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THE POLISH ADAPTATION OF THE RELIGIOUS AND SPIRITUAL STRUGGLES SCALE: FACTORIAL STRUCTURE AND PSYCHOMETRIC PROPERTIES

The aim of the paper is to present the theoretical basis and factorial structure of the Polish adaptation of the Religious and Spiritual Struggles Scale – RSSS-PL. We present the results of two studies. Study 1 included an exploratory factor analysis, which showed that the Polish adaptation of the RSSS, like the original version, measures six domains of religious or spiritual struggle: *divine* (negative emotions centered on beliefs about God or perceived relationship with God), *demonic* (concern that the devil or evil spirits are attacking you or causing negative events), *moral* (wrestling with attempts to follow moral principles; worry or guilt about perceived offenses by the self), *ultimate meaning* (concern about not perceiving deep meaning in one's life), *interpersonal* (concern about negative experiences with religious people or institutions; interpersonal conflict around religious issues), and *doubt* (feeling troubled by doubts or questions about one's r/s beliefs). In Study 2, we confirmed the six-factor structure of the Polish adaptation of the RSSS using the confirmatory factor analysis. The RSSS-PL subscales had high reliability indices and high validity in relation to measures of religiousness and stress. This method has acceptable psychometric properties and may serve as a valuable tool in studies on religion as a source of struggles.

Keywords: religiosity; religious struggle; measurement of religiosity.

Religion and spirituality (r/s) are important aspects of life for many people. It is in religion and spirituality that people seek consolation, gratification of the need for bonds, and a perspective which would facilitate the attribution of meaning to life events (Park, Edmondson, & Hale-Smith, 2013). Over the past decades, psychologists have confirmed the positive functions of religion and spirituality in various domains of human life. It has been proven that they are important resources which make it easier to cope with stress in difficult life situations (Pargament, 1997), as well as significant predictors of somatic health, mental wellbeing, and the recovery process (Oman & Thoresen, 2005).

However, the role of religiosity and spirituality is not always supportive. When people think that the negative events which happen to them in their life are unfair (Kushner, 1981) – they blame God for it and feel anger and distrust toward Him. Others experience stress when they face hypocrisy from believers and the clergy (Krause, Chatters, Meltzer, & Morgan, 2000). Those who try to live in conformity with the moral principles of their religion feel guilty when they cannot live up to its demands. Some believers think that they are victims of supernatural forces and evil in their nature (Exline & Rose, 2005). Although these phenomena seem relatively frequent in people's experience (Pargament, Mahoney, Exline, Jones, & Shafranske, 2013; Zarzycka, 2016), they seem to have been pushed aside in psychological research. It was as late as the beginning of this century that they attracted the interest of psychologists and were termed *religious and spiritual struggle* (r/s struggle). What we now need is measures to assess various types of religious struggle. In order to meet this need, we adapted the Religious and Spiritual Struggles Scale (RSSS) by Exline, Pargament, Grubbs, and Yali (2014) into Polish.

This article describes the development and preliminary validation of the RSSS-PL. First, we introduce the theoretical framework for the RSSS-PL, which includes definition, the frequency of struggles, as well as their predictors and functions in terms of health. Next, we present the existing measures of r/s struggles and the way the original RSSS was developed (Exline et al., 2014). Finally, we describe the Polish RSSS adaptation, which included checking the internal structure of the scale and assessing its psychometric properties. The internal structure of the RSSS-PL was tested by means of exploratory and confirmatory factor analyses. The analysis of the psychometric properties of the RSSS-PL involved testing its reliability, validity, and stability over time.

Psychological Understanding of R/S Struggles

The notion of *religious and spiritual struggles* refers to the forms of distress or conflicts that belong to the religious or spiritual domain (Zinnbauer, Pargament, & Scott, 1999). In psychology, religious struggles can be understood in the context of two theoretical frameworks. For instance, religious or spiritual struggle has been conceptualized as a specific negative form of religious coping elicited by various life stressors (Pargament, Koenig, & Perez, 2000). Religious or spiritual struggles are coping reactions when the value system is in danger – struggles are the effort made to keep or transform the endangered religiosity. Pargament and colleagues (Pargament, Magyar, Benore, & Mahoney, 2005) separated three types of religious and spiritual struggles: divine (e.g., feeling angry at God), intrapersonal (e.g., being unable to forgive oneself for a transgression), and interpersonal (e.g., feeling betrayed by a religious leader).

The other theoretical approach, developed by Exline (2013), defines struggles as the tendency to experience strains or conflicts related to religious beliefs, experience, or practice (rather than as a religious coping reaction). Exline (2013; Exline et al., 2014) described six types of struggles related to various specific aspects of faith and spirituality. Two types of struggles focus on beliefs about supernatural agents: *Divine struggle* involves negative emotions related to religious beliefs or the perceived relationship with God; *Demonic struggle* involves concern that the devil or evil spirits influence you or cause negative events. *Interpersonal struggle* involves concern and worries about negative experiences with religious people or institutions and about interpersonal conflicts related to faith. Some struggles have an intrapersonal nature as they belong to the domain of thoughts and emotions. *Doubt-related struggle* is about feeling doubts and worrying because of doubts and questions about one's own religious or spiritual beliefs. *Struggle around ultimate meaning* is concern caused by the loss of deep meaning and sense of life. *Moral struggle* involves the effort made in living up to religion-determined moral standards as well as distress and guilt because of perceived moral transgressions.

