraversion” (E), “Agreeableness” (A), “Conscientiousness” (C) and “Openness” (O). The scale is comprised of 50 items. There is a five point Likert scale ranging from 0 - “not like me at all” to 4 - “absolutely like me”. The internal consistency of the NEO-FFI was always observed to be satisfying with a Cronbach α of at least .60 for all the subscales (McCrae et al., 2004).

The assessment of psychiatric symptoms was accomplished via a Russian version of the *Symptom Check List (SCL-90-R)* (Derogatis, 1996). The SCL-90-R is a multidimensional symptom self-report inventory composed of 90 items, each rated on a 5-point scale of distress from 0 - “not at all” to 4 - “extremely”. The items are scored into nine primary symptom dimensions: Somatization, Obsessive-Compulsive Thoughts, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation and Psychoticism. Moreover, three global indexes of pathology can be calculated. For this study only the total score Global Severity Index (GSI) of psychiatric symptom burden was calculated. There is a satisfying internal consistency with a Cronbach α of at least .90 for the total score and at least .60 for all the subscales (Derogatis, 1996).

Statistical analysis

As a first step, Factor Analysis (Principal Component Analysis [PCA] with VARIMAX rotation limited to six factors) and reliability analysis are conducted. As a second step, for initial validation purposes, the MI-RSWB-R dimensions are related to established parameters of personality and psychopathology by means of Pearson correlation statistics. In these cases, where normal distribution cannot be accepted, Spearman's rank correlation is

additionally calculated. In order to avoid α inflation due to multiple comparisons the α -level is set at .01.

Results

Descriptive statistics and scale properties are presented in Table 1 for all MI-RSWB-R sub-dimensions and the total score. All of the MI-RSWB-R dimensions including the total RSWB score were found to be normally distributed. The scores had small, mostly negative, deviations from normality as revealed by their skewness z-values, indicating that most of the participants tended to answer positively to the items. The kurtosis indices were within the acceptable range in this sample, although they seemed slightly prone to a more platykurtic distribution. The distribution flatness resulted from the lesser concentration of the data around its mean, accounting for the larger level of variance within the sample. For a rather large sample size of $N=192$, the small deviations can be tolerated and will not have relevant effects on further statistical evaluation of this sample. Satisfying internal consistencies (Cronbach's α) were found for all MI-RSWB-R sub-dimensions and the total score, which parallels the findings from previous research (Unterrainer et al., 2014).

-- Insert Table 1 about here --

Furthermore a Principal Component Analysis (PCA) with VARIMAX rotation was conducted. Due to the theoretical assumptions the number of factors to be extracted was limited to six. This six-factor solution accounted for 53.73% of the total variance. In line with previous research we observed General Religiosity as the strongest factor (eigenvalue: 10.70; 22.29% explained variance), followed by Connectedness (eigenvalue: 5.21; 10.86% explained variance), Experiences of Sense and Meaning (eigenvalue: 3.66; 7.64% explained variance), Forgiveness (eigenvalue: 2.46; 5.07% explained variance), Hope Immanent (eigenvalue: 2.04;

4.26% explained variance) and Hope Transcendent (eigenvalue: 1.74; 3.6% explained variance). In comparison to a sample of British college students ($N=400$; $M=196.60$, $SD=33.68$) (Unterrainer et al., 2012) we found that the total amount of RSWB was substantially lower ($t=3.4$, $p<.001$) in the Russian student sample.

Furthermore, as revealed in Table 2, we investigated the RSWB dimensions as being related with the Big Five personality factors (FFM), and different dimensions of psychopathology (SCL-90-R). To this end, Pearson's correlations statistics was conducted. In these cases, where normal distribution was not given, Spearman's rank correlation coefficient was additionally calculated. However, both parametric/non-parametric procedures yielded highly similar results in each case. The MI-RSWB-R total score was found to correlate significantly with Extraversion ($r=.45$, $p<.001$), Openness ($r=.39$, $p<.001$), and Agreeableness ($r=.38$, $p<.001$). In addition, Extraversion was found to be positively correlated with all of the RSWB sub-scales (at least $p<.01$), except Hope Transcendent. Neuroticism turned out to be highly negatively linked to Hope Immanent ($r=-.40$, $p<.001$). Openness was found to be highly significantly correlated with Connectedness ($r=.44$, $p<.001$) and Experiences of Sense and Meaning ($r=.44$, $p<.001$), while Conscientiousness showed only one positive correlation with Hope Immanent ($r=.20$, $p<.01$). Lastly we observed that Agreeableness was relevantly related with General Religiosity ($r=.24$, $p<.01$).

