

Relationships between spirituality and religiosity in dentistry academics in the state of Bahia

Relações entre espiritualidade e religiosidade em acadêmicos de odontologia do estado da Bahia

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ABSTRACT

Objective: This study aims to evaluate the correlation between religiosity and spirituality in dental students in the state of Bahia. **Methods:** Cross-sectional study carried out with 266 dental students from the state of Bahia. To measure religious involvement, the Duke Religious Index (DUREL) was used, while the Spirituality Self Rating Scale (SSRS) was used for spirituality. **Results:** A total of 266 students were evaluated, with a mean age of 32 years (± 11.9), most of them female (62.4%), of self-reported race/color (52.3%), with an income greater than three minimum wages (57.1%) and studying/working from the sixth to the tenth semester (41.0%). The correlations evidenced can be classified as weak for organizational religiosity (OR) ($r = 0.406$), moderate for non-organizational religiosity (RNO) ($r = 0.589$) and strong for intrinsic religiosity (RI) ($r = 0.677$). In the multivariate model, the ORN and RI dimensions proved to be predictors of spirituality, and the elevation of the former implies a consequent increase in spirituality. **Conclusion:** It is concluded that the RNO and RI dimensions are positively correlated with religiosity.

Indexing terms: Dentistry. Spirituality. Students.

RESUMO

Objetivos: Este estudo objetiva avaliar a correlação entre religiosidade e espiritualidade em acadêmicos de odontologia do estado da Bahia. **Métodos:** Estudo transversal realizado com 266 acadêmicos do curso de odontologia do estado da Bahia. Para mensuração do envolvimento religioso foi utilizada a escala Duke Religious Index (DUREL) enquanto para a espiritualidade a Spirituality Self Rating Scale (SSRS). **Resultados:** Foram avaliados 266 acadêmicos, com média de idade de 32 anos ($\pm 11,9$), sendo em sua maioria do sexo feminino (62,4%), de raça/cor autorreferida (52,3%), com renda maior que três salários mínimos (57,1%) e cursando/atuando do sexto ao décimo semestre (41,0%). As correlações evidenciadas podem ser classificadas como fraca para a religiosidade organizacional (RO) ($r = 0,406$), moderada para a não organizacional (RNO) ($r = 0,589$) e forte para a religiosidade intrínseca (RI) ($r = 0,677$). No modelo multivariado as dimensões RNO e RI mostraram-se preditores da espiritualidade, sendo que a elevação das primeiras implica

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um conseqüente aumento da espiritualidade. **Conclusão:** Conclui-se que as dimensões RNO e RI estão positivamente correlacionadas à religiosidade.

Termos de indexação: Odontologia. Espiritualidade. Estudantes.

INTRODUCTION

Spiritual and religious behaviors have been part of the human experience since our existence, but there is still a lot of controversy about how we should define these experiences. Historically, within a homogeneous and intimately connected society, religiosity and spirituality were often discussed [1]. Both religiosity and spirituality are considered components of human life, as they influence social and cultural interactions and the psychological dimension, which are demonstrated through their values, beliefs, behaviors and emotions [2].

Both religiosity and spirituality are considered components of human life, as they influence social and cultural interactions and the psychological dimension, which are demonstrated through their values, beliefs, behaviors and emotions [3,4].

Thus, spirituality and religion complement each other, but do not confuse each other – there is a hierarchical degree that distinguishes the terms. Spirituality is an innate human experience, while religion is a human institution. Since man broke into nature, with him came the spirituality that is his greatest gift, religion in turn is much younger. This leads to the argument that probably, spirituality would be the gateway to religions [5].

The growing number of research on spirituality, carried out in different areas of the health sciences, has demonstrated the clear desire to obtain revitalizing sources that expand the possibilities of finding solutions to human suffering. University education is probably one of the most important moments in your future career, contact with professors and clinical experience shape your attitudes towards colleagues and patients themselves. The way in which spirituality is taught by teachers and perceived by students can lead to a greater understanding of this dimension, in the care itself [6].

Thus, this study aims to evaluate the correlation between religiosity and spirituality in dentistry academics (students and professors) in the state of Bahia

METHODS

A cross-sectional study conducted between May and June 2020 with dentistry academics (students and professors) attending higher education institutions in the state of Bahia.

