

Research Article

Development and Psychometric Properties of a Scale of Non-Theistic Spirituality: Contributions of Spirituality to the Locus of Control

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Abstract

The present study aims to compare measures of spirituality and religiosity in the experience of the locus of control. For this purpose a scale of non-theistic spirituality (Spiritual Awareness Scale) was developed to better distinguish spirituality from religiosity. The sample included 279 participants, 86 males (30.8%) and 193 females (69.2%), aged between 17 and 69 ($M = 24.42$, $SD = 9.463$). The results showed that the Spiritual Awareness Scale has acceptable psychometric characteristics as also good convergent and practical validity. The findings revealed that spirituality and religiosity affect the perception of the locus of control in opposite ways: the greater the spirituality, the greater the feeling of personal control over life events; and the greater the religiosity, the more the feeling of lack of control. These results raise important questions about the operationalization of both concepts of spirituality and religiosity.

Keywords: Spirituality, Religiosity, Locus of Control, Scale, Psychology

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The study of spirituality has received increasing attention from psychology over the past 30 years. However, there is no agreement on the definition of spirituality, especially to its relationship with religiosity. To many it is widely accepted that spirituality is transversal to religiosity and that there is a conceptual dependence between the two constructs (Koenig, 2009; Oman, 2015; Pargament, 2013). In other hand, this view has been disputed by some authors who advocated the conceptual distinction of the spiritual domain from the religious one (Hay & Socha, 2005; Saucier & Skrzypinska, 2006; Skrzypinska, 2014). Thus, the possible existence of distinct concepts of spirituality gives rise to the problem of knowing whether or not spirituality is being properly assessed by the inventories at our disposal (Da Silva et al., 2019; Gorsuch, 1990; Hill, 2005, 2015; Hill & Edwards, 2013; Kapuscinski & Masters, 2010). In order to solve this, Handal et al. (2017) conducted a study in which they sought to verify to what extent spirituality is conceptually independent of religiosity by comparing measures that assess both constructs. The authors concluded that these constructs actually converge and that the hypothesis of their conceptual independence is unsupported by the results. Even so, it was found that the spirituality measures used in the research were all based on theistic models and that the sample was predominantly of religious students (Handal et al., 2017).

Given the importance of the conceptualisation of spirituality and religiosity in psychometric development, studies such as Handal's are relevant to the state of the art. Considering Handal et al. (2017) findings, it was supposed to expand their study by creating a measure of non-theistic spirituality, aiming to contribute to a new avenue of research. It was also intended to compare spirituality and religiosity in relation to the locus of control in order to clarify even more the conceptual demarcation between constructs.



Non-theistic Spirituality

For more than 30 years there has been discussion about the conceptualisation of spirituality, with authors divided between theistic and non-theistic models. [Pargament \(1999\)](#) in particular rose to prominence with a seminal essay that sparked an academic debate between the proponents of a spiritual theism and the advocates of a conceptually independent spirituality. In his essay, the following definition of spirituality is given:

I see spirituality as a search for the sacred [...] encompasses concepts of God, the divine, and the transcendent but it is not limited to notions of higher powers [...] Even if beliefs in a personal God fade, other objects of significance may remain sanctified. ([Pargament, 1999, p.12](#))

This definition has been criticized. Two authors voiced particularly sharp criticisms: [Hans Stifoss-Hanssen \(1999\)](#) and [Helmut Reich \(2000\)](#). [Stifoss-Hanssen \(1999\)](#), reflecting the European debate on religious and spiritual issues in psychology, ended by challenging the very notion of “sacred”: That is, if we do not conceive the search for meaning as sacred per se, that would empty the word sacred of its meaning [...] ([Stifoss-Hanssen, 1999, p.28](#)).

Contributing to the discussion, [Reich \(2000\)](#) calls Pargament's arguments into question, defending the idea that religion, religiosity and spirituality are distinct concepts. In Reich's opinion ([2000](#)) there's the need to avoid theism in order to embrace a broader concept of spirituality that accepts atheists as spiritual subjects. In any case, the conception of a theistic spirituality in psychology has become popular, where the spiritual and religious domains, although distinct, are considered mutually dependent along with other theological notions as faith and sacred ([Harris et al., 2017](#)). Even so, according with [Harris et al. \(2017\)](#), it turns out that the definitions provided for the two constructs were generally based on poor formulations. Similarly, it can be seen that the different definitions of spirituality, although close in their theistic content, are incongruous with each other when operated in psychometric measures ([Da Silva et al., 2019](#)). It is possible that poor concept definition is related to the fact that a convergence between theology and psychology is a risky task since they are disciplines whose objects of study are different in nature. Nevertheless, given the observations of [Stifoss-Hanssen \(1999\)](#) and [Reich \(2000\)](#), it is understandable that a theistic formulation may be insufficient for a more comprehensive conception of spirituality in psychology.



