Spiritual well-being and quality of life of older adults in hemodialysis

Bem estar espiritual e qualidade de vida de idosos em tratamento hemodialítico

Bienestar espiritual y calidad de vida de ancianos en tratamiento de hemodiálisis

Calíope Pilger1, Renata Ohana Pereira dos Santos1, Maicon Henrique Lentsck2, Sueli Marques3, Luciana Kusumota3

1 Universidade Federal de Goiás – Regional Catalão, Undergraduate Program in Nursing. Catalão, Goiás, Brazil.
2 Universidade Estadual do Centro-Oeste, Department of Nursing. Guarapuava, Paraná, Brazil.
3 Universidade de São Paulo, Escola de Enfermagem de Ribeirão Preto, Department of General and Specialized Nursing. Ribeirão Preto, São Paulo, Brazil.

How to cite this article:

Submission: 01-08-2017 Approval: 02-16-2017

ABSTRACT

Objective: To analyze the relationship between spiritual well-being, sociodemographic, economic, religious, and health variables and the quality of life of older adults undergoing hemodialysis.

Method: This was a cross-sectional and correlational study conducted with 169 older adults undergoing hemodialysis. The researchers conducted interviews to collect sociodemographic, economic, religious, and health data and applied the Spiritual Well-Being Scale (SWBS) and the WHO quality of life assessment (WHOQOL-BREF and WHOQOL-OLD).

Results: Most of the older adults attained a moderate level of total spiritual well-being (SWB). In terms of QOL, the psychological domain (66.8; sd=13.9) and social relationships domain (66.8; sd=15.1) presented the highest mean scores. The WHOQOL-BREF domains were positively correlated with the SWB scale, with statistical significance among all domains and subscales except the environmental domain.

Conclusion: The QOL of older adults was associated with the construct of SWB, either positively or negatively.

Descriptors: Renal Dialysis; Spirituality; Quality of Life; Religion; Aged.
INTRODUCTION

Since the most remote of times, spiritual and religious beliefs, practices, and experiences have represented one of the most prevalent and influential components of most societies[14]. Current anthropological studies have shown that religious views are still present in all social strata as an important part of how health and illness processes are understood[15], and a growing number of health studies have been conducted on the topic, especially among the older adult population[14].

As described by Simão, Caldeira, and Carvalho[5], important paradigmatic shifts, such as the consideration of nonmaterial or spiritual dimensions, compose the concept of health. In the last century, the World Health Organization created the Quality of Life Group, which touches on the domains of spirituality/religion/personal beliefs in its global instrument to assess quality of life (QOL)[6]. This domain introduced the need to expand scientific knowledge, in terms of recognizing the spiritual needs of both patients and the population at large. Thus, aspects that transcend the human dimension, which include cosmic structures higher than those imposed by the material world, reinforce mechanisms that enhance how humans interact with others and the world[5].

The spiritual domain refers to the search for meaning and answers to fundamental aspects of life through experiences with the sacred and transcendent, which can improve health conditions. Spirituality includes values, principles, beliefs, and inner strength, and is universal, subjective, multidimensional and transcendental in nature, generally experienced individually[4-5]. One way to measure this construct is through the assessment of spiritual well-being (SWB), a dimension accessed through the perception of subjective well-being in terms of one’s beliefs, experienced through a sense of life purpose, which justifies committing to something in life[6]. Furthermore, it is also one of the four dimensions of human health, along with the physical, psychological, and social aspects[6].

According to Silva et al.[11], religiosity and spirituality are important dimensions of well-being and coping with illness. More in-depth knowledge is needed about religious and spiritual beliefs, as they can influence treatment and recovery among patients suffering from chronic health conditions.

