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# Comparing measures of religiosity and spirituality in the experience of emotions – Development and Validation of a Scale of Non-Spiritual Religiosity

**Abstract:** This study aimed to compare measures of religiosity and spirituality in the experience of positive and negative emotions. For this purpose, a measure of non-spiritual religiosity (Religious Sense Scale) was developed. Method: The study has been conducted on a sample of 279 participants aged between 19 and 69 ( $M=24.42$ ,  $SD=9.463$ ) who completed a questionnaire that included the Religious Sense Scale, the Portuguese version of the Spiritual Well-being Questionnaire and the abridged Portuguese version of the Positive and Negative Affect Schedule. Findings: It was found to have excellent metrical properties for the measurement of religiosity or “religious sense”. Religious individuals differ from spiritual ones in the experience of emotions: spirituality tends to a greater experience of positive affect and religiosity to negative affect.

**Keywords:** Religiosity, Spirituality, Emotions, Scale, Psychology

### Introduction

For over 50 years, religiosity has been a focus of psychometric development in psychology. The psychology of religion progressed from the advance of the first religious scales (Glock & Stark, 1966; Rohrbaugh & Jessor, 1975), especially in an era when evidence-based psychology was in demand. Spirituality also received attention from psychology and was associated with religion (Paloutzian & Park, 2015; Pargament, Exline & Jones, 2013). Contemporary concepts of spirituality and religiosity presuppose that both constructs overlap (Koenig, 2009; Zinnbauer & Pargament, 2005), which makes their psychometric demarcation difficult (Kapuscinski & Masters, 2010). Handal et al. (2015, 2017) have tried to verify to what extent spirituality and religiosity were mutually independent. The authors concluded that there was a significant convergence between measures. However, this overlap seemed to be associated with the use of scales that assume spirituality and religiosity as metrically dependent (Handal et al., 2017). Studies such as Handal’s are important because it has not yet been possible to find a

consensus on the conceptualization of notions of religiosity and spirituality (Hill, 2015; Oman, 2015; Skrzypinska, 2014).

The comparison of measures of religiosity and spirituality could be better conducted by the development of new scales (Handal et al., 2017; Hill, 2005, 2015; Hill & Edwards, 2013; Kapuscinski & Masters, 2010). Attempts to construct scales of non-theistic spirituality have already been made (Piedmont, 1999; Daaleman & Frey, 2004), but there is a lack of studies that seek to develop measures of non-spiritual religiosity.

### Non-Spiritual Religiosity

The conceptual division between religiosity and spirituality began with the appearance of theoretical proposals that defend a non-theistic spirituality (Helminiak, 1996a; Stifoss-Hanssen, 1999; Reich, 2000). Until then, spirituality was defined as linked to religion: “[S]pirituality is the search for the sacred. Religiousness refers to a search for significance in ways related to the sacred” (Zinnbauer

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& Pargament, 2005). However, spirituality associated with religious concepts has been seen as restrictive, since it excludes cases where the experience of spirituality is not accompanied by religious practices (Saucier & Skrzypinska, 2006; Stifoss-Hanssen, 1999). It can be seen that atheists can also be spiritual (Comte-Sponville, 2008) and that there may be those who consider themselves “spiritual but not religious”, as well as “religious and not spiritual” (Palmisano, 2010; Saucier & Skrzypinska, 2006). Thus, the removal of theistic elements led to the view that spirituality is linked to human subjectivity (Assagioli, 1981; Kelemen & Peltonen, 2005), or as a dynamic human aspect toward an ontologically broader human existence, which involves cognition, personality traits and life attitudes (Skrzypinska, 2014). Spirituality may be in this sense a personal and pre-ritual ontological construct (Jung, 1999), associated with a humanized consciousness that does not have to relate to afterlife beliefs, to religious dogmas or to specific ritual practices (Assagioli, 1981; Bucke, 1991) – it could be both moral and empathetic (Bucke, 1991) and morality seems to be independent or distinct of theism and of assumptions related to the notion of the divine (Laranjeira, 1907; Skitka et al., 2018). In its turn humanness may be the result of the evolution of human consciousness in function of a progressive humanity (Hampton, 2010; Miner, Dowson & Devenish, 2012) being transversal to theistic and secular/atheistic views (Comte-Sponville, 2008). Nonetheless, the notion of “religious but not spiritual” has not been debated. Religion can be strictly rational without the concurrence of mysticism or all human subjectivity (Comte, 2009). The most canonical definition of ‘religiosity’ is probably the one given by William James: “[T]he feelings, acts, and experiences of individual men in their solitude, so far as they apprehend themselves to stand in relation to whatever they may consider the divine” (James, 2008, p.31). Whether religion relates to the divine or to an idea of intelligence, there seems to be a consensus that religiosity reflects a praxis, a certain psychological movement that is teleological in nature (i.e. oriented towards an objective) and whose end lies in a moral and eschatological purpose of the human condition (c.f. Argyle & Beit-Hallahmi, 1975; Dollahite, 1998; James, 2008; Peteet, 1994).