Actually, in the concept of “spiritual but not religious subjects” there is a clear split between spirituality and religiosity (Ammerman, 2013; Lace et al., 2019; Saucier & Skrzypinska, 2006), visible in the idea that atheists may also be spiritual. The notion of “atheistic spirituality” presupposes that atheists may have a spiritual life without adopting a religious creed (Comte-Sponville, 2008; Crocker, 2015). According to Comte-Sponville (2008), all religions are spiritual but not all forms of spirituality are religious, and to be spiritual is to assume the immanent character of what is human. This character refers to a personal experience of plenitude, unity, serenity, acceptance, among other aspects that are intrinsically human (Comte-Sponville, 2008). In spite of this, the spirituality of atheists has been a largely neglected subject and little discussed (Streib & Klein, 2013), both at the level of the conceptualization as well as at the level of psychometric development. This neglect can be partly explained by the fact that the current psychometric measures available are mostly based on models of theistic spirituality (c.f., Kapuscinski & Masters, 2010), while there is a tendency to affirm the integration of a psychology of spirituality and religion (e.g., Oman, 2015; Pargament et al., 2013). Taking this into consideration, the assessment of “atheistic spirituality” in psychological investigations will best be carried out using a model that does not discriminate between the spirituality of atheists and that of believers – the non-theistic model. It is from a concept of spirituality beyond religiosity that one may derive a spirituality that embraces atheists, sceptics and believers – important when one intends to verify the degree of convergence between spirituality and religiosity. This makes particular sense in a social context, such as the European one, where there is a growth in the number of secular postures as opposed to religious ones (Streib & Klein, 2013). Within the context of this study, was adopted Hay and Socha's (2005) understanding that spirituality is a natural, sociobiological, intrinsically human phenomenon, distinguishable from religiosity. From Nye and Hay's (1996) point of view, one can understand spirituality as a “spiritual awareness” that involves attention to the here and now, to a sense of mystery or awe, to the emotional life and value making. This spiritual awareness seems to be linked with a “relational consciousness” based on an intersubjectivity that shortens the psychological distance between the subjects to themselves and to their environment (Hay & Nye, 2006; Hay & Socha, 2005; Nye & Hay, 1996).

Locus of Control, Spirituality and Religiosity

Locus of control is a concept that appears for the first time in the work of the American psychologist Julian Rotter, formulated in his theory of social learning (Rotter, 1982). It



refers to the individual perception of the degree of personal control over the elements and events of life, reflecting an internalising or externalising tendency, in the latter case with regard to others or to chance events. The association between the locus of control and spirituality or religiosity is unsatisfactory. A few studies have sought to establish a correlation between religious or para-religious aspects (beliefs in God, liturgy adherence, devout affiliation) and the locus of control (e.g., [Fiori et al., 2006](#); [Ryan & Francis, 2012](#)) but have provided an indirect association, because the measurements used did not differentiate both the internal and external locus of control. Studies that correlate spirituality and the locus of control are scarce and assume the locus of control as specific to chronic disease contexts and not in a broad sense. [Moreira et al. \(2016\)](#) discovered that the spirituality of ostomized patients affects the degree of personal control over health. By their turn, [Debnam et al. \(2012\)](#) found that spiritual beliefs have a diverse impact in health related behaviours. Other studies on spirituality deal indirectly with the locus of control through coping, and consider that spirituality contributes to a greater sense of self-control ([Frederick et al., 2016](#); [Krok, 2008](#); [Wong-Mcdonald & Gorsush, 2004](#)). In spite of this, the available studies deal with the notion of theistic spirituality and there is a lack of research that correlates the locus of control with non-theistic spirituality.

Study's Aim

The purpose of this study was to compare measurements of spirituality and religiosity. To this end, a measure of non-theistic spirituality was developed based on contemporary appraisals of spirituality. Additionally, it was sought to compare spirituality and religiosity scores with respect to the locus of control, thus allowing further discrimination of any differences that may exist between non-theistic spirituality and religiosity. As specific objectives:

- 1) To develop a scale of non-theistic spirituality and investigate its psychometric properties;
- 2) To ascertain the existence of correlation between the index of non-theistic spirituality and the index of religiosity;
- 3) To verify whether there are significant differences between spirituality and religiosity with respect to the locus of control;
- 4) To determine if there are significant differences, as regards spirituality, between practising believers, non-practising believers, atheists and sceptics;
- 5) To ascertain the impact of socio-demographic variables (age, education and



ethnicity) on spirituality.

Methodology

Procedure

The sample was collected in Portugal with the support of a Portuguese civic movement with no institutional ties and lecturers in areas of the Humanities from Porto's Faculty of Arts who made available this study in their faculty's social network in a person-to-person contact. Those who were interested have been invited to contact the investigator in charge and to participate in the study during the interval of their civic or university activities. A snowball sampling method was adopted. This method is often used to recruit hidden populations that are difficult for researchers to access (Faugier & Sargeant, 1997) – as it is the case of sceptics and atheists, considering that most of the Portuguese population professes a religious creed (Censos, 2011). In conducting the study, one concern was to ensure representativeness among practising believers, non-practising believers, sceptics and atheists in order to overcome the bias that a sample predominantly of believers might otherwise introduce to the results, as has already been demonstrated in other studies (e.g., Handal et al, 2017; Zinnbauer et al., 1997). To mitigate this effect, the study of Kimball et al. (2009) was taken into account, which concluded that individuals from Humanities, in special social sciences, tend to be more secular or less religious, as compared to those from scientific areas. Participants were introduced in person to the research protocol and, after their consent was given, asked to complete, anonymously, a questionnaire that included the Spiritual Awareness Scale (SAS), the Portuguese version of the Spiritual Well-being Questionnaire, Levenson's IPC (Internality, Powerful Others and Chance) Scale, the latter in order to assess internal and external locus of control, as well as a questionnaire of socio-demographic data. All questionnaires were in paper format and were filled out on-site. The data collection followed the ethical and deontological norms of the Portuguese Board of Psychologists (Ordem dos Psicólogos Portugueses). The criteria for inclusion were an age of 17 or older and proficiency in the Portuguese language.