Among the most damaging diseases that affect humans is chronic kidney disease (CKD), which causes exhaustion, alters life routines, and generates treatment-related adverse events, in addition to presenting various signs and symptoms that lead to dependence on the ongoing use of medication and difficulty to adapt to the devices and treatments that partially substitute for natural kidney function. Among such treatments, hemodialysis (HD) is one of the most used and indispensable alternatives, capable of prolonging life, and used to treat CKD in several countries[12-13].

In light of the constraints of CKD and its treatment, spiritually can represent an additional coping resource[14-15]. Other studies[16-17] have found spiritual care provision to be a positive and necessary strategy in the clinical evolution of CKD patients, representing a form of coping with the disease and improving QOL.

Brazilians express strong faith in God and recognition of the sacred, as demonstrated by the diverse forms of religious involvement. Many people in Brazil attribute health improvements more to spiritual forces than to medical treatments received. In light of this[18], it is important to verify whether this type of behavior improves or influences QOL. The WHOQOL Group[19] defines quality of life as “individuals’ perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns.” Religious behavior is specifically associated with the promotion of personal well-being and positive and healthy feelings.

Considering the above, the researchers conducted this study to analyze the relationship between spiritual well-being, sociodemographic, economic, religious, and health variables, and the QOL of older adults undergoing hemodialysis in the municipality of Ribeirão Preto, in the state of São Paulo, Brazil.

METHOD

Ethical aspects

This study is part of a broader investigation, which was submitted and approved by the Research Ethics Committee of the Ribeirão Preto College of Nursing, University of São Paulo.

Study design, setting, and period

This was a cross-sectional, correlational, and quantitative study, developed at five dialysis units in the municipality of Ribeirão Preto, São Paulo, with older adults undergoing hemodialysis from September and November 2013.

Study population and inclusion and exclusion criteria

Participants in this study included older adults who met the following inclusion criteria: patients 60 years old or older; with CKD diagnosis and receiving regular hemodialysis treatment; a minimum of six months in treatment; clinically stable; capable of verbal communication; and with preserved cognitive function, as per the Mini-Mental Status Examination[20]. Of the 301 older adults who were undergoing hemodialysis at the dialysis units, 169 were eligible to be included in the study sample.

Study protocol

Interviews were conducted with the participating older adults, using questionnaires created by the researchers to gather sociodemographic, economic, religious, and health information; the Spiritual Well-Being Scale[21]; and WHOQOL-BREF[22] and WHOQOL-OLD questionnaires[22], which were applied by trained interviewers.

The Spiritual Well-Being Scale is composed of vertical and horizontal dimensions. Religious well-being (RWB) (odd-numbered items) represents the vertical dimension, which involves a sense of personal connection with God or to something considered absolute. Existential well-being (EWB) (even-numbered items) is the horizontal dimension, which refers to individuals’ perception about the purpose of life not based on any religious references. It is a 20-item instrument in which each item is rated on a six-point Likert-type scale: strongly agree (SA); agree more than disagree (Ad); partially agree (PA); partially disagree (PD); disagree more than agree (Da); and strongly disagree (SD). The total score ranges from 1 to 6 (in which 1 is the lowest level of spiritual well-being and 6 the highest); the scale can be answered in five minutes and
presents good face validity. Positively worded items related to spiritual well-being (3, 4, 7, 8, 10, 11, 14, 15, 17, 19, and 20) are scored as follows: CA = 6, Ad = 5, PA = 4, PD = 3, Da = 2, and CD = 1. The remaining items are worded negatively and are reverse-scored (CA = 1, Ad = 2, PA = 3, and so on). The sum of the 20 items results in the total score (sum of the positive and negative items), or the SWB score (total spiritual well-being), with scores ranging from 20 to 120\(^{9}\).

The WHOQOL-BREF instrument consists of 26 items, with two items measuring overall quality of life and health, and another 24 representing each of the 24 facets, divided into four domains (physical, social relationships, psychological, and environmental), assessing specific aspects of a person’s life. Thus, in the WHO-QOL-BREF, each facet is measured by only one item, which use a five-point Likert response scale, transformed to a 0-100 scale (0 = least favorable QOL and 100 = most favorable QOL)\(^{21,23}\).