Religiosity has been evaluated by measures that are based on the “religification” of other variables such as spirituality and coping. The “religification” of non-religious variables can be an easier way to deal with a complex topic and be behind a multitude of scales that do not evaluate a religiosity per se but that can be considered para-religious in terms of its object of measurement (van Wicklin, 1990): religious coping; church frequency; religious history, mystical and spiritual beliefs, among others. When it comes to psychometrics, spirituality and religiosity are taken together (Hill, 2005, 2015; Kaspućinski & Masters, 2010) and the use between one concept and another is still held from a pragmatic point of view (Oman, 2015). There is currently a gap on the psychometric study of non-spiritual religiosity.

## Emotional Life, Religiosity and Spirituality

Emotions are an integral part of living beings, stimulating a particular response that can be brief or prolonged, pleasant or unpleasant (Regard, 2014). Emotional life plays a major role in psychological characterisation because it is a general feature of human mental functioning: no human sensation, either as part of perception or as a self-reflexive activity, can occur without affecting or agitating psychological life in a specific manner (Palmade, 1980).

The psychological characterisation of religious individuals in relation to their emotional life is still a subject that deserves further attention. The emotive life of religious individuals is perceived indirectly by association with pro-social issues or the quality of life (e.g. Ju et al., 2018; Van Cappellen, Saroglou & Toth-Gauthier, 2016). Still, few researches can be found on this subject. One study by Ramsay et al. (2019) suggested that positive emotions are mediators of the relationship between religiosity and quality of life. Another study comparing Jewish and Christian participants revealed the existence of an association between religiosity and positive emotions through cognitive reappraisal (Vishkin, Ben-Nun Bloom & Tamir, 2019). Abdel-Khalek & Naceur (2007) also sought to verify whether religiosity is associated with positive emotions in a sample of 244 Muslim students, verifying that religiosity is associated with happiness.

There are also scant studies concerning emotions and spirituality. Van Cappellen et al. (2013) conducted two studies with a total of 185 participants in which they sought to verify whether spirituality was associated with positive emotions. The authors found that spirituality induces self-transcendent positive emotions. Two other studies sought to verify the extent to which religiosity and spirituality arouse self-transcendent positive emotions, and it was concluded that both religiosity and spirituality were associated with positive self-transcendent emotions like awe and appreciation of nature (Saroglou, Buxant & Tilquin, 2008). Overall, there is a lack of studies comparing spirituality and religiosity with emotional experiences.

## Study's Aim

The purpose of this research was to compare measures of religiosity and spirituality in the experience of emotions. As specific objectives we sought:

- a) To develop a scale of non-spiritual religiosity and study its psychometric properties;
- b) To verify to which extent religiosity and spirituality correlate;
- c) To investigate whether the measures of religiosity and spirituality differ in the experience of positive and negative emotions;
- d) To verify whether the average scores of religiosity and spirituality vary depending on whether one is a practicing believer, a nonpracticing believer, an atheist or a sceptic;

- e) To determine whether the average scores of religiosity and spirituality vary according to socio demographic variables.

## Method

### Procedures

A snowball sampling method was adopted in order to reach populations difficult to access (Faugier & Sargeant, 1997) – e.g. atheists and sceptics. This fact is important, since in the study of religious and spiritual matters it is theoretically essential to counterbalance believers and non-believers in order to avoid sampling errors. The sample was collected with the collaboration of a civic movement and lecturers in the Humanities. The research protocol was introduced to the participants who gave their informed consent and divulged the study among potential candidates. We asked 320 subjects to fill in, anonymously, a questionnaire that included the Religious Sense Scale, the Portuguese version of the *Spiritual Well-being Questionnaire* as well as an abridged Portuguese version of the *Positive and Negative Affect Schedule* and a short survey of socio-demographic data. There was 87.1875% response rate: 4 gave up the inquiry; and 37 questionnaires were invalidated because they were filled out carelessly (e.g. omitting responses to essential variables). The average questionnaire response time was between 10 and 15 minutes.

The criteria for inclusion took into account proficiency in Portuguese language and an age equal to or older than 17.

The analysis of statistical data was carried out using SPSS version 25.

