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Review Article

The nexus between religiosity/spirituality and suicidal behavior in young people*

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Objective: to evaluate the scientific evidence regarding the relationship between religiosity/spirituality (R/S) and suicidal behavior. Method: an integrative literature review study, conducted in the following databases: LILACS, PubMed and CINAHL, from January 2011 to February 2020. A total of 1,044 articles were identified, of which seven were included in the study. Results: quantitative studies (71.4%), carried out with university students (57.14%), which investigated religion (71.43%) and different dimensions of suicidal behavior (85.7%) predominated. Most of the studies portrayed the benefits of religion and spirituality, even if indirectly in the lives of young people and pointed to the protective effects of R/S in relation to suicidal behavior. Conclusion: R/S can be an important factor for adolescents and young adults that deserve to be explored in investigations and actions that strengthen the protective factors against suicidal behavior and allow for an increase in mental health literacy among religious leaderships.

Descriptors: Spirituality; Religion; Adolescent; Young Adult; Attempted Suicide; Suicidal Ideation.

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O nexo entre religiosidade/espiritualidade e o comportamento suicida em jovens

Objetivo: avaliar as evidências científicas referentes à relação entre religiosidade/espiritualidade (R/E) e o comportamento suicida. Método: estudo de revisão integrativa da literatura, nas bases de dados: LILACS, PubMed e CINAHL, de janeiro de 2011 a fevereiro de 2020. Foram identificados 1044 artigos, dos quais sete foram incluídos no estudo. Resultados: Predominaram estudos quantitativos (71,4%), realizados com universitários (57,14%), que investigaram a religião (71,43%) e diferentes dimensões do comportamento suicida (85,7%). A maioria dos estudos retratara benefícios da religião e da espiritualidade, mesmo que indiretamente na vida dos jovens e apontaram para efeitos protetivos da R/E em relação ao comportamento suicida. Conclusão: A R/E pode ser um fator importante para adolescentes e adultos jovens que merece ser explorada em investigações e ações que fortaleçam os fatores protetores contra o comportamento suicida e permitam o aumento da literacia em saúde mental entre lideranças religiosas.

Descritores: Espiritualidade; Religião; Adolescente; Jovem Adulto; Tentativa de Suicídio; Ideação Suicida.

El nexo entre religiosidad/espiritualidad y comportamiento suicida en los jóvenes

Objetivo: evaluar la evidencia científica sobre la relación entre religiosidad/espiritualidad (R/E) y conducta suicida. Método: revisión integradora de la literatura, en las bases de datos: LILACS, PubMed y CINAHL, de enero de 2011 a febrero de 2020. Se identificaron 1044 artículos, de los cuales, siete fueron incluidos en el estudio. Resultados: predominaron los estudios cuantitativos (71,4%), realizados con estudiantes universitarios (57,14%), que investigaron religión (71,43%) y diferentes dimensiones de la conducta suicida (85,7%). La mayoría de los estudios han retratado los beneficios de la religión y la espiritualidad, incluso indirectamente en la vida de los jóvenes, y han señalado los efectos protectores de la R/E en relación con la conducta suicida. Conclusión: la R/E puede ser un factor importante para los adolescentes y adultos jóvenes que merece ser explorado en investigaciones y acciones que fortalezcan los factores protectores contra la conducta suicida y permitan un aumento de los conocimientos en salud mental entre los líderes religiosos.

Descriptores: Espiritualidad; Religión; Adolescente; Joven Adulto; Intento de Suicidio; Ideación Suicida.

Introduction

According to World Health Organization (WHO) data, it is estimated that every 40 seconds a person dies of suicide somewhere in the world, corresponding to more than 800,000 deaths per year. Suicide is a particularly worrying problem among adolescents and young adults, as it is the second leading cause of death at the age of 15 to 29 years old. Considering that suicide is multi-factorial, multiple actions can be taken to prevent it⁽¹⁾. The care provided to this age group from 15 to 29 years old, which includes the transition from adolescence to early adulthood, has therefore proved to be an important focus for investigations, interventions and policies for the prevention of suicide.

Suicidal behavior is a complex phenomenon that is associated with a set of ideas, intentions and actions related to the desire to cause one's own death(2). In youth, different factors can contribute to a greater exposure of this population to this phenomenon, such as variables related to work, family life, group experiences, pre-existing psychopathological conditions, greater consumption of substances, future prospects and own conflicts that manifest in this phase of development, which marks the transition between adolescence and the challenges of adult life, representing a period of greater emotional mobilization and also of greater fragility facing various challenges. In addition, the phenomenon of suicide in this age group must also be understood based on its repercussions on the social support networks, composing a phenomenon that particularly affects the family(3-4).

In spite of the significant epidemiological data, which assert suicide as one of the three leading causes of death among young people, some strategies for preventing and preventing suicide have been increasingly discussed in the scientific literature⁽¹⁾, like religiosity/spirituality (R/S). Studies comparing the R/S of young adults and of older adults highlight that the effects of this variable on health can be more expressive among the older population⁽⁵⁾. This leads us to the need to better understand how young people position themselves in relation to the experiences of R/S and its role in the health outcomes of this population.

A number of studies pointed out diverse evidence about the positive relationship between R/S and mental health⁽⁶⁻⁸⁾ and also its influence on the physical health of people with several changes in the health-disease process⁽⁹⁻¹⁰⁾. However, the relationships between R/S and suicidal behavior are still incongruous⁽¹¹⁾, especially when we analyze adolescents and young adults. Knowing how this population experiences R/S and whether this factor can be protective in the context of mental health, especially in suicide prevention, presents itself as an important gap to be investigated.

In this context, it is relevant to understand that R/S is a nomenclature especially used in the health context and that it covers, in a combined manner, the definitions of religiosity, spirituality and also of religion. Despite the semantic and epistemological differences between these terms, the adoption of the combined term, R/S, has been useful in studies that focus on the effects of this dimension on health care, involving issues related to the meaning of life and the sacred, and may or not to lead to religious and institutional practices(12-13). The R/S dimension is an integral part of the individual, leading us to reflect on how it can have repercussions in the context of health and how it can influence as a protective factor for suicidal behavior. Based on these considerations, the present study aimed to evaluate the scientific evidence regarding the relationship between R/S and suicidal behavior in adolescents and young adults.