Frequency of R/S Struggle

R/S struggle appears in difficult life circumstances in multiple social groups: students (Hunsberger, Pratt, & Pancer, 2002), homeless people (Exline, 2003), sick people (Pargament, Koenig, Tarakeshwar, & Hahn, 2001), religious leaders (Pargament, Tarakeshwar, Ellison, & Wulff, 2001), and the general population (Zarzycka, 2016). According to the research conducted in 1988, 62% of Ameri-

cans experienced religious struggle (Exline, 2003). Similar values were observed in 2008 in a representative Polish sample: 67% study participants declared that they sometimes felt anger towards God (Zarzycka, 2016). In the American research, it was also observed that the intensity of religious struggles was higher in those who were not religious (Exline, 2003). Polish research did not confirm these results, though (Zarzycka, 2016).

Predictors of R/S Struggles

Ano and Pargament (2013) distinguished three groups of struggle-fostering factors: situational, social, and psychological. The situational factors leading to r/s struggle include stressful life events, such as the loss of interpersonal relationships, sexual abuse, worldview-based loss, or homesickness (Johnson & Hayes, 2003). Among the social variables there are dysfunctions in relationships with peers, deficits in social support, and family problems (McConnell, Pargament, Ellison, & Flannelly, 2006). Belonging to a social group was also a predictor of religious struggle. Bryant and Astin (2008) found that students of Catholic and Evangelical schools were more exposed to experiencing r/s struggle than those attending public schools. The psychological factors that foster r/s struggle are: neuroticism (Wilt, Grubbs, Exline, & Pargament, 2016), negative emotions, demanding attitude, low agreeableness (Wood et al., 2010), pessimism, trait anger (Ano & Pargament, 2013), and narcissism (Franczak, Klein, Śliwak, & Zarzycka, 2010). There are also some mechanisms by which social and psychological factors condition religious or spiritual struggle. For instance, neuroticism is a mediator in the relationship between father's parental attitude and religious sense of guilt, whereas agreeableness is a mediator in the relationship between mother's parental attitude and negative affect towards God (Zarzycka, 2017). Religious affiliation has been found to be an important predictor of struggles. Students who were Hindus, Buddhists, Unitarians, Greek Orthodox, and Muslims reported experiencing struggle more often than Catholics, Protestants, or atheists (Ano & Pargament, 2013). Changes in religious affiliation and the style of attachment towards God also revealed associations with religious struggles (Bryant & Astin, 2008; Zarzycka, 2017).

Functions of R/S Struggles in Terms of Health

Studies have shown that conflicts and strains related to faith generate stress as well as worsen mental and somatic health, particularly in those individuals for whom religiosity is a central part of identity (Pargament et al., 2005). For exam-

ple, McConnell and colleagues (2006) found positive correlations between struggles and indicators of depression, somatization, anxiety, and paranoid ideation. Similar correlations were observed in Jews, Christians (Rosmarin, Krumrei, & Andersson, 2009), and Muslims (Raiya, Pargament, Mahoney, & Stein, 2008). Positive relationships between religious struggle and depression were observed in samples of adolescents and psychiatric patients (Dew et al., 2010). Students who experienced intense religious struggle assessed their talents and abilities as weaker and experienced stronger emotional distress and psychosomatic symptoms in comparison to those who did not experience this kind of struggle (Bryant & Astin, 2008). Religious struggle was related to a lower level of adaptation to difficult situations, such as divorce (Krumrei, Mahoney, & Pargament, 2009), sexual abuse in childhood (Pargament, Murray-Swank, & Mahoney, 2008), mourning (Exline, Park, Smyth, & Carey, 2011), or violence in intimate relationships (Bradley, Schwartz, & Kaslow, 2005). Also, some mechanisms of these associations were shown. For example, religious guilt and negative affect towards God mitigate the consequences of stress, such as disorders of mental functioning, when a person does not experience many problems, but they intensify these consequences when the stress experienced is high (Zarzycka, 2017). Religious struggles worsened also physical health (Park et al., 2009), and were even found to be related to higher mortality indicators (Larson & Larson, 2003).

PRIOR ATTEMPTS TO ASSESS R/S STRUGGLE

Although the notion of r/s struggle appeared in the psychology of religion at the beginning of the 21st century, various categories of stress-related religious phenomena had been studied before, such as religious conflict, religious doubt, and spiritual injury (e.g., Lawson, Drebing, Berg, Vincellette, & Penk, 1998). These constructs were measured by means of the Religious Conflict Scale (Funk, 1958) and the Quest Religious Orientation Scale (Batson & Schoenrade, 1991). Polish researchers applied the Religious Crisis Scale by Prężyna (1971; see Nowosielski & Bartczuk, 2011) and the Quest Orientation Scale (Socha, 1999).

The Religious Coping Questionnaire (RCOPE) and its short version (Brief RCOPE) are used to measure both positive and negative religious coping, where negative religious coping can be framed in terms of r/s struggle (Pargament, Smith, Koenig, & Perez, 1998). An instrument useful in the measurement of r/s struggle is the Religious Comfort and Strain Scale (RCSS; Exline, Yali, & Sanderson, 2000). The RCSS measures three types of struggles: fear and guilt,

negative emotions towards God (divine), and negative social interactions surrounding religion (Zarzycka, 2014). Although RCOPE and RCSS are useful methods of measuring religious or spiritual struggles, the full RCOPE is not often used because of its length (105 items), while RCSS assesses only three types of r/s struggles. Therefore, we needed a new method, which would cover a broader range of phenomena related to religious or spiritual struggle. The Religious and Spiritual Struggles Scale (RSSS) could begin to meet these needs (Exline et al., 2014).