### Sample

The study was conducted on a sample of 279 participants (30.8% males and 69.2% females), aged between 17 and 69 ( $M=24.42$ ,  $SD=9.463$ ). The sample was made of 56 Practising Believers (20.1%), 77 Non-Practising Believers (27.6%), 62 Atheists (22.2%) and 84 Sceptics (30.1%). The majority of participants were European Caucasians (92.1%) followed by Mestizos (5.4%), Middle-Eastern (1.1%), Asian (0.7%), Indian (0.4%), and unspecified (0.4%). With regard to education, 0.4% had primary education, 2.2% basic school, 52.3% finished high school, 30.9% had a college degree, 10% had a master's degree, 3.2% had a PhD, and 0.4% omitted their response. The majority of participants were single (85.3%), 6.5% were married, 2.5% were divorced, 3.9% were in a de facto union, 1.4% were separated, and 0.4% did not respond.

### Socio-Demographic Questionnaire

A socio-demographic data sheet was constructed for the purpose of this study comprising direct multiple answer questions on theistic attitude, ethnicity, school education and marital status. The age-related question was the only exception consisting in an open-ended option.

### Development of the Religious Sense Scale (RSS)

For the construction of a non-spiritual religiosity scale, we start from the following definition of religiosity: psychological attitude of a teleological nature concerning the human eschatology. In other words, this is a personal attitude that intends to capture through actions the experience or belief in a transpersonal principle – a divine, natural or human intelligence. This new definition is intended to be a comprehensive one, aiming to include not only followers of revealed religions (e.g. Christians, Jews, Muslims, among others) but also the adherents to the positivist religion founded by Comte (2009), which is based on atheism. The contemporary challenges to the conceptualization of religiosity go through the framing of the non-theistic symbolism of secular religious views in comparison to mystical or theistic religions (Streib, 2008; Streib & Hood, 2013; Streib & Klein, 2013). In this regard it is possible to see that both atheists and sceptics can share moral and ethical beliefs about the ultimate end of humanity and be able to believe in an intelligent principle in the universe that does not have to be divine or supernatural (Streib & Klein, 2013). Atheists and sceptics may also participate in secular rites that take on a philosophical rather than a mystical character toward this ultimate end (Pasquale, 2007; Streib & Klein, 2013). Considering this, previous scales of religiosity (Hill & Hood, 1999; Hill & Edwards, 2013) are not inclusive of the growing secular movement that not only advocates spirituality and religiosity as distinct phenomena (Heelas et al., 2005); it also admits the possibility of atheistic religion.

Thus, after reviewing the literature on the subject, eight aspects that make up the scale were obtained:

- 1) Belief in an Intelligent Principle or in the Divine – religious practices presuppose a belief in something underlying human life itself (in its most limited aspect) and events in the world/universe (in its broadest aspect) which may be divine in nature or otherwise a non-anthropomorphic intelligence/principle (Argyle & Beit-Hallahmi, 1975; Comte, 2009; Dollahite, 1998; Fowler, 1995; James, 1919, 2018; Koenig, 2008, 2009; Peteet, 1994; Reich, 2003; Stein, 2011; Zinnbauer & Pargament, 2005);
- 2) Sacred – from Latin sacer, i.e. consecrated, is comprehended as personal sanctification resulting in the bond between a person and an intelligent principle or the divine, a bond that is special and is reflected in a feeling of the faultlessness of the consecrated self (James, 2008; Koenig, 2008, 2009; Zinnbauer & Pargament, 2005; Pargament, 2013);
- 3) Faith – from Latin fide, i.e. trust, which applied to the religious context takes on a strictly pragmatic meaning, namely, at the level of the response of the intelligent or divine principle towards the individual, especially in the

mitigation of concerns over safety and other personal needs (Fowler, 1995; James, 1919; Stein; 2011; Reich; 2003);

4) Allegiance – the adopted religion must resonate in the individual's persona, triggering a feeling of personal commitment to the same religion (James, 1919, 2008);

5) Religious Conviction – the precepts of a given religion are understood by the individual as guidelines for personal conduct (James, 1919, 2008);

6) Moral Obedience – compliance or adherence to standards of conduct set by a given religion (James, 1919, 2008);

7) Ritualism – personal practice towards the intelligent or divine principle (Argyle & Beit-Hallahmi, 1975; Comte, 2009; Dollahite, 1998; James, 1919, 2008; Peteet, 1994);

8) Prayer – personal communication of a religious individual with the intelligent or divine principle (James, 2008; Ladd & Spilka, 2013; Reich, 2003; Zinnbauer & Pargament, 2005).

Para-religious notions (that go beyond the scope the present definition of religiosity) were excluded from the revised literature – e.g. spirituality, congregational satisfaction or theistic orientation. This exclusion complied with the assumptions of the conceptual demarcation between spirituality and religion (Heelas et al., 2005; Saucier & Skrzypinska, 2006), comprehended the possibility of atheistic religiosity (Pasquale, 2007; Streib & Klein, 2013), and sought to avoid the 'religification' of variables associated with domains of life, as criticized by van Wicklin (1990).