Method

This is an integrative literature review study, which aims to identify and analyze scientific evidence in a systematic and orderly manner, so as to achieve the improvement of knowledge of the researched topic and the need for new research studies⁽¹⁴⁾. The following stages were chosen for this study: identification of a problem, formulation of a guiding question, search for scientific evidence, assessment of the available evidence⁽¹⁵⁾.

As for the elaboration of the guiding question, the PICO strategy was used, composed of the acronym linked to the following items (Patient: adolescent and young adult aged 15 to 24 years old; Intervention: R/S Comparison: people without R/S (in studies where there was a comparison); and Outcomes: suicidal behavior. In relation to the age of the population considered for the present review, the delimitation of the period between 15 and 24 years old had the objective of encompassing adolescents or young adults, who are in an age group in which suicide emerges as the second cause of mortality(1), therefore requiring preventive actions and recognition of risk and protective factors. According to the WHO, adolescents are individuals between 10 and 19 years of age(16), while in national classifications, young adults those between 20 and 24 years old(17).

The PICO strategy was developed in line with evidence-based practice for locating relevant primary studies in databases/libraries⁽¹⁵⁾. In this review, the guiding question was the following: What is the scientific evidence regarding the association between R/S and suicidal behavior among adolescents and young adults?

Data collection was carried out between February and March 2020. To carry out the search, the LILACS (Latin American and Caribbean Literature in Health

Sciences), PubMed (National Library of Medicine and National Institute of Health – USA), and CINAHL (The Cumulative Index to Nursing and Allied Health Literature) databases/libraries were chosen. Such databases/libraries were selected due to their scope and relevance for the identification of evidence, as reported in other available literature reviews⁽¹⁸⁾.

The terms used were those indexed in the Health Sciences Descriptors (Descritores em Ciências da Saúde, DeCS) and in the Medical Subject Headings (MeSH). The following combination of descriptors indexed in the DeCS and MeSH Terms was used: ideação suicida (suicidal ideation), suicidio (suicide), tentativa de suicídio (suicide attempted), espiritualidade (spirituality), religião (religion), adolescente (adolescent), and jovem adulto (young adult), in addition to the use of the keyword jovem (young individual). The Boolean operator AND was used, making eighteen different search combinations. The search strategy included the search for descriptors and keywords throughout the text. These descriptors and their combinations were defined based on the guiding question.

The following inclusion criteria were used: articles in Portuguese, Spanish and English, published between January 2011 and February 2020, that portrayed the relationship between R/S and suicidal behavior, with adolescents and young adults aged 15 to 24 years old as participants. The scope of the review, covering the last nine years, aimed at enabling access to the most recent production on the theme.

This age range between 15 and 24 years old was selected because it includes adolescents and young adults who are in the age group of the population most vulnerable to suicidal behavior⁽¹⁾.

Regarding the exclusion criteria, literature review articles were removed, as well as editorials, abstracts, articles repeated in the database, whose texts were not available in full, which did not answer the guiding question, articles that addressed other comorbidities and whose participants were less than 15 years old and over 25 years old, which only informed the mean age or which did not mention the age of the research participants.

The searches and the application of the inclusion and exclusion criteria were carried out by two independent judges, both with experience in the themes of R/S and suicide, as well as familiarity with the review method adopted. The possible disparities in these assessments were assessed by a third judge. The articles retrieved from this filtering and selection process made up the analytical *corpus*.

For categorizing the articles, the following information was extracted from the articles that made up the *corpus*: authors, year of publication, title, journal,

language, objective, methodological characteristics, instruments and questionnaires being used.

Results

Figure 1 shows the selection process and the exclusion and inclusion criteria for the studies. First, 1,044 articles were identified in the selected databases/ libraries. After reading and analyzing the titles identifying the main theme as: suicidal behavior (ideation and attempted suicide) and spirituality, religion or religiosity, 433 articles were pre-selected. After reading the titles and abstracts, 314 articles were excluded and 112 articles did not meet the inclusion criteria, totaling a final sample of seven articles.

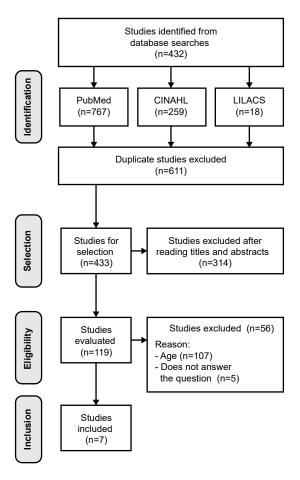


Figure 1 – Flowchart of the study selection process for the systematic literature review

The causes for exclusion were the following: age of the participants (n=107; 95.5%) and articles that did not address the theme under study (n=5; 4.5%).

The *corpus* of the study consisted of seven articles that met the inclusion criteria. The information synthesis of the retrieved articles is shown in Figure 2.

It was verified that (73.47%) of the publications are from PubMed and (24.81%) from CINAHL.

Regarding the year of publication, it was verified that seven selected studies were published between 2011 and 2017. There was predominance in 2011 with two (28.5%) publications and in 2012, 2014, 2015, 2016 and 2017, there was only one (14.3%). Regarding the language, seven (100%) were published in English and in international journals, and three (42.86%) articles were published in the same journal, the Journal of Religion and Health^(19,20,22).

Figure 3 provides an overview of the seven selected publications, highlighting the type of methodological approach, the sample, the age of the participants, the setting and the general objective.

As for the design of the research studies, it was identified that five studies (71.4%) were of a quantitative methodological approach and two (28.6%) of a qualitative approach. It was found that the studies with a quantitative approach had a sample that varied from 111 to 1168 participants, and the studies were conducted in different research settings. In this context, it is emphasized that none of the studies presented the sample size calculation. In the two (28.6) qualitative articles, the sample ranged from 18 to 20 participants^(19,24).

In four studies (57.14%) the research setting took place in universities, two (28.57%) were developed in schools with high school young individuals^(21,25), and the other with a religious group from the Islam⁽²⁰⁾. The age of the participants ranged from 15 to 24 years old. It was also identified that six (85.7%) of the studies addressed young people of both genders, and that one (14.3%) qualitative study was developed only with young women⁽¹⁹⁾.