THE RSSS DEVELOPMENT PROCESS

On their way to developing the RSSS, its authors intended to tap into supernatural, interpersonal, and intrapersonal forms of religious or spiritual struggles that had received attention in prior research. Within these basic forms, they distinguished six types of r/s struggles: two types of supernatural struggles (divine and demonic), interpersonal struggle, and three types of intrapersonal struggle (moral, ultimate meaning, and doubt). The authors aimed to develop a concise and reliable self-report questionnaire that could be used flexibly, focusing either on a specific timeframe or on responses to a specific life event (Exline et al., 2014).

The experimental RSSS consisted of 61 items. The authors used two methods to investigate the internal structure of the RSSS using data collected in two studies. These methods were exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Study 1 consisted of two stages. Both of them explored the RSSS structure by means of EFA. The first stage (1a) showed that the RSSS consisted of 11 factors which explained 70% of the total variance. Based on the results of this analysis, the authors excluded four hardly explainable factors, items in which factor loadings were lower than .50 or cross-loadings were higher than .30, as well as items which measured abandoning faith. As a result, they retained 37 items from the initial pool of 61. Then, they added 11 new items: five for interpersonal struggles and six for doubts. The resulting 48 items were examined in the second stage of Study 1 (1b). The initial solution yielded seven factors with eigenvalues over 1. The authors excluded the last factor, which included only two items. They also excluded those items which showed excessive conceptual overlap with other items or measures or had loadings lower than .50. Finally, they obtained a 26-item questionnaire, with items divided into six subscales: Divine, Moral, Ultimate Meaning, Interpersonal, and Religious Doubt

struggle. These subscales explained 76% of the total variance. In Study 2, the authors conducted a final CFA with the pool of 26 items, which confirmed the 6-factor solution. In the construction process, we applied two instructions: in Study 1a and 2, the instruction involved a time reference (a focus on struggles experienced over the previous month), whereas in Study 1b it involved a reference to a difficult event experienced during the last year.

The Polish Adaptation of the RSSS

We started working on the Polish RSSS adaptation in 2016. The translation process was executed in accordance with the guidelines of the International Test Commission (Hambleton, 2001). Three English language specialists translated the items from English into Polish. Based on the outcomes, we prepared a preliminary Polish version of the RSSS. It was then forwarded to another English language specialist, who proceeded with back translation. Using the translators' comments, we compiled the first experimental RSSS-PL.

The adaptation process, similarly to the development process (Exline et al., 2014), included the exploration of the factorial structure of the RSSS using exploratory factor analysis (Study 1), the confirmation of the factorial structure using confirmatory factor analysis (Study 2), and the preliminary validation of the RSSS (Study 2). Following in the original RSSS authors' footsteps (Exline et al., 2014), we also applied two instruction in our research. In Study 1, we asked the participants to focus on a specific timeframe (the past month). In Study 2, the instruction included reference to a difficult event experienced in the previous six months.

The analysis of the psychometric properties of the RSSS-PL included the assessment of its reliability, validity, and stability over time. The reliability of the RSSS-PL subscales was calculated separately in Study 1 and Study 2 in the form of Cronbach's α and Guttman's λ_6 coefficients. We also calculated intercorrelations among RSSS subscales, as well as relationships between these subscales and the overall RSSS-PL score. The validity of the scale was tested by means of correlations between RSSS-PL scores with the scores on scales measuring religiosity and stress. The final stage of our analyses consisted in checking test-retest reliability with an interval of two weeks.

STUDY 1. EXPLORATORY FACTOR ANALYSIS OF THE RSSS-PL

The aim of Study 1 was to explore the factorial structure of the RSSS-PL by means of exploratory factor analysis.

Method

Participants and procedure. There were 296 adult participants in Study 1: 209 women and 84 men, aged between 18 and 62 years ($M = 22.39$, $SD = 5.72$). Table 1 shows additional demographic data (Sample 1). Study 1 was carried out in 2016 by fourth-year psychology students as part of a project conducted within the framework of the Psychology of Religion course, supervised by the first author of this paper. The students were awarded credits for conducting research.

Table 1. *Participants' Characteristics*

Variable	Sample 1		Sample 2		Sample 3	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Sex						
Women	209	70.6	368	57.0	49	87.5
Men	84	28.4	278	43.0	7	12.5
No answer	3	1.0				
Civil status						
Unmarried with no partner	147	49.7	306	47.4		
Unmarried with a partner	126	42.6	230	35.6		
Divorced / Separated	3	0.9	21	3.3		
Married	20	6.8	89	13.7		
Religious affiliation						
Roman Catholic	274	92.6	577	89.3		
Eastern Orthodox	2	0.7	3	0.5		
Protestant	1	0.3	1	0.2		
Muslim	1	0.3				
Atheist	2	0.7	31	4.8		
Agnostic	5	1.7	14	2.2		
No data	11	3.7				
Religious tradition (upbringing)						
Roman Catholic	274	92.6	635	98.2		
Eastern Orthodox	2	0.7	2	0.3		
Protestant	1	0.3	3	0.5		
Atheist			3	0.5		
No data	19	6.4	3	0.5		
Change in religious tradition						
Never	254	85.8	565	87.5		
Yes, once	31	10.5	74	11.5		
Yes, several times	6	2.0	7	1.0		
No data	5	1.7				

Measures. The measures included demographic questions and the Polish translation of the RSSS.

Demographics. The participants reported their age, sex, civil status, and religious affiliation. They also reported the religious tradition in which they were brought up and whether they had ever changed their religious affiliation (if yes, how often).