Sample

The present study was conducted with a sample of $N = 279$ participants, 86 males (30.8%) and 193 females (69.2%), aged between 17 and 69 ($M = 24.42$, $SD = 9.463$). Socio-demographic data revealed that 20.1% of participants were practicing believers ($n = 56$), 27.6% were non-practicing believers ($n = 77$), 22.2% were atheists ($n = 62$),

and 30.1% were sceptical ($n = 84$). As for the level of education 3.2% had a PhD ($n = 9$), 10.8% had a Master's degree ($n = 30$), 30.8% had a Bachelor's degree ($n = 86$), 52.3% had completed secondary education ($n = 146$), 2.2% had completed basic education ($n = 6$) and 0.4% had completed primary education ($n = 1$). Regarding ethnicity, 92.1% were European-Caucasians ($n = 257$); 5.4% were Mestizos ($n = 15$); 1.1% were Middle-East Caucasians ($n = 3$); 0.7% were Asians ($n = 2$); 0.4% were Indians ($n = 1$); and 0.4% of the participants did not respond ($n = 1$).

Construction Procedure for the Spiritual Awareness Scale (SAS)

The Spiritual Awareness Scale (SAS) is a Likert type scale built to assess spirituality as transversal to believers, atheists and sceptics. In order to measure a non-theistic spirituality, it was sought to operationalize this concept by differentiating it from religiosity. It was considered religiosity as the individual's degree of relationship to an intelligent or divine principle established on the basis of culturally defined dogmas. This relationship presupposes adherence to liturgical practices, to belief in ethical-moral principles specific to a particular religion, and to private prayer as an indicator of the personal connection between the subject and the divine (c.f., [Argyle & Beit-Hallahmi, 1975](#); [Dollahite, 1998](#); [James, 1919, 2008](#)). With regard to non-theistic spirituality, this was understood to be the very nature of being human (c.f., [Bucke, 1991](#); [Hay & Socha, 2005](#)), a humanity that expresses itself in a sense of consciousness, which lies beyond institutional and socially established ethics and evolves within a progressive sense of humanity ([Hay & Nye, 2006](#); [Miner et al., 2012](#); [Nye & Hay, 1996](#)). Human development through consciousness has deep roots in spiritual traditions and refers us to today's techniques such as mindfulness – which has developed from studies on spiritually based practices such as meditation ([Assagioli, 1981](#); [Carrington, 1987](#); [Graf Durckheim, 1992, 2007](#); [Kabat-Zinn, 2012](#)) The relationship between mindfulness or mindful state and spirituality is significant and a possible correspondence of a spiritual nature can be found in this state ([Carmody et al., 2008](#); [Da Silva & Pereira, 2017](#); [Greeson et al., 2011](#)).

Thus, it was accounted the literature on the psychology of spirituality, which respects: a) the conceptual separation between spirituality and religiosity ([Ammerman, 2013](#); [Hay & Socha, 2005](#); [Saucier & Skrzypinska, 2006](#)); and b) spiritual experiences that are transversal to believers and non-believers. In this respect, it has been found that national ([Da Silva et al., 2019](#)) and international psychometric proposals ([Kapuscinski](#)



& Masters, 2010) lack measures that respond to the two previous points, indicating the relevance of developing a measure of non-theistic spirituality for the Portuguese context. Thus, in the literature analysis, all assumptions referring to notions of para-spirituality that might compromise the construct's broadness have been excluded, namely: religion, divine, sacred, supernatural beliefs, prayer, congregational satisfaction, among others. After reviewing the literature on the study of non-theistic spirituality, it was found 10 aspects as the most consensual ones:

- 1) Transcendence – Some authors have taken spirituality as linked to a feeling of going beyond the limits of one's own ego, of personal openness to transcending oneself as a subject (Assagioli, 1981, 1993; Bucke, 1991; Maslow, 1994). Transcendence, as a feeling of going beyond oneself, has already been taken as a parameter of spirituality when setting up psychometric measurements (c.f., Piedmont, 1999; Pinto & Pais-Ribeiro, 2007).
- 2) Hope – Hope was understood as one aspect of spirituality in the sense of a positive attitude towards the future (Peterson & Seligman, 2004; Rovers & Kocum, 2010). Hope is considered a predictor of spirituality, given the significance of the correlation between the two notions (Da Silva & Pereira, 2017; Pinto & Pais-Ribeiro, 2007; Rovers & Kocum, 2010). Pinto & Pais-Ribeiro's (2007) scale of spirituality assumes hope as a dimension of spirituality.
- 3) Capacity to Love – The ability to love was understood by Rovers & Kocum (2010) as an aspect of spirituality alongside hope. Altruistic love (or kinship) as a central concept within the notion of the spiritual subject serves as a basis in both secular and religious ethics (Assagioli, 1993; Bucke, 1991; Graf Durckheim, 1992; Hay & Nye, 2006; Laranjeira, 1907).
- 4) Contentment – A sense of personal contentment with the little things in life, in contrast to ambition, is understood as detachment in the face of unnecessary concerns and as an affirmation of self-sufficiency. This experience is considered by some authors to be linked to spirituality (Assagioli, 1993; Cohen et al., 2010; Da Silva & Pereira, 2017; Graf Durckheim, 1992, 2007).