The eight *items* are given ordinal answers (1 – I disagree to 5 – I fully agree) and the result of the RSS scale data is obtained by the sum of the scores given, divided by the total number of *items*.

#### *Spiritual Well-being Questionnaire*

The Spiritual Well-being Questionnaire (SWBQ) – renamed SHALOM (Fisher, 2010) – is a multidimensional scale of spirituality based on the synergy between theism, environment, community sense and personal awareness.

In this study, we chose to use the Portuguese version of the SWBQ (Gouveia, Marques & Pais-Ribeiro, 2009; Gouveia, Pais-Ribeiro & Marques, 2012). This is a measure made up of 20 Likert-type items that assess four distinct domains: Personal, Community, Environmental and Transcendental. The Portuguese version shows a good internal consistency ( $\alpha=.89$ ) and the sub-scales likewise show good results: Transcendental ( $\alpha=.89$ ), Environmental ( $\alpha=.84$ ), Personal ( $\alpha=.75$ ) and Community ( $\alpha=.74$ )

(Gouveia, Marques & Pais-Ribeiro, 2009).

The choice of this particular questionnaire lies in the fact that there is no scale of religiosity adapted to the Portuguese population, nor any scale that treats a spirituality that is not theistic in its formulation (Da Silva, Pereira, Monteiro & Bartolo, 2019). The exception is the SWBQ, which evaluates both theism and personal spirituality separately. As far as the transcendental domain is concerned, this domain can be used independently to evaluate religiosity since the items that constitute it are theistic in nature (Da Silva, Pereira, Monteiro & Bartolo, 2019). The transcendental domain is composed of five items referring to a theism close to the notion of religiosity: 1) personal relationship with the Divine /God; 2) worship the Divine/the Creator; 3) oneness with the Divine/God; 4) peace with the Divine/God; and 5) Prayer. This domain was chosen to perform convergent validity with the RSS. Spirituality, on the other hand, is related to personal domain based on the idea that spirituality is a personal construct that is based on the conscience of self-sense humaneness (Assagioli, 1981; Bucke, 1991; Kelemen & Peltonen, 2005). Five items compose the personal domain: 1) sense of identity; 2) self-awareness; 3) joy in life; 4) inner peace; and 5) meaning in life. This domain has been chosen for the discriminating validity of the RSS.

#### *PANAS-VRP*

The reduced Portuguese version of PANAS (Galinha, Pereira & Esteves, 2014) is a psychometric scale that evaluates the positive and negative affects. The full version (cf. Galinha & Pais-Ribeiro, 2005) shows good internal consistency for positive affect ( $\alpha=.86$ ) and for negative affect ( $\alpha=.89$ ), and the abridged version of 5 items for positive affect and 5 for negative affect, carried out through a confirmatory factorial analysis, shows excellent data adjustment (Galinha, Pereira & Esteves, 2014).

The scale presents 10 items that describe the following emotional states: interested, enthusiastic, inspired, active, determined, nervous, afraid, frightened, guilty and tormented.

### Findings

In order to evaluate RSS construct validity an Exploratory Factor Analysis (EFA) was chosen using maximum likelihood analysis. Bartlett's sphericity test, for calculating the overall significance of all the correlations within the correlation matrix, was significant ( $X^2(28)=2072.516, p\leq.001$ ), indicating that it was appropriate to use the factor analytical model on this set of data. The Kaiser-Meyer-Olkin test for sampling adequacy indicated that the strength of the relationship among variables was high ( $KMO=.905$ ) being it acceptable to proceed with the analysis. An oblique (nonorthogonal) rotation, namely a direct oblimin technique, was performed since factors were expected to be correlated. Cut off points were .40 for factor loadings and 1.00 for eigenvalues. Only one factor was extracted which explains a total of 71.622% of the RSS's variance (see table 1).

Table 1 – Pattern Matrix for Religious Sense Scale and Item Retention

Scale Items	Factor	Communalities
<b>Faith</b>	.890	.792
<b>Allegiance</b>	.890	.792
<b>Sacred</b>	.871	.759
<b>Prayer</b>	.862	.743
<b>Moral Obedience</b>	.848	.719
<b>Religious Conviction</b>	.816	.665
<b>Belief in an Intelligent Principle</b>	.802	.643
<b>Ritualism</b>	.785	.617
<b>Eigenvalue</b>	5.730	

Note – Extraction Method: Maximum Likelihood Analysis, Rotation Method: Direct Obimin

As for the reliability of the RSS, the calculation of Cronbach's alpha revealed excellent internal consistency ( $\alpha=.94$ ).