The WHOQOL-OLD questionnaire is a specific alternative with good psychometric performance, as it addresses items referring to thoughts, feelings, and certain aspects of QOL specifically directed at older members of society. The questionnaire consists of 24 items measured on a five-point Likert-type scale, consisting of six facets: sensory abilities; autonomy; past, present, and future activities; social participation; death and dying; and intimacy. Each of the facets has four items and therefore can obtain a possible score ranging from 4 to 20. The sum of the facet scores results in an overall QOL score for older adults\(^{21,22}\).

Analysis of results and statistics

Data analysis was conducted using a spreadsheet in Excel (2013) for Windows, using the double-entry method of data validation and verification. All of the analyses were conducted using SAS\(^{9}\). Descriptive analysis of sociodemographic, economic, religious, health, and spiritual well-being, as well as quality of life was conducted using measures of location, dispersion, variability, and simple frequency distribution. Bivariate frequency analyses were also generated, considering that the aim of the study was to employ Pearson’s correlation coefficient. The parameters for assessing the magnitude of the correlation coefficients were: 0 ≤ |\(r_s\)| < 0.3 = weak correlation; 0.3 ≤ |\(r_s\)| < 0.7 = moderate correlation; 0.7 ≤ |\(r_s\)| ≤ 1 = strong correlation.

RESULTS

Of the 169 older adults interviewed, 125 (74%) were men, and all were between 60 and 99 years old, with a mean of 70.1 years (sd = 6.98). Most patients were between 60 to 69 years old (53.3%). White skin color predominated (63.9%), along with patients who were married/divorced with a partner (65.1%). In terms of education, 51.5% of the older adults had one to four years of formal schooling, with a mean of 5.9 years (sd = 4.9). The majority (97.0%) had an income and were Catholic (61.5%), followed by Evangelicals (27.7%), and Spiritists (8.9%), with 136 (81%) patients who considered themselves religious. Among the patients who did not consider themselves religious, men presented higher prevalence (18.3%), in comparison with women (0.6%) (Table 1).

Table 1 – Distribution of sociodemographic, economic, religious, and spiritual variables of older adults undergoing hemodialysis, by gender, Ribeirão Preto, São Paulo, Brazil, 2013

<table>
<thead>
<tr>
<th>Variables</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-69 years</td>
<td>68</td>
<td>40.2</td>
<td>13.0</td>
</tr>
<tr>
<td>70-79 years</td>
<td>46</td>
<td>27.2</td>
<td>14.3</td>
</tr>
<tr>
<td>Skin color</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>80</td>
<td>47.3</td>
<td>28.6</td>
</tr>
<tr>
<td>Black</td>
<td>23</td>
<td>13.6</td>
<td>12.1</td>
</tr>
<tr>
<td>Brown</td>
<td>13</td>
<td>7.7</td>
<td>4.4</td>
</tr>
<tr>
<td>Yellow</td>
<td>8</td>
<td>4.7</td>
<td>-</td>
</tr>
<tr>
<td>Undeclared</td>
<td>1</td>
<td>0.6</td>
<td>-</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/live together</td>
<td>91</td>
<td>53.8</td>
<td>19.3</td>
</tr>
<tr>
<td>Widower</td>
<td>15</td>
<td>8.9</td>
<td>20.8</td>
</tr>
<tr>
<td>Divorced/Separated</td>
<td>13</td>
<td>7.7</td>
<td>3.1</td>
</tr>
<tr>
<td>Single</td>
<td>6</td>
<td>3.5</td>
<td>2.0</td>
</tr>
<tr>
<td>Years of formal schooling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>10</td>
<td>6.0</td>
<td>4.1</td>
</tr>
<tr>
<td>1 to 4</td>
<td>63</td>
<td>37.3</td>
<td>24.1</td>
</tr>
<tr>
<td>5 to 9</td>
<td>18</td>
<td>10.6</td>
<td>11.6</td>
</tr>
<tr>
<td>10 or more</td>
<td>34</td>
<td>20.1</td>
<td>5.0</td>
</tr>
<tr>
<td>Has an income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>124</td>
<td>73.4</td>
<td>40.2</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>0.6</td>
<td>4.1</td>
</tr>
<tr>
<td>Religion/Doctrine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>80</td>
<td>47.3</td>
<td>24.1</td>
</tr>
<tr>
<td>Evangelical</td>
<td>22</td>
<td>13.0</td>
<td>13.0</td>
</tr>
<tr>
<td>Spiritist</td>
<td>10</td>
<td>5.9</td>
<td>5.0</td>
</tr>
<tr>
<td>Buddhist</td>
<td>1</td>
<td>0.6</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>2.3</td>
<td>-</td>
</tr>
<tr>
<td>No religion</td>
<td>8</td>
<td>4.7</td>
<td>1.0</td>
</tr>
<tr>
<td>Considers themselves religious</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>31</td>
<td>18.1</td>
<td>1.3</td>
</tr>
<tr>
<td>Yes</td>
<td>93</td>
<td>55.0</td>
<td>43.5</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0.6</td>
<td>-</td>
</tr>
</tbody>
</table>