5) Contact – The experience of union or contact is expressed in a feeling of congruence between the subject and the world, between what one thinks and what one does. Some authors considered this feeling as another aspect of spirituality, where the spiritual subject has an attitude of openness/connection to the world, as well as to himself (Assagioli, 1993; Bucke, 1991; Cohen et al., 2010; Hay & Nye, 2006). Studies that frame the experience of contact as an aspect of mindfulness show a positive and significant correlation with spirituality (Da Silva & Pereira, 2017; Greeson et al., 2011).

6) Insight – The ability to understand oneself and others is considered a fundamental quality of the spiritual subject, and forms a basis for altruistic love, as also for self-improvement (Assagioli, 1993; Bucke, 1991; Graf Durckheim, 1992; Hay & Nye, 2006). In a study conducted by Da Silva & Pereira (2017) among psychiatric patients, it was found that the greater the capacity for insight, the greater the spirituality.

7) Harmony – Harmony between thoughts and emotions has been regarded as one of the goals of various secular spiritual practices in their different forms such as meditation and yoga (Bucke, 1991; Carrington, 1987; Graf Durckheim, 1992). Da Silva & Pereira (2017) found that a feeling of internal coherence or harmony correlates positively with spirituality, and can be a good indicator for a spiritual attitude.

8) Temperance – Personal self-control in the face of impulses and instincts has been taken as one aspect of spirituality, and the spiritual subject is one who is able to moderate and correct himself (Assagioli, 1993; Bucke, 1991; Graf Durckheim, 1992; Leuba 1999).

9) Awe – A feeling of reorganisation or personal enhancement in the face of a life event. Some authors have considered spiritual subjects as being able to reinvent themselves in the light of everyday experiences, experiencing a feeling of awe, or of personal discovery of their own qualities or defects (Assagioli, 1993; Cohen et al., 2010; Graf Durckheim, 1992, 2007; Hay & Nye, 2006; Nye & Hay, 1996).



10) Existential Sense – Some authors have considered the attribution of meaning to life as an integral part of spirituality (Frankl, 2006; Gorsuch, 2002; Maslow, 1994). The spiritual subject must be able to build guiding frameworks for life, a personal ethic, from the immediate surroundings as a source of meaning (Bucke, 1991; Maslow, 1994).

Each aspect composed an item formulated according to the points of convergence between authors. These same points of convergence have been assumed within our understanding of spirituality as transversal to believers and non-believers. Thus, this one has a 10 items short scale. All items were reviewed and evaluated according with the operationalization of spirituality presented above. SAS is a Likert type scale whose items are ordinarily answered on a scale from 1 (Disagree) to 5 (Fully Agreed).

A preliminary study was conducted with 41 participants in order to confirm the adequacy of the items and their semantic formulation. The sensitivity of the participants is a factor that may compromise their response to a given scale or questionnaire (Hill & Hill, 2016). Questions about spirituality may be particularly sensitive since they refer to the very intelligibility of how the items are formulated. According to Kapuscinski & Masters (2010), the intelligibility of the items is important because the understanding of spirituality can be ambiguous. All participants completed the SAS scale and, upon completion, were questioned by the responsible interviewer. The questions posed by the interviewer sought to clarify the following points: a) whether participants felt uncomfortable with the content of the items on the inventory; b) whether it was clear what each item referred to; and c) whether participants had other suggestions as to the formulation of the items. The SAS was answered in full, with no item omitted and with no indications of discomfort expressed by participants. There were also no misunderstandings in relation to the items, nor any alternative suggestions for their formulation. There was therefore no need to reformulate the scale.

Spiritual Well-being Questionnaire (SWBQ)

The original English-language version (Gomez & Fisher, 2003), recently renamed SHALOM (Fisher, 2010), is theoretically based on Fisher's model of quadripartite spirituality – i.e. spirituality as a synergy between personal, community, environmental and transcendental domains. However, it was chosen here to refer to the questionnaire by its original name, as this is closer to the title of the equivalent version used in the present study. It is a Likert-type questionnaire with 20 items, with excellent internal

consistency ($\alpha=.92$), and its subscales present good indicators: personal consisted of 5 items ($\alpha=.89$); transcendental consisted of 5 items ($\alpha=.86$); community consisted of 5 items ($\alpha=.79$); and environmental consisted of 5 items ($\alpha=.76$). The Portuguese version of the same questionnaire (Gouveia et al., 2009) likewise showed good internal consistency, though slightly lower (20 items; $\alpha=.89$), as well as good values in each subscale: transcendental consisted of 5 items ($\alpha=.89$), environmental consisted of 5 items ($\alpha=.84$), personal consisted of 5 items ($\alpha=.75$) and community consisted of 5 items ($\alpha=.74$). However, the factorial performance of the overall score appears less adequate if the indices of the subscales are considered independently (Gouveia et al., 2009; Gouveia et al., 2012).