Regarding the study locus, it was found that four (57.1%) were developed in Asia (Pakistan, China,

Malaysia, India), two (26.8%) in the Middle East (Israel) and one (14, 3%) in South Africa (Durban) and North America (Canada).

When analyzing the objectives of the studies, it is prudent to mention that six (85.7%) surveys aimed to directly assess the religion/spirituality construct. Also in relation to the objectives, regarding suicidal behavior, it was verified that six studies investigated different dimensions of suicidal behavior, and assessed the attitudes, ideation, suicidal tendencies and thoughts. It is also worth mentioning that one (14.3%) of the articles indirectly assessed suicide risk through the stressful situations of daily life⁽¹⁹⁾.

With regard to the instruments and questions used to assess R/S and suicidal behavior, Figure 4 summarizes these elements in the present sample.

When analyzing the instruments used for the theme under study, the application of diversified instruments and strategies became evident. It was verified that five (71.43%) quantitative studies analyzed religion, and not spirituality. And that the assessment of religiosity in two (28.57%) of the articles was performed only with dichotomous answers, with one evaluating only the religious belief⁽²³⁾, and the other evaluated religious rituals in addition to the religious belief⁽²¹⁾, and an article identified the importance of religion and participation in religious services⁽²⁵⁾.

In qualitative research studies, one of the studies investigated spirituality with semi-structured questions, which were not explained⁽¹⁹⁾ and, in the other, the assessment of religiosity occurred through the question "What does it mean to be religious", and the other questions of religiosity were involved with life, coping strategies and suicide⁽²⁴⁾.

Databases	Authors	Title	Year	Journal
PubMed	Francis W, Bance LO ⁽¹⁹⁾	Protective Role of Spirituality from the Perspective of Indian College Students with Suicidal Ideation: "I am here Because God Exists".	2017	J Relig Health
CINAHL	Kazi TB, Naidoo S ⁽²⁰⁾	Does Religiosity Mediate Suicidal Tendencies? A South African Study of Muslim Tertiary Students.	2016	J Relig Health
CINAHL	Muallem HK, Israelashvilli M ⁽²¹⁾	Religiosity as a buffer against suicidal ideation: a comparison between Christian and Muslim-Arab adolescents	2015	Mental Health, Religion & Culture
PubMed	Foo XY, Alwi MNM, Ismail SIF, Ibrahim N, Osman ZJ ⁽²²⁾	Religious Commitment, Attitudes Toward Suicide, and Suicidal Behaviors Among College Students of Different Ethnic and Religious Groups in Malaysia.	2014	J Relig Health
CINAHL	Zhao J, Yang X, Xiao R, Zhang X, Aguilera D, Zhao J ⁽²³⁾	Belief system, meaningfulness, and psychopathology associated with suicidality among Chinese college students: a cross-sectional survey.	2012	BMC Public Health
CINAHL	Band M, Dein S, Loewenthal K M ⁽²⁴⁾	Religiosity, coping, and suicidality within the religious Zionist community of Israela thematic qualitative analysis.	2011	Mental Health, Religion & Culture
CINAHL	Rasic D, Kisely S, Langille DB ⁽²⁵⁾	Protective associations of importance of religion and frequency of service attendance with depression risk, suicidal behaviours and substance use in adolescents in Nova Scotia, Canada.	2011	Journal of Affective Disorders

Figure 2 – Synthesis of articles published in the PubMed and CINAHL databases, from 2011 to 2020

Methodological approach	Sample, age and setting	Objective
Qualitative Francis W, Bance LO ⁽¹⁹⁾	20 female university students in India from a single university, aged 19 to 22 years old	To explore the perceptions of the university students in relation to "spirituality" beliefs as a protective factor that contributes to positive adaptation during stressful situations.
Quantitative Kazi TB, Naidoo S ⁽²⁰⁾	111 university students adhering to the Islam from various institutions in South Africa, of both genders aged between 18 and 21 years old.	To investigate the relationship between religiosity and the suicidal tendency in a sample of Muslim students.
Quantitative Muallem HK, Israelashvilli M ⁽²¹⁾	219 high school adolescents in Israel, of both genders, aged 15 to 18 years old.	To explore the association between religious beliefs and suicidal thoughts among Muslims and Christian adolescents from the Arab minority in the State of Israel.
Quantitative Foo XY, Alwi MNM, Ismail SIF, Ibrahim N, Osman ZJ ⁽²²⁾	139 university students from two Malaysian colleges, male and female, aged 18 to 24 years old.	To examine the impact of religious commitment and attitudes in relation to suicide and suicidal behavior.
Quantitative Zhao J, Yang X, Xiao R, Zhang X, Aguilera D, Zhao J ⁽²³⁾	1,168 university students in China from ten educational institutions, of both genders, aged 16 to 24 years old.	To investigate the effect of the belief system, including political and religious beliefs, and its interaction with suicidal behavior.
Qualitative Band M, Dein S, Loewenthal K M ⁽²⁴⁾	18 participants from the Zionist community of Israel, 16 of whom were university students and two were not, of both genders, aged between 18 and 24 years old.	To map the main aspects of the relationship between suicidal behavior, coping and religiosity.
Quantitative Rasic D, Kisely S, Langille DB ⁽²⁵⁾	1,615 students from three Canadian high schools, men and women, aged 15-19 years old.	To examine the relationship between two dimensions of religion (importance and frequency of religious attendance) with the risk of depression, suicidal behavior and substance use disorders.