Religious and Spiritual Struggles Scale (RSSS-PL). The participants completed the experimental 26-item Polish version of the RSSS. The instruction they received was as follows: "From time to time, people experience struggles, worry about something, or have doubts related to religion and spirituality. With reference to the time span from the last month to today, please assess the extent to which you have gone through the experiences described below." The respondents answered on a 5-point scale with the following options: 1 – *not at all*, 2 – *to a small extent*, 3 – *more or less*, 4 – *quite well*, and 5 – *to a great extent*.

Results

As the condition of normal distribution of data was not fulfilled, and since it was expected that there would be correlations between factors, we applied principal axis analysis and Oblimin rotation. The factor analysis was preceded by checking sample adequacy ($KMO = .91$; the Bartlett test $\chi^2(325) = 5324.50$, $p < .001$; the lowest $MSA_k \geq .83$). Based on Kaiser's criterion (eigenvalue higher than 1) we estimated that six factors need to be distinguished in the RSSS-PL. The six-factor solution explained 73% of the total variance. Table 2 presents RSSS-PL items, their factor loadings, eigenvalues, and the percentage of variance explained by each of the factors. The loadings of items assigned to each of the factors are in bold in the respective columns. Each of the items is assigned to only one factor.

The analysis of the matrix of rotated factor loadings shows that the internal structure of RSSS-PL is consistent with the assumed one. The RSSS-PL consists of six factors:

Factor 1, *Divine struggle*, includes 5 items that measure negative emotions towards God and disappointment with God; it explains 39% of the total variance;

Factor 2, *Demonic struggle*, includes 4 items that measure the sense of being influenced by evil powers; it explains 10% of the total variance;

Factor 3, *Moral struggle*, includes 4 items that measure strains and difficulties related to living up to the moral expectations imposed by religion; these items explain 7% of the total variance;

Table 2. *Exploratory Factor Analysis Showing 26 Items and Factor Loadings From the Pattern Matrix (Principal Axis Factoring Extraction With Direct Oblimin Rotation)*

Items		Factor loadings					
		1	2	3	4	5	6
		Divine	Demonic	Moral	Meaning	Inter-personal	Doubt
Di3.	Felt as though God has abandoned me	.82	-.09	.03	-.01	-.01	-.09
Di1.	Felt as though God had let me down	.82	.02	-.09	-.06	-.01	-.02
Di2.	Felt angry at God	.79	.12	.08	.03	-.07	-.01
Di5.	Questioned God's love for me	.74	-.02	-.03	.01	.18	-.02
Di4.	Felt as though God was punishing me	.60	.11	.07	-.14	.09	.04
De8.	Felt attacked by the devil or by evil spirits	.06	.85	-.06	-.03	.06	-.07
De9.	Felt as though the devil (or an evil spirit) was trying to turn me away from what was good	-.07	.79	.14	.04	.06	-.06
De7.	Worried that the problems I was facing were the work of the devil or evil spirits	.14	.79	-.01	.01	.01	.01
De6.	Felt tormented by the evil or evil spirits	.01	.78	.03	-.06	.01	-.04
Mo16.	Worried that my actions were morally or spiritually wrong	-.09	.05	.85	.04	.05	-.09
Mo18.	Felt guilty for not living up to my moral standards	.10	.13	.79	-.09	-.14	.09
Mo17.	Felt torn between what I wanted and what I knew was morally wrong	-.04	-.05	.72	-.10	.02	-.07
Mo15.	Wrestled with attempts to follow my moral principles	.13	-.06	.56	.01	.20	-.01
Me20.	Felt as though my life had no deeper meaning	-.04	.06	-.04	-.89	.04	-.03
Me22.	Had concerns about whether there is any ultimate purpose to life or existence	.03	-.05	-.01	-.87	-.03	-.05
Me19.	Questioned whether life really matters	.07	.01	.04	-.84	.01	.01
Me21.	Questioned whether my life will really make any difference in the world	-.01	.01	.01	-.78	.05	-.03
I10.	Felt hurt, mistreated, or offended by religious/spiritual people	.01	.08	-.03	-.09	.86	.08
I11.	Felt rejected or misunderstood by religious/spiritual people	.04	.15	-.06	-.11	.74	.04
I14.	Felt angry at organized religion	.10	-.17	.10	-.05	.46	-.08
I13.	Had conflicts with other people about religious/spiritual matters	.01	.07	.16	.09	.43	-.20
I12.	Felt as though others were looking down on me because of my religious/spiritual beliefs	.13	.08	.10	.06	.42	-.20
Do25.	Felt troubled by doubts or questions about religion or spirituality	-.02	.12	.01	-.03	.01	-.86
Do24.	Felt confused about my religious/spiritual beliefs	.12	-.11	-.05	-.09	-.01	-.80
Do26.	Worried about whether my beliefs about religion/spirituality were correct	.02	.22	.06	.01	.04	-.60
Do23.	Struggled to figure out what I really believe about religion/spirituality	.06	.06	.16	-.18	.01	-.47
Eigenvalue		10.21	2.75	2.04	1.71	1.27	1.21
% of variance		39.25	10.56	7.86	6.59	4.88	4.64

Note. Items for each factor are listed in descending order based on loadings. Boldfaced text indicates items assigned to each factor.

Factor 4, *Ultimate meaning struggle*, includes 4 items that measure the loss of meaning and purpose in life; it explains 6% of the total variance;

Factor 5, *Interpersonal struggle*, includes 5 items that measure conflicts and strains in relations with the clergy and other believers; these items explain 4% of the total variance;

Factor 6, *Religious doubt*, includes 4 items that measure insecurity related to one's own religious beliefs; it explains 4% of the total variance.