This questionnaire was chosen because it is the only measure of spirituality which has been assessed for the Portuguese population and which allows theistic and non-theistic parameters to be evaluated separately (Da Silva et al., 2019). The personal dimension is that most associated, from a theoretical point of view, to a non-theistic spirituality, bringing together five items considered by Gomez & Fisher (2002) as corresponding to a personal spirituality: 1) sense of identity; 2) self-awareness; 3) joy in life; 4) inner peace; and 5) meaning in life. This same domain of SWBQ will therefore be used to study convergent validity with the SAS.

The transcendental dimension refers to a feeling of theism or religiosity, and is grounded on a personal relationship with the divine based on five items: 1) personal relationship with the Divine/God; 2) worship the Divine/Creator; 3) feel of oneness with the Divine/God; 4) peace with the Divine/God; and 5) prayer. The SWBQ's transcendental domain, considering the theistic nature of the items which make it up, will be used to assess a religious sense.

Levenson's IPC Scale

Levenson's IPC Scale – Internal, Powerful Others and Chance Scale – is a psychometric Likert-type measure developed by Levenson (1981), which consists of 24 items whose answers range from 1 (I strongly disagree) to 6 (I strongly agree), and evaluates the factors of Internality, Externality assigned to groups or other signifiers, and Externality assigned to chance events. Internality refers to the extent that personal factors are responsible for one's sense of control over life events. Externality assigned to powerful others encompasses the degree to which others influence one's sense of



control. Externality assigned to chance events relates to one's beliefs that their sense of control depends on chance or fate.

This scale has been validated for the Portuguese population (Relvas et al., 1984) with the following values: internality consisted of 8 items ($\alpha=.69$); powerful others consisted of 8 items ($\alpha=.80$); and chance consisted of 8 items ($\alpha=.76$).

Statistical Analysis

The analysis of statistical data was carried out using SPSS 25 software. Descriptive statistics were obtained for demographic data. An Exploratory Factorial Analysis was undertaken to assess the SAS latent structure. Chronbach's alpha allowed the reliability of the scale to be analysed. Spearman's rank order correlation test was used to determine the associations between variables. A linear regression was used to test the predictive capacity of the SAS. Socio-demographic group differences (theistic postures and educational level) were also determined through one-way ANOVA. Differences between SAS' average scores according to gender were calculated with a t-test for independent samples.

Results

With regard to SAS's latent structure, exploratory factorial analysis was used along with the unweighted least squares method. The statistical significance of Bartlett test $\chi^2 = 571.961$; $gl = 45$; $p \leq .001$ and the suitability of the Kaiser-Meyer-Olkin test $KMO=.771$ allowed the data processing. Three factors were extracted (See Table 1), where the first one with 5 items explains 32.801% of the variance, the second with one item explains 12.231% and the third one with 4 items explains 11.368%, for an acceptable reliability of the 10 item scale ($\alpha=.745$). Factor loadings cut-off was .32.

Table 1
SAS' Structure Matrix

	1	2	3
Transcendence		1.001	
Hope	.620		-.387
Capacity to Love	.436		
Contentment	.547		
Contact	.690		-.565
Insight			-.636
Internal	.547		-.669
Coherence			
Temperance			-.587
Awe			-.383
Existential Sense	.603		-.373

Note: Oblimin Rotation with Kaiser Normalisation

However, the three subscales obtained seem to suggest inadequate factorial performance: component 1 with 5 items is acceptable ($\alpha=.712$); component 2 has only one item, and component 3 with 4 items is weak ($\alpha=.649$). Moreover, the elimination of the item Transcendence was proven to increase the scale's Chronbach's alpha to .777, while the suppression of any one of the scale's other items would result in an alpha lower than that already found ($\alpha=.745$). However, it was chosen not to eliminate the item Transcendence since it is strongly loaded within the latent structure of the scale.

The convergent validity of the SAS is established by the correlation between this scale's overall index and the index of the Personal Domain of the SWBQ. Spearman's rank-order correlation was used for ordinal variables, confirming a correlation on the threshold of strong between both indicators $r_s(277) = .693$; $p < .001$. It was also confirmed that the correlation with spirituality given by the SAS is still moderate for the Community Domain $r_s(277) = .505$; $p < .001$, but weak for the Environmental Domain $r_s(277) = .413$; $p < .001$ and weak for the Transcendental Domain $r_s(277) = .291$; $p < .001$. Spearman's correlation shows moderate correlation between the general indices of both scales $r_s(277) = .612$; $p < .001$. SAS's factor 1 and factor 3 are correlated to each other at the threshold of moderate $r_s(277) = .497$; $p < .001$. Factor 1 correlates strongly with the Personal Domain $r_s(277) = .722$; $p < .001$, moderately with the Community Domain $r_s(277) = .513$; $p < .001$, and weakly with both the Environmental $r_s(277) = .427$; $p < .001$ and Transcendental $r_s(277) = .386$; $p < .001$ Domains. In turn, factor 3 correlates moderately with the Personal Domain $r_s(277) = .505$; $p < .001$, and weakly with the Community $r_s(277) = .352$; $p < .001$, Environmental $r_s(277) = .316$; $p < .001$