Figure 3 – Characteristics of the articles regarding the type of methodological approach, sample, age of participants, gender, setting, and objective variables

	Religion/Spirituality Authors validation or construction	Suicidal behavior. Authors validation or construction
Francis W, Bance LO ⁽¹⁹⁾	Conducted through a focus group with semi- structured questions to gather information about spirituality and the factors that contribute to positive adaptation	What are the stressors you experience that cause you to have thoughts of ending your life? What are the factors that help you to be strong in facing the difficulties/stressors you encounter in your life? How do you see the belief in the supreme Creator, a source of strength?
Kazi TB, Naidoo, S ⁽²⁰⁾	ROT - Religious Orientation Test ⁽²⁶⁾	MAST - Multiple Attitude Suicide Trends Scale ⁽²⁷⁾
Muallem HK, Israelashvilli M ⁽²¹⁾	Religiosity Questionnaire ⁽²⁸⁾	Suicidal Ideation Questionnaire ⁽²⁹⁾
Foo XY, Alwi MNM, Ismail SIF, Ibrahim N, Osman ZJ ⁽²²⁾	RCI-10 - Religious Commitment Inventory ⁽³⁰⁾	ATTS - Attitudes Towards Suicide Scale ⁽³¹⁾
Zhao J, Yang X, Xiao R, Zhang X, Aguilera D, Zhao J ⁽²³⁾	Report of the religious belief, analyzed in a dichotomous way	SBQ-R - Suicidal Behavior Questionnaire – Revised ⁽³²⁾
Band M, Dein S, Loewenthal KM ⁽²⁴⁾	What does being religious mean to you?	How do your religious beliefs affect your life? Do your religious values help you deal with life's stressful or problematic events? Do you think there are circumstances in which suicide can be acceptable? Do you think that your religious beliefs help you deal with life and death issues? Did things ever get so bad that you thought about harming yourself in some way? Do you think that religion influences how people feel about suicide? When you find out that someone has committed suicide, do questions of religiosity affect how you view your actions? If you have ever been in a state of despair, do you think that your religious beliefs helped you to deal with that situation?
Rasic D, Kisely S, Langille DB ⁽²⁵⁾	Importance of religion and participation in religious services, analyzed in a dichotomous manner	Report of previous experience of suicidal behavior in the last year

Figure 4 – Main instruments and questions used to assess religion/spirituality and suicidal behavior and the respective authors who validated or built the tools

Regarding the assessment of suicidal behavior in the quantitative studies, the application of different instruments was also verified (20-23,25).

As for the studies with a qualitative approach, the research conducted with university students used questions directed to stressful situations such as suicide and the relationship of spirituality as strength and support. It is prudent to mention that this article performed a screening using three instruments, namely: the Suicidal Scale Ideation (SSI), the Suicide Behavior Questionnaire – revised (SBQ-R), and the Suicide Resilience Inventory (SRI-25). The research was conducted only with university women who had a change in suicidal behavior⁽¹⁹⁾. The other study evaluated the relationship between religiosity and suicide through various questions⁽²⁴⁾.

The main results of the studies regarding the relationship between R/S and suicidal behavior are shown in Figure 5.

With regard to the results of the articles, it was identified that there are four (57.1%) studies that support the association between R/S and the prevention of suicidal behavior, and in two studies this positive relationship was found only for Christian adolescents⁽²¹⁾

and, in the other, only in the female gender⁽²⁵⁾. Two studies did not find any relationship between R/S and coping with suicidal behavior. However, religious commitment has indirectly contributed to young people being more understanding of other people's suicidal behavior and considering that it can be prevented⁽²²⁾, and that faith can also help young people to go through difficult times, but it is not enough to activate in acute situations of stress and trauma⁽²⁴⁾.

An important fact to be clarified is that one of the studies mentioned that religion may not be a universal protector against suicidal ideation in different religions, and that the desire to live was a protective factor against suicidal behavior, regardless of the religion⁽²¹⁾.

It is relevant to mention that in one of the articles there was an opposite effect, in which being religious increased the risk of suicide. The authors explain that young people, when they believe in afterlife, see suicide as a quick way to accelerate this achievement⁽²³⁾.

As for explaining the benefits of R/S, only two articles portray that the connection with divinity provides a feeling of comfort, relief and vigor to continue living⁽¹⁹⁾ and that the more religious the young person is, the more they are seduced by life⁽²⁰⁾.

Relationship between religion/spirituality and suicidal behavior

It was concluded that the protective aspects of spirituality in promoting adaptation and well-being in the lives of students at risk of suicide through their perceptions of God, offering an important meaning of spirituality in increasing resilience to suicide. Connection with God as a "presence" and 'strength' in the midst of adversity provides individuals with a sense of comfort, relief and strength to get on with life. These significant consequences represent the positive aspects of coping behaviors that can be well associated with resilience or positive adaptation⁽¹⁹⁾.

There is a significant negative correlation (-0.227) at the 0.005 level between attraction to life and the Religious Orientation Test, which indicates that the more religious the young person is, the more attracted to life they will be. It is concluded that religion acts as a protective factor against suicide⁽²⁰⁾.

A significant negative correlation (r = -0.33) was found between level of religiosity and suicidal ideation, but only among Christian adolescents. Religious devotion may not be a universal protection against suicidal ideation, in different religions⁽²¹⁾.

The acceptance of suicide varied significantly (0.01) among the religious groups, with Buddhist participants (Mean=24.8) having greater acceptance compared to Muslims (Mean=19.9). The participation of the university students in different religious groups did not differ in terms of the likelihood of believing that suicide was preventable and also in relation to the risk for suicide. However, the result of the logistic regression analysis showed that the probability of suicide attempt among university students can be predicted by their ethnicity and religious affiliation, the Chinese and Buddhists being 2.7 times more likely to attempt suicide than the Malaysians and Muslims. Religion in the lives of the students helps to shape the rules about suicide in young people. The influence of the attitudes towards suicide and religion must be considered in the development of suicide prevention programs⁽²²⁾.

Having a religious belief was significantly related to suicide risk by Pearson's correlation coefficient matrix. Therefore, being religious was associated with an increased risk of suicide, since by believing in life after death, suicide would be a means for accelerating this achievement⁽²³⁾.

It is concluded that there is ambiguity in the relationship between religiosity, coping and suicide. It is stated that being religious does not automatically guarantee that it is an element of coping and that faith and belief are not activated in acute situations of stress and trauma. However, faith is a source of comfort and has helped some participants to overcome difficult situations⁽²⁴⁾.

Among women, the lower personal importance of religion was associated with 1.8 times more chances of suicidal ideation, being statistically significant (p<0.001), and 1.5 times more chances of attempted suicide, with no significant difference. Since little religious participation presented 1.8 times more chances of suicide ideation, statistically significant (p<0.05), and 1.4 times more chances of attempted suicide, not statistically significant (p<0.05).