The selection of participants took place in different stages. Initially, through the electronic address of the Registry of Higher Education Institutions and Courses (e-MEC), the official and unique database of information related to higher education institutions, the dentistry courses registered in the Country. At this stage, 410 registered courses were identified. Invitations to participate were sent to representatives of the institutions by e-mail, who then forwarded them to the students and professors under their responsibility.

In the end, we received the return of 390 questionnaires answered by teachers and students. In the end, 266 participants were from the state of Bahia, over 18 years of age, of both sexes and signed the free and informed consent form consenting to their participation, integrating the final sample of this study (figure 1).

As a data collection instrument, the questionnaire of the SBRAME (Spirituality and Brazilian Medical Education) [7] which already contains the Duke Religious Index (DUREL) and the "Spirituality Self Rating Scale (SSRS) [8], which assesses aspects of the individual's spirituality. The SSRS has a score of 6 to 30 points and the higher the score, the greater the spirituality. For data analysis, the SRSS was dichotomized into low and high spirituality from the median (i.e., 24 points).

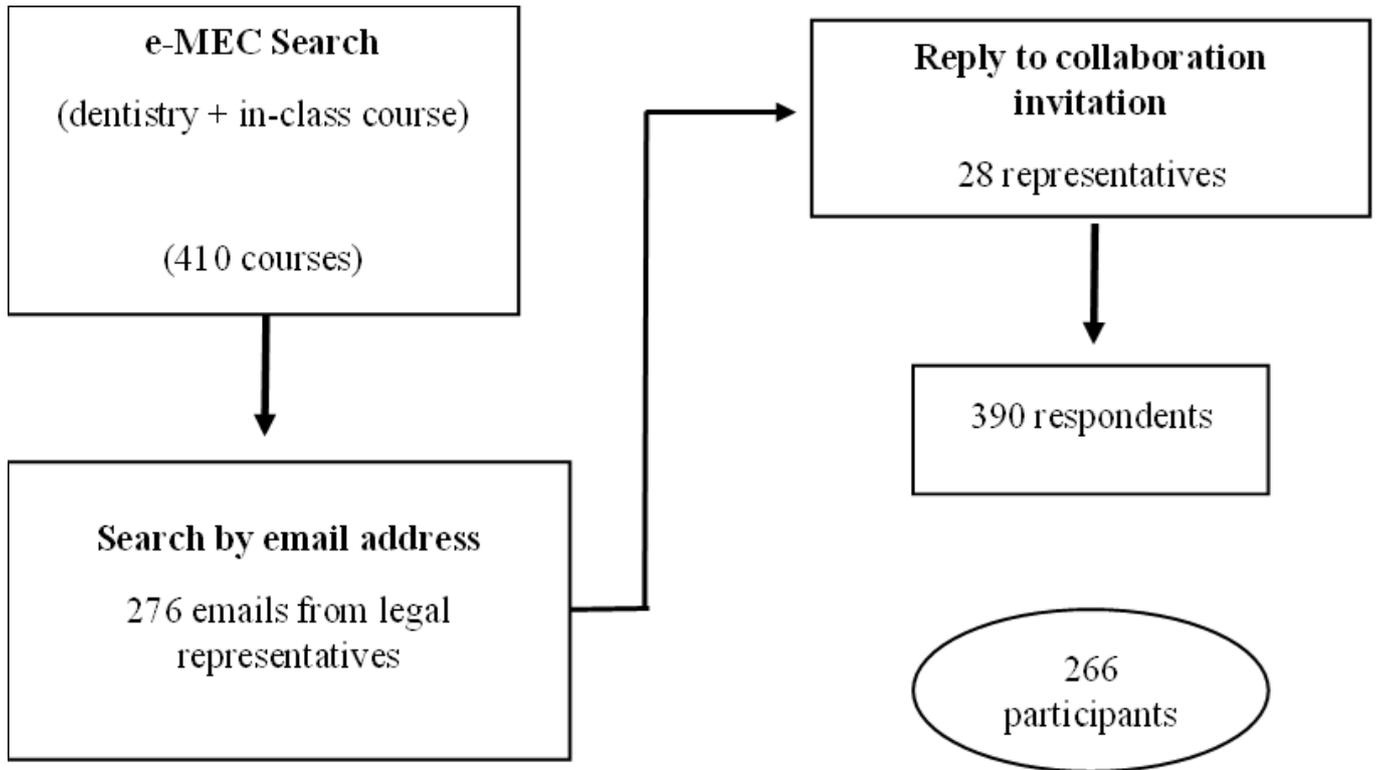


Figure 1. Sample selection flowchart.