Moving on, then, to convergent validity, Spearman's rank-order correlation was applied in order to determine the degree of association between the general RSS's index and the Transcendental Domain of the SWBQ. This Transcendental Domain, as mentioned above, shows what may be considered a theistic component theoretically close to a religiosity. A Spearman correlation study, between the general RSS's index and the other SWBQ domains, was also carried out to assess the theoretical adequacy of the conceptual independence of religiosity from the concept of spirituality. Therefore, the general index of the RSS correlated on the threshold of very strongly with the Transcendental Domain ( $r=.869$ ;  $p\leq.001$ ); whereas with other spiritual domains its association was weak, in particular with the Environmental Domain which had the lowest correlation value (see Table 2).

The practical validity of the RSS was assessed by means of a predictive analysis carried out by simple linear regression to predict Transcendental Domain's score based on the index of RSS. It was noted that the religiosity of the RSS predicted "theism" in the Transcendental Domain [ $F(1, 277)= 977.276$ ,  $p\leq.01$ ] with  $R^2 .779$  and  $\beta=.883$ , thus confirming that the predicted theistic position index is equal to  $.323 + 1.010$  when "theism" is measured by religiosity. Reversing the assessment to determine whether the "theism" of the Transcendental Domain predicts the religiosity of the RSS, it was noted that the predicted religiosity index is  $.208 + .771$  when the religiosity of the RSS is measured by the Transcendental Domain's index. Another linear regression was carried out in order to verify the extent to which religiosity predicts spirituality. RSS's religiosity predicted the spirituality of the Personal Domain [ $F(1, 277)= 33.956$ ,  $p\leq.01$ ] with  $R^2 .116$  and  $\beta=.330$ . Participants predicted spirituality is equal to  $3.104 + .237$  when spirituality is measured through

Table 2 – Correlation between Religious Sense Scale and SWBQ Domains

Spearman's rho		General Index - SWBQ	Personal Domain	Community Domain	Enviromental Domain
Religious	Coef. C.	.587**	.281**	.219**	.135*
Sense	Sig.	.000	.000	.000	.024
(RSS)	N	279	279	279	279

Note – \*  $p\leq.05$  \*\*  $p\leq.001$

religiousness. On the other hand, spirituality also predicted religiousness: the predicted index of religiosity is equal to  $.416 + .460$  when religiousness is measured by spirituality.

Additionally, we sought to verify if both religiosity and spirituality scores vary according to theistic postures, gender and education. RSS' scores were tested for normality with a Shapiro-Wilk test. It was verified a significant departure from normality,  $W(279)=.888$ ,  $p < .001$ . Then, a Kruskal-Wallis test was conducted to compare the effect of theistic attitudes as a practising believer, non-practising believer, sceptic and atheist, on RSS' scores. An analysis of variance showed that the effect of theistic attitudes on RSS' scores was significant,  $H(3)=194.987$ ,  $p < .001$ . The descriptive analysis of the RSS scores as a function of theistic attitudes is shown in Table 3.

Another analysis of differences between averages using the Kruskal-Wallis test revealed that there are no statistically significant differences in religiosity indices in regard to education,  $H(2)=.628$ ,  $p = .731$ . As for gender, a

Mann-Whitney test indicated that there were no differences between males and females in the scores obtained for religiosity,  $U=7478.000$ ,  $p = .185$ .

Similarly, we sought to check whether the average of the scores in the SWBQ also vary as according to the theistic attitudes. A Shapiro-Wilk test was used to check the normality of the SWBQ overall scores. It was not confirmed a significant departure of the overall scores from normality,  $W(279)=.993$ ,  $p = .207$ . Using a One-Way ANOVA it was verified that there is a significant effect of theistic attitudes on SWBQ general scores,  $F(3, 275)=24.662$ ,  $p < .001$ . Applying the same statistical test, we also confirmed that the Personal Domain scores vary according with theistic attitudes,  $F(3, 275)=5.584$ ,  $p < .001$  (see Table 4).

On the other hand, it was verified that Personal Domain mean scores do not differ according to the educational level,  $F(2, 259)=1.537$ ,  $p = .217$ . An independent-samples t test was conducted to compare the Personal Domain scores in males and females participants.

Table 3 – Differences in RSS Scores According to Theistic Attitudes

	N	Mean	SD	Min.	Max.
Practising Believer	56	3.47455	,839419	1.625	5.000
Non-Practising Believer	77	2.37370	,667094	1.250	4.625
Atheist	62	1.11935	,257328	1.000	2.375
Sceptic	84	1.56012	,527156	1.000	3.125
Total	279	2.07097	1,030342	1.000	5.000

Note: Religious Sense Scale – Higher scores indicate strong religious sense (Range 1-5)

Table 4 – Differences in Spirituality (Personal Domain) Scores According to Attitudes