Figure 5 – Main results of the studies analyzed regarding the relationship between religion/spirituality and suicidal behavior

Discussion

There was a lack of studies in the national context regarding the relationship between R/S and suicidal behavior in adolescents and young people, which is already being portrayed in the literature⁽³³⁾. In this sense, it is necessary that research studies be conducted with this group, since the suicide rates in this population are significant⁽³⁴⁾, in addition to R/S being part of the culture, socialization and daily routine of many Brazilians⁽³⁵⁾, with Brazil being an eminently religious country. Greater investment in these research studies can contribute so much to better understanding the suicide prevention strategies employed by this population, as well as the possible particularities in relation to the Brazilian context. In this sense, R/S may prove to be a more or less expressive protective factor due to this context, which should still be better investigated and supported by more scientific evidence.

The main approach taken by the researchers in this field was quantitative, and in none of the studies was the statistical calculation to define the sample performed. The performance of the sample calculation contributes to the internal validity of the study, being of fundamental relevance that is described in the articles⁽³⁶⁾.

Another important fact to be highlighted is that most of the studies were conducted in universities and with university students. Such a situation can be related to facilitated access to the students, as well as to the suffering experienced in this social context and by this group, such as violence, panic syndrome, stress, depression and suicide, in addition to the world often becoming uninteresting and meaningless for young people⁽³⁷⁾. The literature refers that university students are a group that deserves attention in relation to suicidal behavior⁽³⁸⁾. In addition, the institutional context has been increasingly the target of reflections in terms of mental health, and it is necessary that higher education institutions are engaged not only in programs to assist these students, but also to develop actions to welcome this population, which goes beyond the reflections on the prevention of suicidal behavior at this training stage.

A research study carried out with 637 university students, aged between 18 and 32 years old, from the Federal University of Mato Grosso, found that 9.9% had suicidal ideas in the last 30 days⁽³³⁾. Another research study also conducted with 220 university students in Ireland found that 59% of the participants had depressive symptoms and 28.5%, suicidal ideation⁽³⁹⁾. These data converge with the research carried out with 523 undergraduate students from Ethiopia, which found that the general estimate of suicidal behavior was

28.9%, while the lifetime prevalence of ideation was 58.3%, of a suicidal plan, 37.3%, and of attempted suicide, $4.4\%^{(38)}$.

It is necessary to consider that two articles included in the sample of this research had the school as their setting, and high school adolescents as population. This group also has significant rates of suicidal behavior, as evidenced in a study conducted in Ghana, in which adolescents had higher rates of stress, depression and suicidal ideation than university students⁽⁴⁰⁾. A survey conducted with Iranian high school adolescents concluded that 4.1% had suicidal thoughts in the last 12 months⁽⁴¹⁾. In the Brazilian context, it was also evident that 12.1% of the high school adolescents had suicidal thoughts and that 5.5% had attempted suicide in the last 12 months, with the highest prevalence of thoughts being in the 14-to-16-year-old age group⁽³⁴⁾.

It is imperative that research studies be conducted in school and university spaces and that the health professionals be able to implement strategies that can welcome adolescents and young people in all their existential dimension, contributing to the improvement of their well-being^(37,40). Although the literature retrieved does not sufficiently explore the role of educational management, it is necessary that the leaders of these educational institutions, both high school and college, are engaged in mental health promotion actions that can emphatically consider the prevention of suicidal behavior. These strategies can also be articulated to other actions that are fundamental to this population.

Regarding the age of the participants, considering the inclusion criteria established in this study, it was verified that their age ranged from 15 to 24 years old. It is important to elucidate that, worldwide, the second leading cause of death among young people aged 15 to 29 years refers to suicide, and that it is still a neglected health area⁽⁴¹⁾. Regarding this variable, it is observed that research studies were excluded from this study due to the age being over 25 years old(11,42,43). In some investigations the authors only mentioned that the participants were over 18 years old(44,45), or that they were adolescents and young adults(46), and others portrayed just the mean age of the young individuals^(38,47). It is recommended that the studies clearly specify the age range of the participants to allow for a better understanding of the results.

It is appropriate to point out that studies with a very broad age group can alter the research results in relation to the R/S experience⁽⁴²⁻⁴³⁾ as well as to suicidal behavior. It is known that adolescents and young people are exposed to other vulnerabilities, such as the consumption of alcohol, tobacco and other

substances, depression, peer violence, and other aspects that would be catalysts to raise the suicide rate among the other groups.

This is consistent with a research study conducted with participants between 18 and 36 years old, where the risk of suicide is higher in the youngest, who were less committed to religion, had higher rates of symptoms of depression, anxiety, alcohol consumption, perceived less social support from family and friends and did not seek help, and these variables were significant⁽¹¹⁾.

Another relevant issue refers to the fact that most of the articles studied only sex/gender issues and the relationship with suicide, which corroborates the research that describes the negligence of studies on the interface between R/S and the mental health of the LGBTQI+ community, a group with increased risk of suicidal behavior(33,48). The authors consider that more research studies are needed with the LGBTQI+ population(49) and that they should be conducted to define interventions that contribute to suicide prevention⁽⁴⁸⁾. It should also be noted that R/S can be an important protection factor, especially when it is welcoming to sexual and gender minorities⁽⁵⁰⁾, allowing LGBTQI+ young people who are connected to the R/S dimension to also adopt healthier behaviors, which also involves the prevention of suicidal behavior.

Related to the particularities of the R/S dimension with the construction of suicidal behavior, it was verified that most of the studies aimed to investigate this relationship. For both constructs the researchers used different instruments to measure the variables. Only one qualitative study investigated the spirituality dimension, and the others evaluated the belief, the importance of religion, religious rituals, and participation in religious services.

Regarding the investigation of suicidal behavior, a quantitative study⁽²³⁾ applied the SBQ-R - Suicidal Behaviors Questionnaire-Revised, and in another study, this same instrument was used to identify the participants with suicidal behavior and later conduct the qualitative approach⁽¹⁹⁾. It presents itself as a reliable tool for the adolescent and adult population, self-reported and of the Likert type, in which the risk of suicide is evaluated through four questions, with scores that vary from three to 18 points: a score equal to or higher than seven indicates that the individual presents high risk of suicidal behavior^(32,11).