The DUREL scale is composed of five items that capture three of the dimensions of religiosity that are most related to the health dimension: organizational (OR), non-organizational (NOR) and intrinsic religiosity (IR). The first two items address OR and NOR, these were taken from large epidemiological studies carried out in the United States and demonstrated a relationship with indicators of physical and mental health and social support. The other items refer to the IR to the three items of the RI scale. In the analysis of the DUREL results, the scores in the three dimensions (OR, NOR and IR) must be analyzed in isolation and the scores of these three dimensions must not be added to a total score [9,10].

To understand how the main independent variables (i.e., OR, NOR and IR), were related to spirituality, a Pearson's correlation analysis was performed, considering normality of the tested data. The variables that presented $p < 0.2$ in this stage were included in a multivariate linear regression model.

For the multivariate analysis, a multiple linear regression model with backward entry method was executed. Furthermore, independence of the residues was evaluated using the Durbin-Watson test to diagnose adequacy of the final model, with reference values between 1.5 and 2.5 [11].

All the analyses were performed in the Stata statistical package (Stata Corp®, version 12.0). The research was submitted to the Research Ethics Committee of *Universidade de Vassouras* under opinion number 3,977,832 and CAAE 29846820.4.0000.5290, participation being voluntary, and with term signing. All the procedures were in accordance with resolution No. 466/2012 of the National Health Council.

RESULTS

A total of 266 participants in the state of Bahia were evaluated, with a mean age of 32 years (± 11.9), most of them students (59.0%), female (62.4%), of self-reported race/color (52.3%), with an income greater than three minimum wages (57.1%) and studying/working from the sixth to the tenth semester (41.0%) (table 1).

Table 1. Characterization of the sample of academics evaluated.

	n	%
Categoria		
Student	157	59.0
Professor	109	41.0
Sex		
Male	100	37.6
Female	166	62.4
Skin Color		
White	89	33.5
Black	35	13.2
Yellow	2	0.8
Indigenous	1	0.4
Brown	139	52.3
Income		
up to 3 salaries	114	42.8
More than 3 salários	152	57.1
Semester in progress/operation		
first to fifth	76	28.6
sixth to tenth	109	41.0
more than one semester	81	30.5

With regard to religiosity measured by means of DUREL, mean values of 3.80 (± 1.15), 4.10 (± 1.61) and 3.72 (± 1.29) for the organizational, non-organizational and intrinsic dimensions were evidenced, respectively. Regarding the spirituality level assessed through SRSS, the mean was 23.63 (± 5.14).

Figure 2 below shows the results of the assessment of the correlation between spirituality and religiosity. The correlations evidenced can be classified as weak for OR ($r = 0.406$), moderate for NOR ($r = 0.589$) and strong for IR ($r = 0.677$).

When incorporating the religiosity dimensions into a multivariate linear model, with spirituality as outcome, the NOR and IR dimensions proved to be predictors of spirituality. For both dimensions, their rise implies a consequent increase in spirituality (table 2).

DISCUSSION

College life is one of the most challenging and exciting chapters in a person's life. Every scholar finds various experiences that prepare them for their future endeavor. However, these experiences are associated with stressful events that can affect your overall well-being as well as your quality of life. While they are completing their training, they are exposed to different situations, which force them to undergo adaptation processes [12].

Dental students often face a number of stresses, including admission to dental school, competitive training to develop clinical skills, dealing with innate feelings related to the doctor-patient relationship, high pressure at work, exam stress, limited free time, and stress resulting from compliance with clinical requirements. These sources of stress can lead to poor health, burnout, and the development of undesirable habits. So they need to be able to deal with their stress [13-15].

