

Impact of spirituality on mortality of patients admitted to the intensive care unit

Abstract

The conceptual heterogeneity of spirituality has been widely recognized and, for some authors, spirituality does not have a clear definition, being the term used imprecisely and inconsistently, varying according to religion, culture and time and therefore difficult to measure. The theme is so relevant that the Department of Spirituality and Cardiovascular Medicine of the Brazilian Society of Cardiology elaborated and published a Position on arterial hypertension and spirituality – 2021, making it clear that the realization of the spiritual anamnesis is fundamental. We evaluated 200 patients admitted to the Intensive Care Unit (ICU) due to clinical pathologies that were lucid and conscious. Because there is no single and established methodology, it was decided to elaborate a score of easy applicability in the patients evaluated by this group to classify the patient as spiritualized or non-spiritualized. Before classifying them as spiritual or not, the risk of mortality in this hospitalization was calculated through the Simplified Acute Physiology Score III (SAPS 3). The 200 patients had a predictive score of death around 20% (18.5% to 21%). Through this sample, it is concluded that the existence of faith and the presence of active spirituality of these patients was one of the factors for the reduction of mortality during their hospitalization during the period in which they remained in the ICU. Another highlight was the lower mortality in women, especially in the non-spiritual group (2.5 times lower). The length of ICU stay did not vary significantly between groups.

Keywords: spirituality, religiousness, mortality, chronic disease, cardiovascular disease, cancer, familial support

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Abbreviations: ICU, intensive care unit; SAPS 3, simplified acute physiology score III

Introduction

Definitions of spirituality typically merge with other concepts, such as religiosity and the dimensions of psychological well-being, especially positive relationships with other people, purpose in life, and sometimes paranormal beliefs. The conceptual heterogeneity of spirituality has been widely recognized and, for some authors, spirituality does not have a clear definition, being the term used imprecisely and inconsistently, varying according to religion, culture and time and therefore difficult to measure.¹⁻⁵ Some methodologies are described in the literature: the DUREL (Duke University Religion Index) is a five-item scale that measures three dimensions of religious involvement. Similarly, HOPE Questions has shown good performance in spiritual assessment. The scale called Brief Multidimensional Measure of Religiousness and Spirituality, validated in Brazil, considers in its analyses the frequency of spiritual experiences, values/beliefs, propensity for forgiveness, religious practices of a personal nature, religious and spiritual overcoming, religious support and commitment. The Quality of Life instrument of the World Health Organization, in the module Spirituality, Religiosity and Personal Beliefs (WHOQOL-SRPB) encompasses 32 items, distributed in eight facets involving connection to Being or spiritual force, meaning in life, admiration, totality and integration, spiritual strength, inner peace, hope and optimism and faith.

Studies evaluating the association of spirituality and religiosity with outcomes have been criticized for the difficulty in adjusting for multiple comparisons, certain apparently contradictory findings and an excessive number of instruments. Measuring spirituality is

complex because of the various aspects involved in its definition and the multiple domains it covers. The theme is so relevant that the Department of Spirituality and Cardiovascular Medicine of the Brazilian Society of Cardiology, elaborated and published a Position on arterial hypertension and spirituality – 2021, making it clear that the realization of the spiritual anamnesis is fundamental.⁶ Countless works⁷⁻¹¹ demonstrate that faith in something Supreme reduces the length of hospitalization and mortality. In a 2009 systematic review, spirituality/religiosity was shown to be associated with reduced mortality in studies involving healthy populations, but not in trials of sick populations. The protective effect of spirituality and religiosity was independent of behavioral factors such as smoking, alcohol, exercise, socioeconomic status, negative affect and social support. In the Women's Health Initiative study, involving more than 43,000 menopausal women, cardiovascular risk was shown to be higher in patients without spiritual activity such as prayers, Bible reading, and meditation. In the Nurses' Health Study cohort of more than 74,000 nurses followed for up to eight years, we observed a reduction in both all-cause mortality, cardiovascular disease and cancer mortality, by about 30 percent, when comparing women with at least once a week of attending religious services with those with no participation at all.

Material and method

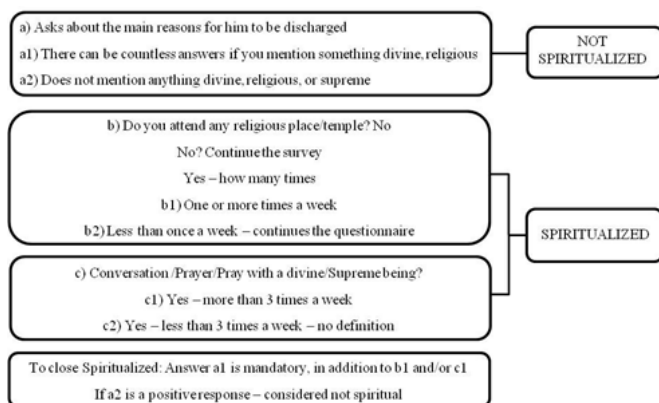
We evaluated 200 patients admitted to the Intensive Care Unit (ICU) due to clinical pathologies that were lucid and conscious. Because there is no single and established methodology, it was decided to elaborate a score of easy applicability in the patients evaluated by this group to classify the patient as spiritualized or non-spiritualized. Before classifying them as spiritual or not, the risk of mortality in this hospitalization was calculated through the Simplified Acute Physiology Score III (SAPS 3). The 200 patients had a predictive score of death around 20% (18.5% to 21%).