To sum up, the results of EFA confirmed the assumed six-factor structure of the RSSS-PL. Three items in the Interpersonal subscale had somewhat lower factor loadings ($< .50$): I12 (*Felt as though others were looking down on me because of my religious/spiritual beliefs*), I13 (*Had conflicts with other people about religious/spiritual matters*), and I14 (*Felt angry at organized religion*). This may be due to the fact that items in this subscale are related to various aspects of interpersonal struggle.

Descriptive statistics for RSSS-PL. The scores on particular subscales were calculated by averaging across items. The overall score is also an arithmetical mean of answers to all the items ($M = 1.86$, $SD = 0.67$). We conducted one-way repeated-measures ANOVA in order to check whether the scores on RSSS-PL subscales varied. The scores on RSSS-PL subscales were measured for different levels of the independent variable. As the data failed to be consistent with the assumption about variance sphericity, we applied the Greenhouse-Geisser correction. The result obtained was: $F(4, 1268) = 27.48$, $p < .001$. This means scores differed significantly across the RSSS-PL subscales. The Bonferroni-corrected comparisons showed that Moral struggle scores were the highest in the sample ($M = 2.20$, $SD = 0.95$). This subscale differed significantly ($p < .001$) from all other subscales, with the exclusion of Ultimate Meaning. Ultimate Meaning scores ($M = 2.02$, $SD = 1.12$) were significantly higher than scores on Doubt ($M = 1.82$, $SD = 0.91$, $p < .001$). The levels of Divine ($M = 1.68$, $SD = 0.85$), Demonic ($M = 1.66$, $SD = 0.87$), and Interpersonal struggle ($M = 1.76$, $SD = 0.80$) were low – these levels did not differ significantly from one another.

Intercorrelations between the RSSS-PL subscales. All subscales correlated positively with one another and with the Religious Struggle overall score. The correlations between the RSSS subscales and the overall score were stronger ($r = .64$ to $.81$) than the correlations between the subscales ($r = .23$ to $.55$) (Table 3).

Table 3. *Intercorrelations Between RSSS-PL Subscales (N = 296)*

Variable	1	2	3	4	5	6
1 Divine	–					
2 Demonic	.38***	–				
3 Moral	.36***	.39***	–			
4 Ultimate Meaning	.54***	.23***	.42***	–		
5 Interpersonal	.55***	.40***	.46***	.39***	–	
6 Doubt	.54***	.51***	.53***	.50***	.52***	–
7 RELIGIOUS STRUGGLE	.76***	.65***	.72***	.73***	.74***	.81***

Note. *** $p < .001$.

RSSS-PL reliability. The reliability of the RSSS-PL was assessed in the form of the Cronbach's α and Guttman's λ_6 coefficients (Sijtsma, 2009). Table 4 shows the coefficients obtained. The reliability of RSSS-PL subscales is high (α_A) – higher than .80 in all cases. The reliability of the overall score is higher than .90. For comparison, Table 4 also includes the reliability coefficients of the original RSSS (α_B) – their values are similar to those obtained in our research.

Table 4. *Reliability Indices (α_A , λ_6) for RSSS-PL Subscales (N = 296) and the Original RSSS Subscales (α_B)*

RSSS-PL	k	α_A	λ_6	α_B
Divine	5	.90	.89	.93
Demonic	4	.91	.89	.93
Moral	4	.85	.84	.88
Ultimate meaning	4	.93	.91	.89
Interpersonal	5	.81	.82	.85
Doubt	4	.86	.84	.90
RELIGIOUS STRUGGLE	26	.94	.96	

STUDY 2. CONFIRMATORY FACTOR ANALYSIS OF THE RSSS-PL AND PRELIMINARY VALIDITY TESTING

In Study 2 we confirmed the internal structure of the RSSS-PL using confirmatory factor analysis (CFA) and performed several validity tests. In this study, the instruction included a reference to experience related to a difficult situation that the participant had gone through during the previous six months.

Method

Participants. The participants in Study 2 made up two adult samples. Sample 2 amounted to 646 respondents (368 women and 276 men) aged between 18 and 73 years ($M = 26.28$, $SD = 9.72$). Sample 3 amounted to 56 respondents (49 women) aged between 20 and 38 ($M = 24.43$, $SD = 3.22$). We conducted a confirmatory factor analysis in Sample 2 and assessed the stability of the method in Sample 3. Study 2 was conducted in 2017 by third-year psychology students as part of a project conducted within the framework of a course in the analysis and interpretation of empirical data in social psychology, supervised by the first author of this paper. Table 1 shows additional demographics of the participants (Sample 2, Sample 3).

Measures. The measures applied in Study 2 are presented below.

Demographic variables. In Sample 2, the metrics added to the set of questionnaires included questions about age, sex, civil status, religious affiliation, religious tradition in which the respondent was brought up, and change in religious affiliation in the course of his or her life. In Sample 3, the metrics included questions about age and sex.

Religious and Spiritual Struggles Scale (RSSS-PL). In Samples 2 and 3, the participants completed the 26-item RSSS-PL scale. Study 2 was introduced with the following instruction: "Various life events provoke references to God. Please think of a difficult event or situation that you experienced in the last six months and that elicited references to God from you, e.g., when you prayed to God, asked Him for help, expressed your resentment against God, were angry at God, etc. Recall the thoughts and emotions towards God that you experienced at that time. Then, read the following statements and assess to what extent the experiences listed below apply to you." In Sample 3, the participants were asked to focus on their experiences during the previous month. In both samples the participants answered on a 5-point scale from 1 (not at all) to 5 (to a great extent).