The results of the articles showed discrepancies in the link between the R/S constructs and suicidal behavior. It can be inferred that the divergence of results can be related to the different instruments employed⁽⁴⁷⁾ and to the methodologies, besides sociocultural issues, of the

different religions and how young people experience the dimension of religion and spirituality in their lives.

Despite the divergent results, the articles portrayed the benefits of religion and R/S, even if indirectly, in the lives of young people in relation to suicide. And that the genesis for this benefit lies in comfort, in the relief of stressful situations, and in the satisfaction for life. R/S has a positive effect on the mental health of human beings, since it increases positive emotions and reduces the stress that could generate negative feelings, such as suicidal ideation. R/S also contributes to define the doctrines of life in society and pro-social behavior: by fulfilling them, the individual reduces the probability of experiencing stressful situations. R/S can also promote human virtues such as honesty, forgiveness, gratitude and patience, which increase positive emotions(13), and work as protective factors in terms of mental health.

Other research studies show that R/S contributes to well-being^(33,35), as this dimension provides a social support network which minimizes loneliness and a sense of isolation, while many religious teachings nurture the idea that suicide is not a viable alternative to dealing with suffering and problems⁽³⁵⁾. The effects of this association can be found in other studies, such as the one conducted with university students who also completed the SBQ-R, concluding that only young women who were less involved in religious practices had a higher chance for suicide risk⁽³⁸⁾. A research study conducted in the Brazilian context found that the university students who did not have a religious practice had a higher risk of suicidal behavior⁽³³⁾.

These data converge with a research developed with American university students in which it was observed that intrinsic religiosity (religious beliefs and practices) was a protective factor for preventing suicide ideation only in women⁽⁴⁷⁾. It is also evident from a research study conducted with adult Iranians who attempted suicide compared to those who did not, that intrinsic religion, as well as the religious beliefs, is related to the prevention of suicidal behavior; however, religious practice showed no correlation with this variable⁽⁵¹⁾.

The results of a study conducted with adolescents and young adults in Trinidad and Tobago detected protective associations of suicidal thought only among those who declared themselves to be Catholics and Seventh-day Adventists. The greater self-assessed religiosity of the participants was related to the lower probability of thinking about suicide and of planning suicide. Attendance at religious services was also associated with a decreased risk of suicidal thoughts and suicide attempts. There was also a protective association

between higher prayer frequency and lower chances of suicidal thoughts and plans, which contributes to minimizing stress and suffering $^{(46)}$.

There are reports in one of the articles that composed the sample of the study which reveal that, even if young individuals have faith, they do not always use it to face adversities, although some believe it is fundamental to survive these moments. These results are in line with a qualitative research study conducted with young people and adults who had attempted suicide: they consider the existence of God, and that He is responsible for giving life and collecting it. They also believe in the relevance of religion for mental health and well-being; however, they failed to use it during suffering and that this whole process generated a feeling of guilt and reproach for the act⁽⁴³⁾.

Conclusion

From the studies retrieved in this review, it is evident that R/S is a relevant element in the lives of adolescents and young people. However, it is necessary to conduct more research studies and direct them to understanding the experience of the dimension for these constructs in their lives and their effects, especially in relation to suicidal behavior. Although the evidence retrieved in this study is limited in terms of its power of effect for more robust comparisons, only seven studies have been retrieved, it should be noted that, for the most part, they point to protective effects of R/S in relation to the prevention of suicidal behavior. Thus, R/S can be evoked not only as a resource in mental health, which is also in line with the recommendations of the World Health Organization, based on its multidimensional concept of health, updated in 1998, but also on an element that can be further discussed with adolescents and young people.

In a society increasingly hyperconnected, automated and with little space for incursions in the individual's own universe, R/S can be an invitation for these young people to be in contact with their own sensations, with their own resources, and with reflections that are beyond materiality, which may evoke safer and more aligned answers to a real health promotion by the possibility of returning to what in fact constitutes them. A need that has emerged from this review is to understand how this population understands and experiences R/S. In the Brazilian setting, eminently religious and with several religious and spiritual manifestations, the possibility is opened that the studies in the field of mental health should be in constant dialog with those produced by the human sciences, in search of apprehension of the religious phenomenon itself in this age group and its

specificities from the different social markers such as origin, income, schooling and access to health. These relationships may prove relevant, in future studies, for a deeper apprehension about the protective role of R/S on suicidal behavior. These reflections may be part of suicide prevention programs and actions, not as a form of indoctrination or exploitation of a professional action considered religious, but on the contrary: as a possibility of leading the individual to an internal connection that promotes self-knowledge and, consequently, self-care, having as a reference an intelligible and meaningful R/S for this population.

References

- 1. World Health Organization. Preventing suicide a global imperative. Geneva: WHO; 2014. [cited Mar 15 2020]. Available from: http://www.who.int/mental_health/suicide-prevention/world_report_2014/en/
- 2. Goodfellow B, Kõlves K, de Leo D. Contemporary Definitions of Suicidal Behavior: A Systematic Literature Review. Suicide Life Threat Behav. 2018;49(2):488-504. https://doi.org/10.1111/sltb.12457
- 3. Penso MA, Sena DPA de. Young people's hopelessness and suicide as a solution. Soc Estado. 2020;35(1):61-81. doi: https://doi.org/10.1590/s0102-6992-202035010004
- 4. Orellana JDY, Ribeiro MRC, Barbieri MA, Saraiva MC, Cardoso VC, Bettiol H, et al. Mental disorders in adolescents, youth, and adults in the RPS Birth Cohort Consortium (Ribeirão Preto, Pelotas and São Luís), Brazil. Cad Saúde Pública. 2020;36 (2): e00154319. doi: https://doi.org/10.1590/0102-311x00154319
- 5. Oliver A, Galiana L, Sancho P, Tomás J M. Spirituality, hope and dependence as predictors of satisfaction with life and perception of health: the moderating Effect of being very old. Aquichan. 2015;15(2):228-38. doi: https://dx.doi.org/10.5294/aqui.2015.15.2.7
- 6. Oliveira MR, Junges JR. Mental health and spirituality/ religiosity: psychologists' understandings. Estud Psicol. 2012;17(3):469-76. doi: doi.org/10.1590/ S1413-294X2012000300016
- 7. Scorsolini-Comin F. The religiosity/spirituality in health [editorial]. Rev Ciênc Saúde. 2018;8(2):1-2. doi: https://doi.org/10.21876/rcsfmit.v8i2.752
- 8. Cunha VFF, Scorsolini-Comin F. The Religiousness/ Spirituality Dimension in Clinical Practice: An Integrative Review of the Scientific Literature. Psicol Teor Pesq. 2019;35:e35419. doi: https://doi. org/10.1590/0102.3772e35419
- 9. Inoue TM, Vecina MVA. Spirituality and/or religiosity and health: a literature review. J Health Sci Inst.