To divide the two groups, the following questions were asked in the following sequence for the patient:

- I. What are the reasons that make you believe that you will return to your home: numerous reasons could be cited, and to go to the next question it was necessary to mention faith in a Supreme Being. If the answer did not contemplate this criterion, the patient was directed to the non-spiritual group.

If the answer was positive, the next question was asked:

- II. Do you attend any religious temples? If so, it was necessary for the answer to be that the frequency was equal to or greater than once a week. If this question did not meet this expectation, he was asked how many times a week he prayed. To remain in the spiritual group it was necessary that either he attend some religious temple or that he “talk” to a Supreme Being at least three times a week. If he did not fulfill one of these last two questions, he was directed to the non-spiritual group.



Results

Here the epidemiological characteristics of the patients will be described, the reasons for believing in their discharge in percentage of other factors will be cited – for example: I believe in my doctor, I believe in the ICU team, I trust the hospital. The group characterized as spiritualized was composed of 63 men and 37 women. The mean age of the men was 64 years (median=61), the mean expected mortality was 19.5% and the mortality was 3.15%. The mean length of stay in the ICU was 11 days. In the female group, the mean age was 60 years (median=59), the mean expected mortality was 19.8% and the mortality was 1.85%. The mean length of stay in the ICU was 12 days (Table 1). In the group defined as non-spiritual, 58 were men and 42 women. The mean age of the men was 60 years (median=61), the mean expected mortality was 19.8% and the mortality was 10.8%. The mean length of stay in the ICU was 11 days. In the female group, the mean age was 62 years (median=60), the mean expected mortality was 20.1% and the mortality was 4.2%. The mean length of stay in the ICU was 10 days (Table 1). Of the group of spiritualized patients, all were Christians, so the Supreme Being mentioned was God. The mortality found in non-spiritualized patients was 15% (still below the mortality predicted by the SAPS score 3). On the other hand, those who were classified as spiritualized by this questionnaire applied, the mortality found was 5% (3 times lower than in the other group). The outcome of the patients after discharge from the ICU was not followed-up, except if they returned to the ICU from the inpatient unit. In case of readmissions after hospital discharge, the patient would be excluded (which did not occur). Based on all these results we may add in a more simplified way:

Table 1 Summary of results

Group	Spiritualized		Not spiritualized	
	Male	Female	Male	Female
Number of patients	63	37	58	42
Mortality expected by mean SAPS-3	19.50%	19.80%	19.80%	20.10%
Middle Ages	64	60	63	62
Median age	61	59	61	60
Mortality found	3.15%	1.85%	10.80%	4.20%
Length of hospital stay	11	12	11	10

This is an observational study, and as so we included PECOT in the main text.

P participants in the Intensive Care Unit.

E a questionnaire as to access the believe in a Superior Being.

C comparison between believers and non believers.

O outcome equivalent to the time of staying in the ICU.

T observational study.

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Discussion

Our findings were consistent with the results of previous studies and the effect sizes were similar or somewhat larger, especially when examining associations with a consistent pattern of attendance at religious services. The literature supports the notion that attendance at religious services is associated with better health and reduced mortality. In our study, we were able to account for time-dependent confounding and examined the association between repeated measures of attendance at religious services with long-term all cause and cause-specific mortality. Although our study was not targeted to a particular religious group, the study consists mainly of white Christians. Our results might not be generalizable to the general population, other countries, or areas with limited religious freedom. Moreover, our study population consists of US nurses with similar socioeconomic status who tend to be more health conscious. Our analysis is also restricted to the specific period under consideration, and the effects of attendance at religious services may vary over time as the nature of attendance itself changes. Although frequency of attendance at religious services did not substantially change in our study, it is possible that the content of the services themselves changed. Further research could examine other religious practices, mindfulness practices, other aspects of spirituality and religiosity, other race/ethnicity and demographic groups, and could further investigate the potential underlying mechanisms of causal pathways. Our results do not imply that health care professionals should prescribe attendance at religious services, but for those who already hold religious beliefs,

attendance at services could be encouraged as a form of meaningful social participation. The relationship between spirituality and the outcomes of critically ill patients is a complex and multifaceted topic. While there is some evidence that spirituality can have positive effects on health and well-being, it is important to note that these effects can vary from person to person and there is no guarantee that spirituality can alter the outcomes of critically ill patients in a direct or measurable way. Nevertheless, this retrospective study shows that the presence of spirituality positively altered the outcomes of patients admitted to the ICU.

Conclusion

Through this sample, it is concluded that the existence of faith and the presence of active spirituality of these patients was one of the factors for the reduction of mortality during their hospitalization during the period in which they remained in the ICU. Another highlight was the lower mortality in women, especially in the non-spiritualized group (2.5 times lower). The length of ICU stay did not vary significantly between groups.

Acknowledgments

None.

Conflicts of interest

No conflict of interest.

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