	N	Mean	SD	Min.	Max.
Practising Believer	56	3.6536	.50162	2.50	4.80
Non-Practising Believer	77	3.5481	.46921	2.20	4.70
Atheist	62	3.3887	.63274	2.10	5.00
Sceptic	84	3.5607	.55969	1.80	5.00
Total	279	3.5376	.54698	1.80	5.00

Note – SWBQ's Personal Domain – Higher scores indicate strong personal spirituality (Range 1-5)

There was not a significant difference in scores for males and females,  $t(277) = -.365, p = .526$ . No analysis was carried out for differences between religiosity and spirituality scores in relation to ethnicity, since 92.1% of the sample was made up of Caucasian Europeans (257 participants in  $n=279$ ) with a statistically insufficient number of the remaining ethnicities, namely 15 of mixed race, 3 from the Middle-East, 2 Asians, 1 Indian and 1 unspecified. Equally, the same social and demographic data did not allow us to assess the existence of differences between religiosity and spirituality scores according to marital status, since the sample consisted mostly of unmarried individuals (85.3%) whereas the remaining participants with different marital status were not statistically significant when analysed separately.

To complete this presentation, it remains to verify whether religiosity and spirituality imply distinct emotional properties. While carrying out Spearman's rank-order correlation, it was seen that religiousness is associated neither with positive ( $r = .095; p = .117$ ) nor with negative ( $r = .033; p = .588$ ) emotions. Although there was no correlation with positive or negative emotions, it is possible that religiousness correlates with particular emotional states evaluated by the PANAS-VR. It was confirmed that religiousness has been associated positively just with the feeling of 'activity', though with a weak correlation value ( $r = .137; p \leq .05$ ). It is also noteworthy that, although the correlations of religiousness to negative emotions were not statistically significant, they proved positive for the following states: afraid ( $r = .052; p = .391$ ), frightened ( $r = .046; p = .445$ ), guilty ( $r = .056; p = .353$ ) and tormented ( $r = .037; p = .538$ ) with the exception of nervous ( $r = -.010; p = .867$ ). On the other hand, the statistics revealed that the Personal Domain's spirituality was positively associated to a moderate degree with positive emotions ( $r = .585; p \leq .001$ ) and negatively with negative emotions ( $r = -.310; p \leq .001$ ). Specifically, the correlation between spirituality and the feeling of action is moderate ( $r = .509; p \leq .001$ ) and weak in relation to feelings of interest ( $r = .423; p \leq .001$ ), enthusiasm ( $r = .444; p \leq .001$ ), inspiration ( $r = .363; p \leq .001$ ) and determination ( $r = .454; p \leq .001$ ). Levels of correlation between spirituality and negative emotions were inverse and low, namely, with nervousness ( $r = -.266; p \leq .001$ ), fearfulness ( $r = -.193; p \leq .001$ ), fright ( $r = -.259; p \leq .001$ ), guilt ( $r = -.159; p \leq .01$ ) and torment ( $r = -.264; p \leq .001$ ).

## Discussion

Present study's findings suggest that the RSS is a scale that reflects what might be referred to as religiosity or, alternatively, 'religious sense'. The starting point for the development of the RSS was the assumption that religiosity is a construct with a defined conceptual identity and the fact that only one factor was extracted during statistical processing, which in turn has been aligned with high internal consistency ( $\alpha = .94$ ), suggests that the scale has excellent metrical properties. Moreover, we noted that the obtained factor explains 71.622% of the variance, which

is hardly surprising considering that average scores on the scale vary significantly according to theistic attitudes. The average difference between a practising believer and a non-practising believer is superior to one score point and that between an atheist and a non-practising believer is also one point, whereas it is two points when comparing atheists and practising believers (see Table 3). The average difference between atheists and sceptics is not very significant, yet it is almost half a point. Regarding this matter, it can be seen that the average scores of religiosity and spirituality tend to be more congruent in practicing believers and progressively more discrepant when comparing non-practising believers, atheists and sceptics (compare Tables 3 and 4). The data confirmed the following two points:

- a) Amplitudes between the scores for religiousness and spirituality are mutually disjoint, which suggest the conceptual independence of both constructs;
- b) It is the form and not the content of the participants' theistic beliefs that is a determining factor both for the amplitude of the scores and for the level of convergence or divergence between the values for religiousness and spirituality. By form we mean Practising Believer, Non-Practising Believer, Atheist and Sceptic; and by content we mean Christian, Jewish, Shintoist, etc. It may be said that the theistic attitude of the participants is a parasite variable and should be taken into account in any study on religiosity and/or spirituality.