- 2017;35(2):127-30. [cited Mar 10 2020]. Available from: https://www.unip.br/presencial/comunicacao/publicacoes/ics/edicoes/2017_02.aspx
- 10. Précoma DB, Oliveira GMM, Simão AF, Dutra OP, Coelho OR, Izar COM, et al. Atualização da Diretriz de Prevenção Cardiovascular da Sociedade Brasileira de Cardiologia 2019. Arq Bras Cardiol. 2019;113(4):787-891. doi: 10.5935/abc.20190204
- 11. Hamdan S, Peterseil-Yaul T. Exploring the psychiatric and social risk factors contributing to suicidal behaviors in religious young adults. Psychiatry Res. (Internet). 2019;20:112449. [cited Mar 10 2020]. Available from: https://www.ncbi.nlm.nih.gov/pubmed/31229309
- 12. Cunha VF, Scorsolini-Comin F. Best professional practices when approaching religiosity/spirituality in psychotherapy in Brazil. Couns Psychother Res. 2019;19:523–32. doi: https://doi.org/10.1002/capr.12241
- 13. Koenig HG. Religion, spirituality, and health: the research and clinical implications. ISRN Psychiatry. 2012;2012:278730. doi: https://doi.org/10.5402/2012/278730
- 14. Mendes KDS, Silveira RCCP, Galvão CM. Integrative literature review: a research method to incorporate evidence in health care and nursing. Texto Contexto Enferm. 2008;17(4):758-64. [cited Mar 17 2020]. Available from: https://www.scielo.br/scielo.php?pid=s0104-07072008000400018&script=sci_arttext 15. Santos CMC, Pimenta CAM, Nobre MRC. The PICO strategy for the research question construction and evidence search. Rev. Latino-Am. Enfermagem. 2007;15(3):508-11. doi: https://doi.\org/10.1590/S0104-11692007000300023
- 16. World Health Organization. Young people's health a challenge for society: report of a WHO Study Group on Young People and "Health for All by the Year 2000". Technical Report Series 731. Geneva: WHO; 1986. https://apps.who.int/iris/handle/10665/41720
- 17. Ministério da Saúde. Secretaria de Atenção à Saúde (BR). Área de Saúde do Adolescente e do Jovem. Marco legal: saúde, um direito de adolescentes. Brasília: Ministério da Saúde; 2007. 60 p.[Acesso 28 jul 28 2020].Disponível em: http://www.adolescencia.org.br/upl/ckfinder/files/pdf/marco_legal.pdf
- 18. Felipe AOB, Carvalho AMP, Andrade CUB. Spirituality and religion as protectors for adolescente drug use. SMAD, Rev. Eletrônica Saúde Mental Álcool Drog. 2015; 11(1):49-58. doi: http://dx.doi.org/10.11606/issn.1806-6976.v11i1p49-58
- 19. Francis W, Bance LO. Protective Role of Spirituality from the Perspective of Indian College Students with Suicidal Ideation: "I am here Because God Exists".

- J Relig Health. 2017; 56: 962–70. doi: https://doi.org/10.1007/s10943-016-0296-6
- 20. Kazi T, Naidoo S. Does Religiosity Mediate Suicidal Tendencies? A South African Study of Muslim Tertiary Students. J Relig Health. 2016;55:1010–23. doi: 10.1007/s10943-015-0167-6
- 21. Muallem HK, Israelashvilli M. Religiosity as a buffer against suicidal ideation: a comparison between Christian and Muslim-Arab adolescentes. Mental Health, Religion Culture. 2015;18(10): 838–49. doi: http://dx.doi.org/10.1080/13674676.2015.1107891
- 22. Foo XY, Alwi MNM, Ismail SIF, Ibrahim N, Osman ZJ. Religious Commitment, Attitudes Toward Suicide, and Suicidal Behaviors Among College Students of Different Ethnic and Religious Groups in Malaysia. J Relig Health. 2014;53:731–46. doi:10.1007/s10943-012-9667-9
- 23. Zhao J, Yang X, Xiao R, Zhang X, Aguilera D, Zhao J. Belief system, meaningfulness, and psychopathology associated with suicidality among Chinese college students: a cross-sectional survey. BMC Public Health. 2012;12:668. doi: 10.1186/1471-2458-12-668
- 24. Band M, Dein S, Loewenthal KM. Religiosity, coping, and suicidality within the religious Zionist community of Israela thematic qualitative analysis. Mental Health, Religion Culture. 2011;14(10):1031-47. doi: https://doi.org/10.1080/13674676.2010.548059
- 25. Rasic D, Kisely S, Langille DB. Protective associations of importance of religion and frequency of service attendance with depression risk, suicidal behaviours and substance use in adolescents in Nova Scotia, Canada. J Affective Disorders. 2011;132(3):389-95. doi: https://doi.org/10.1016/j.jad.2011.03.007
- 26. Idehen EE. The development and evaluation of a religiosity scale. IFE Psychologia. 2001;9:58–69. doi: 10.4314/ifep.v9i2.23617
- 27. Orbach I, Milstein I, Har-Even D, Apter A, Tiano S, Elizur A. A multi-attitude suicide tendency scale for adolescents. J Consult Clin Psychol. 1991;3(3):398–404. 28. Katz A. The link between religious identity, Israeli identity, and value identification with military service among Jews and Druze in Israel (Unpublished master's thesis). Tel Aviv: University Education; 2000.
- 29. Reynolds WM. Psychometric characteristics of the adult suicidal ideation questionnaire in college students. Personal Assess. 1991;56(2):289–307. doi: https://doi.org/10.1207/s15327752jpa5602_9
- 30. Worthington E, Wade N, Hight T, Ripley J, McCullough M, Berry J, et al. The religious commitment inventory-10: Development, refinement, and validation of a brief scale for research and counselling. J Counsel Psychol. 2003 Jan 1;50(1):84-96. doi: https://doi.org/10.1037/0022-0167.50.1.84