.001 and Transcendental $r_s(277) = .118$ $p < .05$. Domains. In other hand, SAS's item Transcendence does not correlate with factor 1 $r_s(277) = .110$ $p = .066$ neither with factor 3 $r_s(277) = .042$ $p = .485$ but has a weak correlation with the SAS general index $r_s(277) = .287$ $p < .001$. The same item also has no statistically significant correlation with the Personal $r_s(277) = .033$ $p = .586$, Community $r_s(277) = .036$ $p = .548$, Environmental $r_s(277) = .030$ $p = .613$ and Transcendental $r_s(277) = -.006$ $p = .927$ Domains.

It was intended to know to what extent SAS evaluates something that may be understood as spirituality. For this purpose, a simple linear correlation was examined, where it was found that the general index of the SAS predicts the Personal Domain $F(1,277) = 295.850$, $p < .01$ with R^2 of .515 and β of .719, confirming that the predicted Personal Domain position index is equal to $.157 + .972$ when Personal Domain score is measured in terms of SAS's spirituality index. It was also intended to know which of the two scales will have a higher prediction capacity of the spirituality scores, so it was chosen to perform a reverse analysis in order to verify if the Personal Domain predicts the SAS outcomes better than the SAS predicts the Personal Domain scores. Then, another linear regression analysis was carried out to determine whether the Personal Domain predicts spirituality as defined by the SAS and this was confirmed $F(1,277) = 295.850$, $R^2 = .515$, $p < .01$, and the predicted SAS's spirituality index is $1.627 + .531$ when the SAS's spirituality is measured as a function of the Personal Domain of the SWBQ. It is also interesting to distinguish the predictive nature as between spirituality (SAS's general index) and religiosity (Transcendental Domain's index), since it was intended to know whether spirituality embraces religiosity and therefore is a more overarching construct than the other (c.f., Zinnbauer & Pargament, 2005). It was shown by another simple linear regression that the SAS's general index predicts the Transcendental Domain $F(1,277) = 22.454$, $R^2 = .097$, $\beta = .312$, $p < .01$. Participant's predicted Transcendental Domain's index is equal to $.035 + .673$ when religiosity is measured in terms of spirituality. A significant regression equation was also found $F(1,277) = 22.454$, $\beta = .145$, $p < .01$ predicting that spirituality position index is equal to $3.188 + .145$ when measured in Transcendental Domain's scores.

In order to assess the SAS's practical validity, it was followed Hill & Hill (2016) recommendation as to test the association of the new scale scores with a performance variable. The variable chosen to this purpose was the Locus of Control. Additionally, it was intended to compare spirituality and religiosity in terms of the Locus of Control. By means of Spearman's correlation it was shown that there is a positive and weak



correlation between the general index of the SAS and the Locus of Internal Control $r_s(277) = .279$; $p < .001$, but no correlation with the Locus of Control focused on Powerful Others $r_s(277) = -.107$; $p = .081$ nor with the Locus of Control focused on Chance Events $r_s(277) = -.115$; $p = .059$. As for the general index of the SWBQ, there is a positive and weak correlation between this and the Locus of Internal Control $r_s(277) = .189$; $p < .05$ but no correlation with the Locus of Control based on Powerful Others $r_s(277) = -.113$; $p = .064$ nor with that focused on Chance Events $r_s(277) = -.091$; $p = .138$. Therefore, it was assumed that both SAS has a good practical validity. The Personal Domain of the SWBQ correlates positively and poorly with the Locus of Internal Control $r_s(277) = .355$; $p < .001$ and there are weak inverse correlations with the Locus of Control focused on Powerful Others $r_s(277) = -.177$; $p < .05$ and likewise with the Locus of Control focused on Chance Events $r_s(277) = -.213$; $p < .001$. Assuming that the Transcendental Domain, due to the theistic reference of its items, relates to a religious sense, it was used to draw a contrast with spirituality as regards the locus of control. The use of Spearman's correlation confirms that the Transcendental Domain (religiosity) has a positive but weak correlation with the Locus of Control focused on Chance Events $r_s(277) = .177$; $p < .05$ and with the Locus of Control centred on Powerful Others $r_s(277) = .129$; $p < .05$. It is not, however, associated with the Internal Locus of Control $r_s(277) = -.025$; $p = .685$, which even tends to show a negative correlation.

It was also intended to know if there are differences in SAS average scores depending on whether one is a practicing believer, non-practicing believer, atheist or sceptic. A Shapiro-Wilk test was performed to test the hypothesis that SAS average scores do not follow a normal distribution. The Shapiro-Wilk showed no significant departure from normality in SAS scores $W(279) = .994$, $p = .336$. Thus, a t-test for independent samples was carried out to verify whether there are significant differences in SAS scores between male and female participants. The t-test for independent samples showed that the mean scores of the SAS did not differ for male ($M = 3,51$) and female ($M = 3,55$) participants, $t(277) = -.601$, $p = .549$. Additionally, a One-Way ANOVA was carried out to examine whether there are significant differences between the average scores of the SAS regarding the theistic posture/beliefs of the participants, and it was found that the effect of theistic postures on the mean scores of the SAS is not statistically significant, $F(3, 275) = 2.468$, $p = .062$ (See Table 2). A new One-Way ANOVA also showed that the effect of the educational level on the SAS average scores is not statistically significant, $F(2, 259) = 1.411$, $p = .246$.