Continuing with the psychometric properties of RSS, it is relevant to refer to its practical validity, i.e. when measuring religiosity. As already mentioned in this article, the SWBQ's Transcendental Domain reflects what may be considered a "theistic feeling". Given this proximity, we decided to check whether the RSS's index predicts the theistic feeling of the Transcendental Domain. It was found that the RSS predicted the score obtained in the Transcendental Domain with a likelihood that cannot be obtained inversely, suggesting that the RSS has superior metrical relevance for religiosity in comparison to the SWBQ. In its turn, the relationship between religiosity and spirituality is contingent: the correlative values between both constructs were weak and therefore did not allow a shared conceptual identification – i.e. different correlation forces relate to different types of relationship between variables (Mukaka, 2012) and, even though religiosity and spirituality were positively associated, the weak correlation index was not sufficient to support a conceptual union in our view. It was also noted that an increase in spirituality predicted an increment in religiosity with a superior effect when one seeks to predict spirituality through religiosity. Thus Koenig's (2008) theory, which claims that spirituality is a conceptual degeneration of religiosity, is here rejected. The opposite is clear: religiosity is a behavioural product of spirituality, a psychological attitude that seeks to reproduce

through actions the experience of spirituality (Jung, 1999). This data also seems to support Skrzypinska's (2014) idea that spirituality develops from cognitive, personal and subjective processes, to a more complex human phenomenon, which may involve religious attitudes.

So, we may say that the RSS has excellent psychometric qualities, despite the fact that *the theistic attitude of the participants is a parasitic variable that may be responsible for significant fluctuations in the obtained scores*. Asking participants about their personal attitude in relation to religion may be decisive in avoiding bias in the overall score.

When interpreting the RSS scores, one should take into consideration the differences with regard to theistic attitudes. Atheists tend to manifest incipient religiosity or not to be religious – this notion of incipient religiosity in atheists is interesting and is corroborated by the existence of the religion of humanity, which is atheistic (Comte, 2009). About this matter, we are aware that the greater the spirituality, the greater the religiosity and spiritual atheists can manifest religious tendencies even without believing in the Divine. Furthermore, sceptics are not the most consistent group: they can either not score or score arbitrarily on items, which leads to scores ranging from incipient religiosity to weak and moderate religiosity – this fluctuation could be due to the feeling of uncertainty within these individuals' personal attitude. Non-practising believers will not score fully in religiosity and can hardly grant higher than moderate values for a religious practice. Finally, practising believers are the most likely to get higher scores although, in exceptional cases, lower scores may be shown – which can be explained by the fact that everyone has their own vision of their personal attitude, using criteria that may not be consistent with those of other individuals. Thus, the interpretation of RSS scores is as follows: the minimum of 1 refers to “absence of religious behaviour/feeling” and the maximum of 5 to “remarkable religiosity” or “religious extremism”; a score inferior to 2 and greater than 1 reflects “incipient religiosity”; scores between 2 and 3 “conventional religiosity”; and a score of 4 “average religiosity”. The mean of the participants on this study scored at the level of a conventional religiosity.

Finally, it was noted that religious and spiritual individuals have different emotional profiles. Religiosity had no impact on the experience of emotions, except for the feeling of action; which is consistent with the fact that religiosity refers to a praxis, and is strictly teleological in nature. Interestingly, religious individuals have shown a certain tendency to experience negative emotions with the exception of nervousness; however this association is based on low correlative values without statistical significance. From this it is clear that religiosity per se certainly does not suppress negative emotional experiences. By contrast, spirituality moderately affects the experiencing of positive emotions and slightly mitigates the experiencing of negative ones. Considering the existence of “religious but not non-spiritual” subjects (Palmisano, 2010; Saucier & Skrzypinska, 2006), we understand that religiosity in these cases may be considered empty of emotional content, i.e. *religiosity*

*without the concurrence of spirituality is utilitarian, sterile in the development of emotional life, and that religiosity accompanied by spirituality is attitudinal, intrinsic*. Thus, the data corroborates the Allport and Ross (1967) religious orientation model. We also found that these results differ from those discovered by other authors (Abdel-Khalek & Naceur, 2007; Ramsay et al. 2019; Vishkin, Ben-Nun Bloom & Tamir, 2019) – it is acceptable that spirituality combined with religiosity can give to “religious and spiritual” individuals positive emotional experiences, but considering only “religious and spiritual” subjects might result in the neglect of fundamental aspects on the emotional experience of subjects with other theistic attitudes.

Therefore, *religiousness is not the same as spirituality*. However, what does this mean in psychology? According to these results, Oman's (2015) idea of spirituality and religiosity as “*family resemblance concepts*” makes no sense and his proposal for ‘pragmatic’ use between one construct and another has no foundation. Instead, Skrzypinska (2014) was right in stating that an appropriate understanding of spirituality and religiosity requires the operationalization of both concepts and their unambiguous use. The data also suggest that Pargament's et al. (2013) integrative proposal for a psychology of religion and spirituality should be reviewed, namely: 1) Conceptualization; 2) Methodological Guidelines; and 3) Clinical Assessment. Concerning the revisions to be made, we propose some recommendations for investigations in this field:

- a) A conceptual review of the current models of religiosity, working towards its conceptual autonomy in relation to spirituality – and vice versa;
- b) Consideration of the participants' theistic attitude as a significant parasitic variable;
- c) Attention to a differential psychology between religious individuals and spiritual ones.

