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The influence of spirituality and religiousness on suicide risk and mental health of patients undergoing hemodialysis

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Abstract

Background: Despite the large amount of literature assessing how spiritual and religious beliefs have an impact on mental health and suicide risk in various groups of patients, few studies have investigated patients with chronic kidney disease (CKD). The purpose of this study is to investigate whether spirituality and religiousness (S/R) are associated with the presence of suicide risk as well as whether those beliefs are also associated with the presence of mental health problems in patients undergoing hemodialysis.
Methods: Cross-sectional study carried out in three Brazilian dialysis units involving hemodialysis patients. The study assessed religiousness (Duke Religion Index); spiritual well-being (FACIT-Sp 12); mental health - depression and anxiety (Mini International Neuropsychiatric Interview–MINI); and risk of suicide (MINI). For analysis, adjusted logistic regression models were applied.
Results: A total of 264 (80.7%) patients were included, 17.8% presented suicide risk, 14.0% presented current major depressive episode, and 14.7% presented generalized anxiety disorder. Concerning spiritual well-being (FACIT-Sp 12), the subscale of "Meaning" was associated with lower risk of suicide, depression, and anxiety. The subscale "Peace" was associated with lower depression and anxiety, whereas the subscale "Faith" was associated with lower suicide risk and depression. Religiousness measures were not associated with the study outcomes.
Conclusion: Spiritual beliefs were associated with lower suicide risk and better mental health among hemodialysis patients. Factors related to spiritual well-being, such as "meaning", "peace" and "faith" were more associated with the outcomes studied than religious involvement. Further studies are needed to replicate our findings in different cultural and religious settings.

1. Introduction

Suicide and chronic kidney disease (CKD) are two important public healthcare issues. According to the WHO [1], suicide represents the second cause of death between the ages of 15 and 29. Worldwide, one death by suicide is estimated to take place every 40 s. As far as chronic kidney disease is concerned, estimates point out that over 2 million people worldwide use substitutive therapies such as dialysis and kidney transplants, even though this represents only 10% of the people who need these therapies [2].

Despite the advances in substitutive therapies for CKD patients, studies have shown that patients undergoing dialysis have increased risk of suicide and worse mental health, which is probably due to hopelessness, difficulty dealing with the chronic disease, sleep alterations (e.g. insomnia) and high levels of depression [3–5]. A recent systematic review of current literature [6] revealed that depression and anxiety were strongly associated with suicide attempts, suicide risk, and suicide deaths. However, the authors have stressed that other factors are commonly associated with suicide, such as fatigue, older age, male gender, white race, previous hospitalization, alcohol/drug dependence, and reduced quality of life. Within this context, it is important that protection factors and preventive measures which can help these individuals face their diseases be identified.

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Among the factors that have been debated as being inversely associated with these outcomes, we highlight patients' spiritual and religious beliefs [7]. Spirituality plays a relevant role in the psychological well-being of patients with chronic kidney disease undergoing dialysis. It permits better quality of life and positively influences patients' ways of coping with the disease [8–10]. Dialysis studies have shown that spiritual/religious beliefs can provide hope, meaning, and a reason to live. They also show a better way of dealing with death, which may have either a positive or negative impact on clinical outcomes and social support for these patients [11–13].

Likewise, scientific literature has pointed out the protective role of spirituality/religiousness in both the risk and prevalence of suicide. A recent longitudinal study (14 years of follow-up) investigated religiousness and suicide risk in 89,708 nurses and concluded that religious frequency decreased the risk of suicide up to five times when compared to people who did not attend religious services [14]. These results were like those of other studies [15,16].

However, despite the large amount of literature assessing how these beliefs have an impact on mental health and suicide risk in various groups of patients, there are few studies that have investigated CKD patients [17]. Understanding the factors that may influence dialysis outcomes can help in the development of preventive measures and healthcare policies.

Thus, there is a need to increase our understanding of clinical, social, and even cultural factors that may have an impact on the outcomes of patients in dialysis, permeating the social factors (inequality, access to health services, expanding dialysis services) [18], clinical factors (use of medications, electrolytic and metabolic controls, comorbidities), psychological factors (depression, anxiety, quality of life), as well as a greater understanding of cultural limits and barriers to dialytic treatment that include preconceived beliefs and religious barriers [19].

The purpose of this study is to investigate whether spirituality and religiousness (S/R) are associated with the presence of suicide risk as well as whether those beliefs are also associated with the presence of mental health problems in patients undergoing hemodialysis. Based on previous literature [6], our hypothesis is that S/R may be inversely associated with suicide risk even after adjusting for socio-demographics and mental health problems, and that S/R may also be inversely associated with anxiety and depression, even after adjustments.

2. Methods

2.1. Design

This is a quantitative, observational and cross-sectional study carried out at three dialysis units in the Greater Vitoria Metropolitan area, Brazil, between May 2015 and May 2016. These units can serve up to 144, 55 and 150 hemodialysis patients, respectively. Two of the units are private and one is a philanthropic institution. All of them are accredited by the Brazilian Healthcare System. The study was approved by the Ethics Committee at the *Escola Superior de Ciências da Santa Casa de Misericórdia de Vitória* under protocol number 1.250.626. Patients who voluntarily accepted to participate signed a detailed term of informed consent.

2.2. Eligibility criteria

We included patients of both sexes, over 18 years old, who had stage 5 chronic kidney disease according to the National Kidney Foundation criteria [20], who had been undergoing hemodialysis treatment for over 3 months, and who agreed to participate in the study. Participants who were hospitalized, had received transplants, or had any health condition preventing them from participating in the study were not included.

2.3. Procedures

Data was gathered by a team made up of four psychologists. One was the team coordinator, who had experience in nephrology and neuropsychology and was responsible for training the team and accompanying trainees during the first five interviews. Participants were identified through lists provided by the institutions, considering the schedule of hemodialysis sessions. All patients were approached during these sessions, one by one and face-to-face in a non-consecutive manner. Initially, the researcher read the consent term, explained the study's objectives, and invited patients to participate. Once they had agreed, participants signed the term and, if clinically stable, they were interviewed. The entire process of administering the questionnaires took on average 30 min.

2.4. Instruments

The following aspects were assessed:

- Socio-demographic data: sex age, educational background, and length in dialysis.
- Cognition: via the Mini-Mental State Examination (MMSE). This is a fast-administering instrument to assess cognitive function. It can be done in about 10 min, and has already been adopted for patients with chronic kidney disease undergoing hemodialysis [21].
- Suicide risk and mental health: the assessment of suicide risk, generalized anxiety disorder, and depressive disorder was carried out through diagnosing sessions using the Mini International Neuropsychiatric Interview (MINI). MINI is an instrument that allows quick, standardized interviews (about 15 min) to identify the main psychiatric disorders. This instrument was validated for Portuguese by Amorim [22] and has been used in several studies to assess depressive disorders, anxiety, and suicide risk [23,24]. Suicide risk was scored as having "no risk"