Centrality of Religiosity Scale (CRS). The CRS is a measure of the centrality, importance, or salience of religious meanings in personality. The method consists of 15 items divided into five subscales (Huber, 2003; Huber & Huber, 2012): Intellect, Ideology, Private Practice, Religious Experience, and Public Practice. The total score is the sum of scores on the subscales and a measure of the centrality of religious meanings in personality. The CRS has satisfactory psychometric properties (Zarzycka, 2007, 2011). Response option range from 1 (not at all/never) to 5 (to a great extent/very often). The reliability of the CRS in the present study was .96 for Centrality, and for the subscales it ranged from .83 (Interest) to .92 (Religious Experience).

Perceived Stress Scale (PSS-10). The PSS-10 measures various subjective feelings about problems, personal events, behaviors, and coping ways (Cohen, Kamarck, & Mermelstein, 1983). The items in this scale concern the respondent's feelings and thoughts during the last month. Respondents answer on a 5-point scale from 0 (*never*) to 4 (*very often*). The reliability of the PSS-10 in Sample 2 was .75.

Results

Confirmatory factor analysis. Confirmatory factor analysis was conducted in the Amos 24 program, and estimation was carried out by means of the maximum likelihood method. We replaced missing data using the median value imputation method. When calculation and inspection of modification indices had been completed, covariance of measurement errors was implemented in the tested model for items I12 < - > I13 (Figure 1). Global goodness-of-fit indices between the model and data are acceptable. Although the χ^2 test indicates insufficient fit (χ^2 ($df = 283$, $N = 646$) = 728.84, $p < .001$), it is clear that this statistic is too restrictive and, in big samples, very often indicates the necessity of rejecting the model (Bentler & Bonett, 1980). The normed χ^2 (CMIN/ $df = 2.58$) had the necessary value lower than 5 (Wheaton, Muthén, Alwin, & Summers, 1977). RMSEA (.049 [.045, .054]) and SRMR (.08) demonstrated acceptable fit. Modification indices, TLI = .953 and CFI = .96, had the necessary values higher than .95. According to the strategy of presenting goodness-of-fit indices, introduced by Hu and Bentler (1999), if RMSEA is .06 or lower, and if SRMR is .09 or lower, the model fit should be accepted.

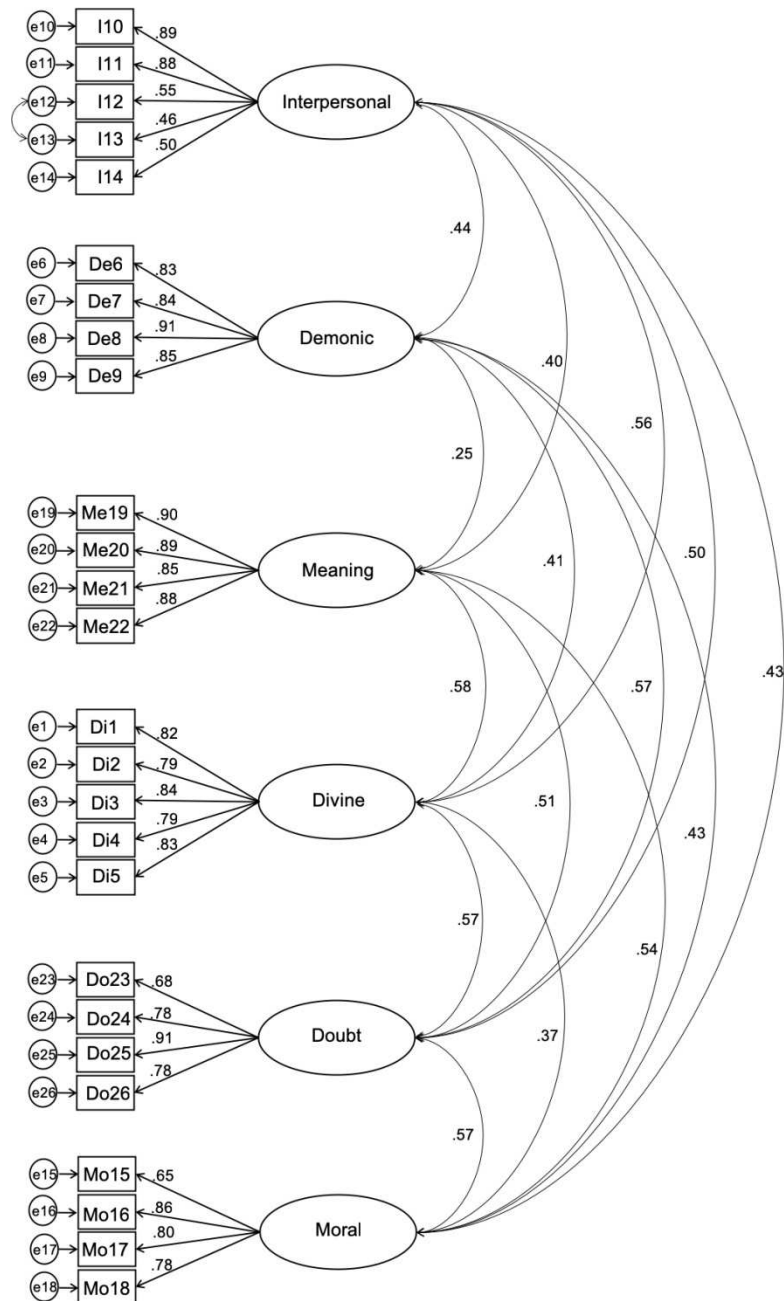


Figure 1. Confirmatory factor analysis of the six-factor model for the RSSS-PL. See Table 2 for items corresponding to the labels (e.g., Di1, Mo5).