- 31. Salander-Renberg E, Jacobsson L. Development of a questionnaire on attitudes towards suicide (ATTS) and its application in a Swedish population. Suicide Life-Treat Behav. 2003;33:52–64. doi: 10.1521/suli.33.1.52.22784 32. Osman A, Bagge CL, Guitierrez PM, Konick LG, Kooper BA, Barrios FX. The suicidal behaviour questionnaire-revised (SBQ-R): validation with clinical non clinical samples. Assessment. 2001;5:443-54. doi: 10.1177/107319110100800409
- 33. Santos HGB, Marcon SR, Espinosa MM, Baptista MN, Paulo PMC. Factors associated with suicidal ideation among university students. Rev. Latino-Am. Enfermagem [Internet]. 2017;25:e2878. [cited Mar 19 2020]. Available in: http://www.scielo.br/scielo.php?script=sci_arttext&p id=S0104-11692017000100332.
- 34. Alves CAS Junior, Nunes HEG, Gonçalves ECA, Silva DAS. Suicidal behaviour in adolescents: characteristics and prevalence. J Hum. Growth Dev. 2016;26(1):88-94. [cited Mar 27 2020]. Available in: http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S0104-12822016000100013&lng=pt&nrm=iso
- 35. Nantes AC, Grubits S. A religiosidade/espiritualidade como um possível fator de ajuda à prevenção da prática suicida. Rev Contemplação. 2017;16:73-84. [Acesso 27 mar 2020]. Disponível em: http://fajopa.com/contemplacao/index.php/contemplacao/article/view/155 36. Brito CJ, Grigoletto MES, Toledo Nóbrega O, Córdova C. Sample size and the myth of magical numbers: point of view. Rev Andaluza Medicina Deporte. 2016;9(1):29-31. [cited Mar 22 2020]. Available in: https://www.sciencedirect.com/science/article/pii/S1888754615001318
- 37. Dutra E. University student's suicide: existential emptiness in contemporary times. Estud Pesqui Psicol. [Internet]. 2012;12(3):924-37. [cited Mar 20 2020]. Available in: http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1808-42812012000300013&lng=pt&nrm=iso
- 38. Abdu Z, Hajure M, Desalegn D. Suicidal Behavior and Associated Factors Among Students in Mettu University, South West Ethiopia, 2019: An Institutional Based Cross-Sectional Study. Psychol Res Behav Manage. 2020; 13: 233–43. doi: 10.2147/PRBM.S240827
- 39. Horgan A, Kelly P, Goodwin J, Behan L. Depressive Symptoms and Suicidal Ideation among Irish Undergraduate College Students. Issues Ment Health Nurs. 2018; 39(7):575-84.[cited Mar 20 2020]. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29465285 40. Ahorsu DK, Adjaottor ES, Yeboah FA, Opoku Y. Mental health challenges in academia: comparison between students of the various educational levels in Ghana. J Ment Health. 2020;13:1-8. [cited Mar 21

- 2020]. Available from: https://doi.org/10.1080/096382 37.2020.1739253
- 41. Ziaei R, Viitasara E, Soares J, Sadeghi-Bazarghani H, Dastgiri S, Zeinalzadeh AH, Bahadori F, Mohammadi R. Suicidal ideation and its correlates among high school students in Iran: a cross-sectional study. BMC Psychiatry. 2017; 17: 147. [cited Mar 21 2020]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5397734/
- 42. Lytle MC, Blosnich JR, Susan M, De Luca SM, Brownson C. Association of Religiosity With Sexual Minority Suicide Ideation and Attempt. Am J Prev Med. 2018; 54(5):644-65. doi: 10.1016/j.amepre.2018.01.019
- 43. Akotia CS, Knizek BL, Kinyanda E, Hjelmelan H. "I have sinned": understanding the role of religion in the experiences of suicide attempters in Ghana. Mental Health, Religion Culture. 2014; 17(5): 437–48. http://dx.doi.org/10.1080/13674676.2013.829426
- 44. Kleiman EM, Liu RT. Prospective prediction of suicide in a nationally representative sample: religious service attendance as a protective factor. Br J Psychiatry. 2014;204:262-6. doi: 10.1192/bjp.bp.113.128900
- 45. Wang Z, Koenig Harold G, Ma W, Liu L. Religious involvement, suicidal ideation and behavior in mainland China. Int J Psychiatry Med. 2015;48(4):299-316. doi: 10.2190/PM.48.4.e
- 46. Toussaint L, Wilson CM, Wilson LC, Williams DR. Williams. Religiousness and suicide in a nationally representative sample of Trinidad and Tobago adolescents and young adults. Soc Psychiatry Psychiatr Epidemiol. 2015; 50(9):1441–50. doi:10.1007/s00127-015-1045-y 47. Lester D, Walker RL. Religiosity Is a Protective Factor for Suicidal Ideation in European American Students but Not in African American Students. OMEGA- J Death Dying. 2017;74(3):295-303. doi: 10.1177/0030222815598452
- 48. Meyer IH, Teylan M; Schwartz S. The Role of Help-Seeking in Preventing Suicide Attempts among Lesbians, Gay Men, and Bisexuals. Suicide Life Threat Behav. 2015;45(1):25–36. doi:10.1111/sltb.12104.
- 49. Baere F, Zanello V. The gender in suicidal behavior: An epidemiological reading of data from the Federal District. Estud Psicol. 2018;23(2):168-78. http://dx.doi.org/10.22491/1678-4669.20180017
- 50. Ribeiro LM, Scorsolini-Comin F. Relations between religiousness and homosexuality in religious young adults. Psicol Soc. 2017;29:e162267. doi: https://doi.org/10.1590/1807-0310/2017v29162267
- 51. Baneshi MR, Haghdoost AA, Zolala F, Nakhaee N, Jalali M, Tabrizi R, et al. Can Religious Beliefs be a Protective Factor for Suicidal Behavior? A Decision Tree Analysis in a Mid-Sized City in Iran, 2013. J Relig Health. 2017;56:428–36. doi: 10.1007/s10943-016-0215-x

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