-- Insert Table 2 about here --

Moreover, as shown in Table 2, we observed several substantial correlations between the RSWB dimensions and psychiatric symptoms. While we found only one significant correlation for RSWB total score with Paranoid Ideation ($r=-.23$, $p<.001$), we observed the RSWB sub-dimensions of Hope Immanent, Hope Transcendent as well as Connectedness as being strongly negatively correlated with various parameters of psychopathology such as for instance Hostility, Interpersonal Sensitivity, Paranoid Ideation and Phobic Anxiety.

Furthermore Hope Transcendent was the only parameter to be negatively associated with the global severity of psychiatric symptoms ($r = -.27, p < .001$). Lastly, there was a negative correlation between Hostility and Experiences of Sense and Meaning ($r = -.20, p < .01$).

Discussion

In this study it was intended to validate a Russian adaption of the MI-RSWB in order to advance scale development and additionally to propose a first standardized measure for the assessment of spirituality in the Russian language. The proposed six-dimensional structure of the RSWB scale as well as its psychometric properties, were fully confirmed in this sample of Russian young adults (Unterrainer et al., 2014). What's more, the MI-RSWB-R was related with the Big Five personality factors. In line with former research more favorable personality traits such as Extraversion, Openness and Agreeableness were found to be related with a higher amount of RSWB. As indicated by previous studies there was no connection with Neuroticism. In contrast to previous work we did not observe any (positive) correlation with Connectedness, which might be considered in future research (Unterrainer et al., 2010). In keeping with these results we found some substantial correlations between MRSB-R dimensions and various symptoms of psychopathology (SCL-90-R). Thus, we observed that Hope Immanent (or hope for a better future), Hope Transcendent (for a better life after death) as well as Forgiveness were especially strong negative correlates of psychiatric symptoms (Unterrainer, Schoeggl, Fink, Neuper, & Kapfhammer, 2012). In accordance to these findings several clinical intervention programs to promote Forgiveness (Worthington Jr, Witvliet, Pietrini, & Miller, 2007) and Hope (Cheavens, Feldman, Gum, Michael, & Snyder, 2006) have already been developed. However, our results do not confirm the assumption of a relevant connection between religiosity and mental health, which is in line with previous

research (Unterrainer et al., 2014). Therefore institutionalized religiosity might also have a minor impact on subjective well-being, at least in this current sample of Russian young people.

As hypothesized, the Russian version of the MI-RSWB questionnaire has proven its efficacy in measuring religious/spiritual well-being and its theoretically postulated six distinct dimensions. However, when comparing Russian to Austrian and English student samples, cultural and social differences may be causing additional variability. Compared to British college students, the Russian group exhibited a substantially lower amount of RSWB, which could be an indicator for a decreased amount of psychological well-being within the young people of Russia. After the so called "perestroika" most people in former Soviet Union have been suffering from series of deep socio-economic-cultural crises which included poverty, unemployment, hunger, crime wave, corruption, terroristic activity with ongoing dire socio-economic consequences for the population. The youth is experiencing an underlying sense of socio-economic hopelessness and exacerbation otherwise normative identity crises while enduring political chaos, thus they might not be as forgiving and more pragmatic, acting and living in the here and now, than the youth in other Western European communities (Steinberg, 2008; Steinberg & Coleman, 2007).