Table 2.

Average differences of spirituality as a function of theistic beliefs

	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>
Practising Believer	56	3.65	.50	2.50	4.80
Non-Practising Believer	77	3.54	.46	2.20	4.70
Atheist	62	3.38	.63	2.10	5.00
Sceptical	84	3.56	.55	1.80	5.00
Total	279	3.53	.54	1.80	5.00

Note: Spiritual Awareness Scale (SAS) – Higher scores indicate strong spiritual sense (Range 1-5)

No analysis was carried out for differences in the SAS scores as a function of ethnic/cultural origin, since 92.1% of the sample of 279 participants is made up of European Caucasians, with a statistically insufficient number of the remaining ethnicities, namely 15 of Mestizos, 3 from the Middle-East, 2 Asians, 1 Indian and 1 unspecified.

Discussion

The analysis of SAS's metrical properties revealed that the reliability of this scale is reasonable, and that one of the three factors obtained may not be metrically relevant. Factor 2 is made up solely by the item Transcendence and the elimination of this item increases the reliability of the scale, which suggests that this factor has a frail position within the latent structure of this scale – on this matter one should also consider that the item Transcendence is strongly loaded and, even though factor 2 seems to be frail, this item should not be excluded from the outset. Taking this into consideration, could we admit such a factor? Some authors consider that a single item can represent a construct, since it is possible to have constructs that are singular, conceptually restricted or concrete to a single expression (Bergkvist & Rossiter, 2007; Drolet & Morrison, 2001). Then, as shown in Table 1, one can thus assume the existence of three domains. But what do these three domains tell? Are there three different 'spiritualities'? The set of items in factor 1 refers to a tendency of personal openness towards others, the world and life – "conscience of others". The items of factor 3, on the other hand, concern the consciousness of oneself, one's own mental states, one's own qualities and defects – "self-consciousness". Factor 2, as it was seen, relates to a feeling of personal transcendence. However, it cannot be said that these dimensions refer to different types of spirituality. Spirituality can be understood as the product of the balance between conscience of others and self-consciousness – the meaning that was adopted within this article. In this respect, it was found that both subscales – Conscience of Others and Self Consciousness – correlate at the threshold of



moderate, which suggests a consistent binding between the two variables, but labile to some extent. The same was not found when taking factor 2 (item Transcendence) into consideration, which suggests that the feeling of personal transcendence, that one has the potential to be more than what one is, may be contingent but not necessary for the expression of spirituality. Thus, spirituality could be understood as a balanced consciousness. If one assumes that this balance or equilibrium is strictly subjective and that it may be different between individuals, then it could be understood the poor adequacy of the SAS's latent structure. Regarding this matter, Hill & Hill (2016) considered that idiosyncratic characteristics of the individual do not produce a fixed or typical value of a latent variable built on subjective attributes. That may be the case with spirituality. Similar factorial results were also found in assessment studies of the SWBQ (or SHALOM) for the Portuguese population, with a lower consistency of the Personal and Community domains (Gouveia et al., 2009; Gouveia et al., 2012; Neves et al., 2018).

In regard to convergent validity, the mutual correlation between the scores of the SAS and of the Personal Domain of the SWBQ are on the threshold of strong, which suggests that the SAS evaluates spirituality. It is noteworthy that the general index of SAS predicts the Personal Domain scores with predictive accuracy that does not happen when Personal Domain's index predicts SAS' scores. Therefore, one may assert that the SAS is a measurement more in harmony with the object of measurement – i.e. spirituality – than is the Personal Domain of SWBQ. It could be also noted that the factor 1 – Consciousness of Others – correlates strongly with the Personal Domain of SWBQ, while the factor 3 – Consciousness of Self – presents, in turn, a moderate correlation with this very domain. This suggests that a personal openness is more cohesive to a sense of spirituality than a return inward that may entail a greater risk of solipsistic closure. In any case, both factors have correlative values with the Personal Domain that suggest a consistent relationship with spirituality. It was also found that the mutual correlation between spirituality and religiosity is weak, which suggests that both constructs are variables that touch each other tangentially and are not synonymous. Moreover, it appears that spirituality predicts religiosity with a force that cannot be obtained inversely which, along with weak correlative values between the constructs, allows one to accept the idea that spirituality is at the base of religiosity (Comte-Sponville, 2008; Hay & Socha, 2005); as also the assumption that religiosity would be a way of fixing or reproducing a 'spiritual' mindset (Jung, 1999) which does not have to be theistic nor refer to a concept of the divine.