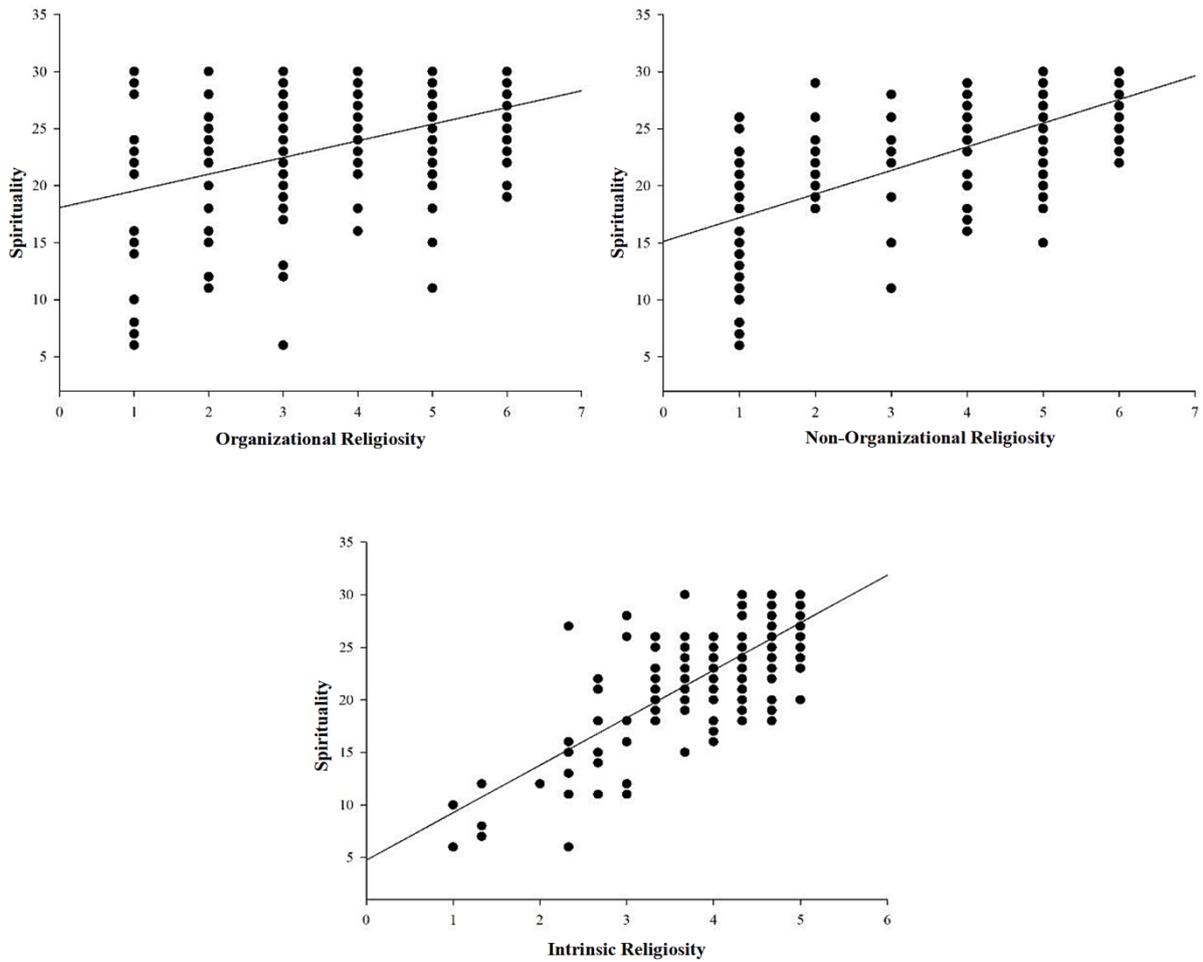


Figure 2. Scatter plots for the religiosity dimensions (Organizational [OR], Non-Organizational [NOR] and Intrinsic [IR]) and spirituality.

Table 2. Multiple linear regression final model for the relationship between spirituality and religiosity.