In conclusion, some limitations of the study should be noted. First of all it has to be mentioned that our findings are not representative of the general population of Russia. The relatively young age of the participants ($M=20.7$ years) substantially restricts the generalizability of these data. This is aggravated by the fact that more than 75% of the participants in our sample were women, which might have influenced our findings significantly, as women always exhibited higher RSWB scores in various studies (Unterrainer et al., 2014; H. F. Unterrainer & Fink, 2013). Another shortcoming of this study is the lack of information about religious denomination of respondents. This issue might be addressed in

further research by an enhanced assessment of sociodemographic data. Traditionally most of the people in Russia identify themselves in some extent with the tradition of Orthodoxy, and approximately 10% of population reckon themselves among Islam tradition (Kornblatt & Michelsson, 2014). In the study the focus was placed on the adaption of the MI-RSWB-R. A reasonable next step in the validation process of the scale might be the RSWB assessment in more enhanced samples. Finally, the application of the MI-RSWB-R instrument, especially in clinical surroundings, is suggested in order to learn more about the possibilities and limitations of considering a religious/spiritual dimension in patient treatment.

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Table 1*Descriptive statistics, scale properties and intercorrelations for the MI-RSWB-R (N=192)*

	α	M	SD	KS	$Skewness$	$Kurtosis$	Intercorrelations						
							1.	2.	3.	4.	5.	6.	7.
1. General Religiosity	.94	28.04	11.30	.06	-0.20	-0.84	-	.31**	.30**	-.19*	.60**	.42**	.76**
2. Forgiveness	.86	30.43	9.42	.06	-0.25	-0.60		-	.12	.37**	.18	.13	.65**
3. Hope Immanent	.86	34.66	7.58	.08	-0.30	-0.43			-	-.09	.49**	.41**	.60**
4. Hope Transcendent	.62	29.04	6.61	.06	-0.08	-0.29				-	-.23*	-.30**	.11
5. Connectedness	.81	30.53	8.26	.06	-0.21	-0.30					-	.72**	.78**
6. Sense and Meaning	.68	34.09	6.41	.05	-0.23	-0.44						-	.62**
7. RSWB total score	.90	186.79	30.15	.05	0.00	0.02							-

Notes. * $p < .01$; ** $p < .001$; α = Cronbach's α ; M = Mean; SD = Standard Deviation; KS : Kolmogorov-Smirnov test for normal distribution; Standardized z-values for Skewness and Kurtosis.

RSWB = Religious/Spiritual Well-Being.

Table 2*The relationship between MI-RSWB-R and personality factors and psychiatric symptoms (N=192)*

	<i>M</i>	<i>SD</i>	GR	FO	HI	HT	CO	SM	RSWB
<i>Personality Factors</i>									
Extraversion	29.09	6.96	.31**	.20*	.45**	.02	.34**	.28**	.45**
Neuroticism	22.79	7.49	-.02	-.07	-.40**	-.19*	-.07	.07	-.17
Openness	28.82	5.38	.09	.23	.17	.12	.44**	.44**	.39**
Conscientiousness	28.92	7.31	.15	-.02	.20*	-.05	.11	.10	.14
Agreeableness	27.90	6.26	.24*	.49	.15	.18	.13	.12	.38**
<i>Psychiatric Symptoms</i>									
Anxiety	.75	.71	.04	-.08	-.10	-.21*	.11	.15	-.02
Depression	.90	.73	-.02	-.12	-.25**	-.20	.10	.18	-.09
Hostility	.77	.67	.07	-.29**	-.05	-.27**	.17	-.20*	-.05
Interpersonal Sensitivity	.93	.74	.02	-.22**	-.21*	-.20*	.08	.16	-.11
Obsessive-Compulsive Thoughts	.89	.72	.03	-.11	-.14	-.20*	.11	.15	-.04
Paranoid Ideation	.71	.72	-.05	-.35**	-.16	-.34**	-.01	.07	-.23*
Phobic Anxiety	.39	.52	-.00	-.14	-.06	-.30**	.06	.03	-.10
Psychoticism	.48	.54	.08	-.11	-.16	-.24*	.10	.12	-.04
Somatization	.73	.64	.11	-.07	-.07	-.16	.12	.18	.04
Global Severity Index	.73	.57	.04	-.17	-.17	-.27**	.11	.17	-.07

Notes. * $p < .01$; ** $p < .001$; GR = General Religiousness; FO = Forgiveness; HI = Hope Immanent; HT = Hope

Transcendent; CO = Connectedness; SM = Experiences of Sense and Meaning; RSWB = Religious /Spiritual Well-Being.