Descriptive statistics. We computed the scores on the RSSS-PL subscales by averaging across items. In order to check whether the subscale scores differed between one another, we conducted a one-way repeated-measures ANOVA. The scores on the RSSS-PL subscales were measured on different levels of the independent variable. The data failed to confirm the assumption of variance sphericity, and for this reason we applied the Greenhouse-Geisser correction. Thus the following result was obtained: $F(5, 3045) = 79.60, p < .001$. This means that the scores on the RSSS-PL subscales differed between one another significantly. The Bonferroni multiple comparison test demonstrated the highest score for the following subscales: Moral ($M = 2.31, SD = 1.08, p < .001$), Doubt ($M = 2.29, SD = 1.12, p < .001$), and Ultimate Meaning ($M = 2.25, SD = 1.20$). The scores on these three subscales did not differ significantly between one another, but they did differ ($p < .001$) from scores on Demonic, Divine, and Interpersonal struggle. In addition, the score on Interpersonal ($M = 1.95, SD = 0.97$) differed significantly from scores on Demonic ($M = 1.64, SD = 0.94$) and Divine ($M = 1.77, SD = 0.93$). The score was the lowest in the case of the Demonic subscale. Although different instructions were applied, the total RSSS-PL score in Sample 2 ($M = 2.04, SD = 0.72$) did not differ significantly from the total score obtained in Sample 1 ($M = 1.86, SD = 0.67$), $t(611) = 3.74, ns$.

Intercorrelations of the RSSS-PL subscales. All RSSS-PL subscales correlated positively both with the total score and with one another. Correlations among subscales ranged from $r = .24$ (Demonic and Interpersonal) to $.54$ (Moral and Doubt). These indices are not high, which attests to the content specificity of the analyzed struggle types. Correlations between the subscale scores and the Religious Struggle total score were higher and ranged from $r = .59$ to $r = .77$. Table 5 shows the correlation matrix.

Table 5. *Intercorrelations of RSSS-PL Subscales (N = 646)*

Variable		1	2	3	4	5	6
1	Divine	—					
2	Demonic	.26***	—				
3	Moral	.32***	.46***	—			
4	Ultimate Meaning	.41***	.25***	.47***	—		
5	Interpersonal	.28***	.24***	.34***	.34***	—	
6	Doubt	.39***	.28***	.54***	.53***	.39***	—
7	RELIGIOUS STRUGGLE	.63***	.59***	.77***	.75***	.62***	.77***

Note. *** $p < .001$.

RSSS-PL reliability. The RSSS-PL reliability was assessed in the form of Cronbach's α and Guttman's λ_6 coefficients (Table 6). For comparison, Table 6 also includes Cronbach's α coefficients for the original version (α_B). The reliability of the RSSS-PL subscales was high and comparable to those of the original RSSS subscales (Exline et al., 2014) – all indices were higher than .80.

Table 6. *Reliability Coefficients (α_A , λ_6) for RSSS-PL Subscales and the Original RSSS Subscales (α_B) (N = 646)*

RSSS-PL	k	α_A	λ_6	α_B
Divine	5	.90	.89	.89
Demonic	4	.91	.88	.90
Moral	4	.86	.83	.88
Ultimate Meaning	4	.91	.89	.87
Interpersonal	5	.84	.85	.82
Doubt	4	.89	.86	.89
RELIGIOUS STRUGGLE	26	.92	.96	

Relationships between the RSSS-PL and stress. The notion of religious struggle refers to distress related to the religious or spiritual domain (Zinnbauer et al., 1999). Therefore, we expected that religious or spiritual struggle would correlate positively with stress. As the data in Table 7 shows, stress correlated positively with divine, demonic, moral, ultimate meaning, interpersonal, and doubt struggle. Simultaneous regression showed that, as a group, the subscales predicted 24% ($R^2 = .24$) of variance in the stress criterion ($F(6, 289) = 5.22$, $p < .001$).

Table 7. *Correlations of RSSS-PL Subscales With Centrality of Religiosity (C-15) and Perceived Stress (PSS-10) (N = 290)*

PSS-10 / CRS	Divine	Demonic	Moral	Ultimate Meaning	Interpersonal	Doubt
Stress	.34***	.15**	.26***	.49***	.29***	.26***
Intellect	-.16**	.24***	.17**	-.17**	-.02	.08
Ideology	-.22***	.15*	.13*	-.11	-.12*	-.06
Prayer	-.16**	.24***	.15**	-.16**	-.12*	.03
Experience	-.08	.28***	.18**	-.05	-.05	.02
Cult	-.13*	.26***	.10	-.17**	-.14*	.03
CENTRALITY	-.17**	.27***	.17**	-.15**	-.10	.02

Note. * $p < .05$; ** $p < .001$; *** $p < .001$.