	Spirituality			Durbin-Watson
	β	95% CI	p	
Non-Organizational Religiosity	0.80	1.01 – 1.18	<0.01	1.68
Intrinsic Religiosity	3.57	3.01 – 4.13	<0.01	

The relationship between religiosity and spirituality and health among different population groups is already well established. Generally, religiosity and spirituality have been shown to help people by providing strategies for coping with a wide range of illnesses or in a variety of stressful situations, as well as developing positive emotions such as well-being, happiness, hope, optimism, meaning and purpose, high self-esteem, and a sense of control over life [16,17]. In addition, several studies have reported high interest in spirituality among college students [18,19].

Religiosity is often seen as “the formal, institutional and external expression” [20] of one’s relationship to the sacred and is typically operationalized as beliefs and practices associated with a particular world view and religious community [21]. On the other hand, spirituality is conceptualized as the search for meaning in life, for a personal connection with transcendent realities and for interconnectedness with humanity [22], and is therefore operationalized

as the human desire for transcendence, introspection, interconnectivity and the search for meaning in life [23], which can be experienced within and/or outside a specific religious context [24].

All concepts of religion are linked to the manifestation of acts of worship, rites and other forms of religious expression, while spirituality is understood as a constitutive human dimension, characterized by intimacy of the human being with something bigger [5]. Spirituality, in turn, refers to the internalization and full experience of religiosity as the main objective, where individuals seek harmony with the religious principles [25].

The evaluation of religiosity through DUREL subdivides it into three dimensions, as already mentioned (OR, NOR and IR). Non-organizational religiosity is a trait that does not depend on other people, but rather refers to personal religious activity. It includes prayer and meditation, among others. Such characteristics justify the correlation between NOR ($\beta=0.80$ [95% CI: 1.01-1.18]) and spirituality due to the non-dependence of normative acts [10].

Intrinsic religiosity is characterized as an end in itself, a master motive. Thus, the individuals described by intrinsic religiosity see their religion as the structure of their lives and try to live consistently with the religion they profess [26]. However, this dimension was pointed out as related to spirituality here ($\beta = 3.7$ [95% CI: 3.01-4.13]). IR-oriented people find their main motive in religion. Other needs, however strong, are considered of lesser importance and are, to the extent possible, harmonized with religious beliefs and prescriptions [27].

The two dimensions herein identified as correlated to spirituality are those more linked to personal issues, which do not depend directly on institutions or external guidelines. Consequently, spirituality is potentially more influenced by such dimensions.

College students who reported participation in religious and spiritual practices had better satisfaction with campus social life, more positive interactions, and greater overall satisfaction with college life. Furthermore, it was also reported that religious students showed greater involvement in campus life, better leadership, self-esteem and cognitive development [7,28,29]. With regard specifically to dental students, spiritual health was associated with increased happiness, and this relationship was mediated by resilience [15].

Psychologically, spirituality is related to personality structure, whereas religiosity is related to process. Thus, if spirituality is inherent to human beings and an integral part of personality, religiosity is not, being an accessory component, although important for most people, especially, but not only, because it is a precious means of community and cultural insertion. In any case, spirituality is not necessarily related to religion [30].

It is evident then that spirituality constitutes a human dimension and reflects the care a person has with life; it expresses the way people interrelate and interact in relation to the circumstances and events that involve it, such as religious involvement. It is important to recognize the conceptual approximations between spirituality and religiosity that can exist through the sense of connection with the sacred. Thus, although they are not similar concepts, life experiences can bring them closer or further apart, considering that religious practice is not always synonymous with the expression of spirituality [31].

The findings of this study showed the relationship of the two constructs evaluated here (i.e., religiosity and spirituality), future research may be dedicated to highlighting factors that influence this correlation. The cross-sectional approach adopted here limits the stipulation of cause and effect without reducing the importance of the results shown. The study addresses a relevant theme and with a population that is still scarcely evaluated in the national territory, thus being able to direct future studies.

CONCLUSION

Based on the analyses herein performed, the positive correlation between the non-organizational and intrinsic dimensions of religiosity and spirituality can be attested. However, it is reinforced that, despite being different, both constructs are intertwined so that an improvement in one of the aspects exerts a positive impact on the other.

Collaborators

IA Souza, conception and study design, data collection, data analysis and interpretation and manuscript writing. MMT Souza and EM Crosato, interpretation of data, writing and review of the manuscript. SD Yarid, conception and study design, analysis and interpretation of data, writing of the manuscript and review of the manuscript

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