One may now examine whether religious and spiritual individuals differ in terms of locus of control. The data from this study suggest that SAS' spirituality scores has a weak and positive correlation with the internal locus of control, but none with the external locus of control (focused on significant others, or on chance events), even though there tends to be an inverse correlation in the latter case. On the other hand, religiosity has a weak and positive correlation both with the external locus of control focused on chance events and with the external locus of control focused on powerful others, and has no correlation with the internal locus of control; even though there tends to be a negative correlation in the latter case. Hence, the deduction that spiritual individuals have greater personal control over life events the greater their spirituality. On the other hand, religious individuals tend towards a greater perception of loss of personal control over life events the greater their theistic (religious) sense. It is observed, however, that the correlative values are weak, which leads to state that the amplitude of the locus of control in both groups of people is quite low. However, it should be remembered that spirituality and religiosity are accounted *per se*, as different constructs – nevertheless, there are individuals who may consider themselves “spiritual and non-religious”, “religious and not spiritual”, as well as “spiritual and religious” (Palmisano, 2010; Saucier & Skrzypinska, 2006). The very existence of individuals who may consider themselves “spiritual and religious” may, indeed, lower the amplitude of the internal and external locus of control, which will result in a weak correlation. This is something that should be taken into account, and may be considered a possible parasitic variable in this study. This distinction between a spiritual and a religious posture with regard to the locus of control reinforces a conceptual independence of spirituality from religiosity. The data also allow one to challenge the findings as to the adaptive nature of religious coping (c.f., Gall & Guirguis-Younger, 2013), since the external locus of control is favoured by the theistic (religious) feeling – it is possible that religious coping in individuals who are “religious and not spiritual” may assume pathological dimensions and may be regarded as a maladaptive defence mechanism. This could be a mote for future investigations on the subject.

The present study has attempted to characterise the participants in regard to their theistic beliefs, which is relevant in order to allow a clear distinction between religiosity and spirituality to be made. From the descriptive aspect, this sample includes 20.1% practising believers, 27.6% non-practising believers, 22.2% Atheists, and 30.1% Sceptics. As can be seen, the sample makeup in regard to theistic beliefs is quite balanced, which leads to assume that the statistical data are securely protected

against the bias which distorted previous investigations that attempted to establish a conceptual demarcation between spirituality and religiosity (e.g., Handal et al., 2017; Zinnbauer et al., 1997). In support of these assumptions, the data revealed that the spirituality scores given by the SAS do not vary as a function of the theistic attitudes which suggests an optimal intersection of spirituality among practicing believers, non-practicing believers, atheists and sceptics. Considering that atheists may be just as spiritual as practising believers, one is led to regard religious practice as a secondary element in the experiencing of spirituality. The average values for spirituality are moderate for all the groups.

Limitations and Further implications

However, this study has some limitations. First, one may account on sample representativeness. The sample is slightly small and composed of a majority of young adults, single, Caucasian Europeans, with secondary education. Therefore, the interpretations of this study's results were restricted. The absence of a confirmatory factorial analysis (CFA) is also a limitation – this analysis could help to understand whether the theoretical model underlying the construction of the SAS is adequate and to verify the need to revise some aspects of the scale, as it seem to be the case with the item Transcendence. Nevertheless, it was intended only to study the dimensionality of the scale from a factorial point of view.

Despite these limitations, this study intends to contribute to new avenues of research where spirituality is considered as transversal to believers, atheists and sceptics. The research on atheistic spirituality seems to be interesting, along with the distinct treatment of spirituality and religiosity in association with other psychological variables.

Conclusions

With this study some conclusions were drawn that will allow psychologists to highlight some fundamental aspects, which may guide future research in an accurate description of religiosity and spirituality within psychology:

- a) It is possible to operationalize spirituality without using religious or theistic descriptors in order to transversally approach secular postures that admit atheistic spirituality;
- b) Religious subjects and spiritual ones manifest different attitudinal traits regarding the manifestation of their own sense of locus of control;



c) The theistic perspective of a psychology of both religiosity and spirituality should be viewed with suspicion, with a call for a separate treatment of religiosity and spirituality as distinct phenomena.

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Appendix

Spiritual Awareness Scale¹

The following sentences refer to the way your personal experiences acquire expression in your daily functioning. Please mark the option that best suits your opinion, as a rule. There are no right or wrong answers.

	I Disagree	I Slightly Agree	Agree	I strongly Agree	I Fully Agree
1 – I hold within me the potential to be more than what I am	1	2	3	4	5
2 – I see everyday life with hope	1	2	3	4	5
3 – I love, respect and cherish the world and all the people	1	2	3	4	5
4 – I'm pleased with the joys life brings me	1	2	3	4	5
5 – I often experience a feeling of union between my mind and body and/or between my being and the world	1	2	3	4	5
6 – I am aware of my thoughts, feelings and behaviour, as well as the effect these have on others	1	2	3	4	5
7 – I find harmony and tranquility in my thoughts and emotions	1	2	3	4	5
8 – I have the ability to self-control or moderate my desires/instincts	1	2	3	4	5
9 – I feel that there are events imbued with personal significance that can lift my mood or affect me in a particular way	1	2	3	4	5
10 – I find meaning in life	1	2	3	4	5

¹ Translated from the original Portuguese version “Escala de Consciência Espiritual” by the main author. This translation should not be considered definitive and it is recommended that any further clarification on this measure be supplied with the original version.



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