Relationships between RSSS-PL and centrality of religiosity. As struggle-related distress refers to the religious or spiritual domain, we computed the relationships between the scores on RSSS-PL subscales and the centrality of religiosity. Centrality is a measure of the position of religious meanings in the individual's hierarchical system of personal constructs. It is measured in five dimensions: intellect, ideology, private practice, religious experience, and public practice. Following the authors of the original scale (Exline et al., 2014), we made several assumptions in our analysis. First, high religious involvement is accompanied by concern about living up to the moral standards of religion. Therefore, we expected a positive relationship between centrality and the Moral subscale. Second, we expected the existence of a positive relationship between the centrality of religiosity and Demonic struggle, because religious involvement is associated with a stronger belief in a supernatural reality, including a stronger belief in the existence of evil spirits. Third, as religion delivers the meaning system and is a source of purpose in life, it was expected that centrality would be negatively correlated with Ultimate Meaning struggle. Fourth, the research so far (Zarzycka, 2016) provides evidence that Divine struggle correlates negatively with religiosity; therefore, the assumption was that it would also correlate negatively with centrality. The above assumptions were confirmed (Table 7). It was more difficult to predict the relationships between Doubt and centrality. On the one hand, religious people are marked by high acceptance of religious teaching, which may suggest that they experience less religious doubt. On the other hand, religious questions and doubts demand certain religious involvement, which may suggest a positive relationship between religious doubt and centrality (Exline et al., 2014). In the present sample, correlation between centrality and Doubt was not significant. Also the correlation analysis conducted in samples with low and high centrality of religion showed no significant relationships between centrality and Doubt in any of the samples.

Test-retest reliability. We tested the stability of the RSSS-PL using the test-retest method in a sample of 56 respondents with an interval of two weeks. Table 8 shows descriptive statistics and correlations between the respondents' scores in the first study (test) and those in the second one (retest). We obtained significant correlations for all RSSS-PL subscales. The Divine subscale demonstrated the highest stability over time. The Demonic, Interpersonal, Moral, and Ultimate Meaning subscales as well as the total score showed moderate stability. The Doubt subscale had relatively low stability over time.

Table 8. *Descriptive Statistics and Correlations Between Test (Study 1) and Retest (Study 2) (N = 56)*

RSSS-PL	Study 1		Study 2		<i>r</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Divine	2.06	1.16	1.80	1.03	.81***
Demonic	1.85	0.98	1.66	0.92	.79***
Moral	2.74	1.02	2.52	1.05	.73***
Ultimate Making	2.32	1.36	2.06	1.27	.79***
Interpersonal	2.36	0.96	2.22	0.94	.74***
Doubt	2.53	1.05	2.29	1.13	.51***
RELIGIOUS STRUGGLE	2.31	0.68	2.10	0.68	.72***

Note. *** $p < .001$.

GENERAL DISCUSSION

Religious struggle is a relatively frequent human experience, with a series of negative consequences for physical and mental health. Since the beginning of this century, this issue has attracted more attention from psychologists (Bryant & Astin, 2008; Zarzycka, 2016). However, empirical research was limited due to the lack of methods appropriate for the measurement of religious and spiritual struggle. Therefore, a new measure was needed, capable of simple and economical assessment of various domains of religious struggle. The Religious and Spiritual Struggles Scale, developed by Exline and colleagues (2014), filled this gap. With a small number of items, it measures six types of religious and spiritual struggles: divine, demonic, moral, ultimate meaning, interpersonal, and doubt. In the present article we have shown the Polish adaptation of this method. The aim of Study 1 was to establish the internal structure of the RSSS-PL via exploratory factor analysis. Study 2 comprised a confirmatory factor analysis of the RSSS-PL items and several validity tests.

The EFA demonstrated a six-factor RSSS-PL structure, consistent with the original version. The scale items explained 73% of the RSSS-PL total variance – a percentage similar to that obtained by the authors of the original version (76%). Each RSSS-PL item had the highest factor loading on one particular factor. Three items of the Interpersonal subscale had slightly lower factor loadings. The likely reason is that they measure different types of social strains. All subscales had high reliability indices, comparable with those established for the original RSSS.

The confirmatory analysis confirmed a good fit of the six-factor model. The goodness-of-fit indices are similar to those obtained for the original method (χ^2 ($df = 284$, $N = 1141$) = 878.03, $p < .001$; CFI = .968, RMSEA = .42) (Exline et al., 2014). This means that the RSSS-PL structure has been confirmed. Both the total score and the subscales had high reliability and acceptable stability over time.

The study also included testing the validity of the RSSS-PL. As expected, the RSSS-PL subscales demonstrated moderate intercorrelations. This suggests that they measure different aspects of religion-related strains. The RSSS-PL subscales were related to the centrality of religion and to stress. Centrality correlated positively with Demonic and Moral, and negatively with Ultimate Meaning and Divine struggles. All struggle types correlated positively with stress. In two samples, despite different instructions being applied, Moral, Ultimate Meaning, and Doubt struggles turned out to be stronger than Demonic, Interpersonal, and Divine struggles. Exline and colleagues (2014) obtained similar results. This outcome lets us hope that the Polish adaptation of the Religious and Spiritual Struggles Scale is a valuable tool for the measurement of religious strains and that it can be applied in research on the functional aspects of religiosity.

Our study is not flawless. The main limitation is that it was conducted on a sample in which the vast majority were Catholics, who are the largest religious group in Poland. For any other religious affiliations, it would be necessary to test the factorial structure and reliability of the scale separately. Second, the RSSS-PL requires deeper validity analyses. We limited our research to correlations between religious or spiritual struggle, centrality of religion, and stress. Exline, and colleagues (2014) applied both different measures of religiosity and mental health and other measures of religion-related strain to establish the validity of the RSSS. In this respect, the Polish adaptation requires further and deeper insight; what it needs in particular is an investigation of convergent validity. Finally, those who apply the RSSS-PL must be aware that it is a self-report measure. This means it is subject to all the limitations that mark such tools – some study participants, particularly those highly involved in religious matters, may not admit experiencing religion-related struggle because they may deem them morally bad.

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The preparation of the English version of *Roczniki Psychologiczne* (Annals of Psychology) and its publication in electronic databases was financed under contract no. 753/P-DUN/2017 from the resources of the Minister of Science and Higher Education for the popularization of science.