From these findings it can also be considered that the debate on a separate psychology of religion and psychology of spirituality was not closed (cf. Doran, 1996; Emmons & Crumpler, 1999; Helminiak, 1996a, 1996b; Hill, 1999; Pargament, 1999a, 1999b; Reich, 2000; Richardson, 1996; Stifoss-Hanssen, 1999). Efforts should too be made to rethink the state of the art of investigations into religiousness and spirituality.

In any case, this study has some limitations. The sample has a partial representativeness. Religiosity and spiritual scores did not vary according to gender and education, however, we were unable to determine the impact of ethnic-cultural differences – the majority of the participants were Caucasian Europeans (92.1%). The same can be said for marital status, given the preponderance of unmarried individuals (85.3%). The mean age of the

participants is 24 years, meaning that the sample was mostly composed by young adults – i.e. there is a lack of representation of other age groups. These limitations may be explained by the sampling method applied: snowball sampling relies on the referencing of subjects by other participants with whom they usually share personal characteristics and traits, which may result in a sampling bias (Faugier & Sargeant, 1997). The use of SWBQ is also not exempt from criticism – some authors suspect the notion that spirituality can be associated with variables of well-being and understand that scales of spiritual well-being should be questioned (Garsen, Visser, & De Jager Meezenbroek, 2016; Migdal & MacDonald, 2013; Koenig, 2009). Still, of the 20 items that make up the SWBQ only one – developing joy in life (item 14) – suggests a direct link to the concept of well-being (De Jager Meezenbroek et al., 2012) and its use is therefore admissible in investigations of emotional well-being (Garsen, Visser, & De Jager Meezenbroek, 2016). Assuming that SWBQ is a measure that confuses spirituality with well-being, it is understandable that the results of this study which associated spirituality with positive emotions may be tautological for some authors (MacDonald, 2017, 2018; Koenig, 2008). In spite of this, the rejection of a spirituality that is associated with well-being has led to the defence of a spirituality dependent or linked to the notion of religiosity (cf. Koenig, 2008), which does not find consensus among other authors (Assagioli, 1981; Saucier & Skrzypinska, 2006). The perspective on this problem is not consensual (Hill, 2005, 2015) and the very definition of spirituality is not definitive, with disagreement on the preponderance of the role of religion in the conception of spirituality (Koenig, 2008; MacDonald et al, 2015; Zinnbauer & Pargament, 2005) as well as on the formulation of a non-theistic spirituality (Daaleman & Frey, 2004; Piedmont, 1999). Therefore, while this paper does not address the conceptual limitations of spirituality, these must be taken into account in the extrapolation of our data. Additionally, we have the cross-cultural applicability of this study's findings. This study is restricted to the Portuguese context and the influence of cultural factors on the interpretation of SWBQ and RSS scores cannot be ruled out. Gouveia, Pais-Ribeiro and Marques (2012) observed that the Portuguese version of the SWBQ might benefit from linguistic revision in the wording of the scale and in the expression of some items, in spite of having a good factorial performance. However, the authors considered that this issue is not based on sample characteristics but on the ambiguity of abstract terms present in some items (Gouveia, Pais-Ribeiro & Marques, 2012). The probable ambiguity of some terms could render the results of SWBQ more susceptible to personal views on religion and spirituality, which may differ from one individual to another. This leads us to a cultural difficulty that can be placed in the interpretation of the results of both RSS and SWBQ and that relates to the difference between secular cultures in different countries. The possible difference between Americans and Europeans in the prevalence of atheism and scepticism as well as in the secular interpretation of both spirituality

and religiosity is not excluded (Streib & Klein, 2013) – a difference that has already motivated discrepant opinions about the conceptualization of spirituality (Pargament, 1999b; Stifoss-Hanssen, 1999). In more theistic societies there may be a greater predisposition to associate religiosity with spirituality, as is the case in Italy (Palmisano, 2010) and possibly Portugal (Census, 2011); contrary to what may happen in more secular countries. Thus, knowledge of the secular characteristics of a population seems to us to be relevant to understand both notions of religiosity and spirituality, especially in the possible fluctuations that may occur in the scores measuring these two constructs. To conclude these observations, a confirmatory factorial analysis (CFA) could say something more about the model of religiosity with which we worked. In this study we only intend to understand the dimensionality of the construct from an exploratory point of view. The resolution of this limitation is dependent on future studies with a different sample.

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