The mean overall QOL of the older adults was 64.0 (sd = 15.8), as measured with the WHOQOL-BREF. The highest scores were associated with the psychological domain (66.8; sd = 13.9) and the social relationships domain (66.8; sd = 15.1); the lowest mean score was associated with the physical domain (55.5; sd = 16.5). The mean overall level of QOL measured by the WHOQOL-OLD was 66.3 (sd = 10.6). The facets with the greater means were “intimacy” (73.6; sd = 15.9), “death and dying” (69.4; sd = 25), and “social participation” (59.6; sd = 15.6) (Table 2).

The older adults attained moderate levels of total spiritual well-being (SWB), with a mean of 93 (sd = 13.52). The mean values attained on the existential well-being (EWB) subscale (43.4; sd = 7.59) indicated moderate levels of satisfaction and life purpose among the older adults. The religious well-being (RWB) subscale presented higher scores (50; sd = 7.54), which reflects a positive relationship with God.
No statistically significant correlations were observed between age, income, number of comorbidities, frequency of hospital admissions, time of hemodialysis, and SWB, RWB, and EWB scores. The correlation between mean SWB scores and sociodemographic, economic, and religious variables were also not significant (Table 3).

Table 4 demonstrates that the higher the SWB, RWB, and EWB scores, the greater the QOL scores in the physical, psychological, social relationships, and environmental domains. Thus, the correlation between WHOQOL-BREF domains and the SWB scale was positive and statistically significant in all domains and subscales except for the environmental domain, which was not correlated with the religious well-being subscale (p = 0.152). The psychological domain presented moderate correlation with SWB (0.54) and EWB (0.547).

Considering overall QOL assessed with the WHOQOL-OLD, statistically significant correlation was presented with total SWB (r = 0.37; p < 0.001) and with the RWB (r = 0.18; p < 0.018) and EWB scales (r = 0.49; p < 0.001). Moderate positive correlations were obtained between the intimacy facet (r = 0.41; p < 0.001), as well as SWB and the autonomy (r = 0.40; p < 0.001), past, present, and future activities (r = 0.47; p < 0.001), and intimacy (r = 0.46; p < 0.001) facets with EWB, in the same subscale (Table 4). In Table 4, a weak positive correlation was found between the social participation facet and SWB, in addition to a moderate positive correlation with EWB, both statistically significant, p = 0.000 and p < 0.000, respectively.

This study showed that the QOL of older adults was related with the SWB construct, both in its vertical dimension, or satisfaction with one’s personal connection with God or something considered absolute, and the horizontal dimension, which refers to individuals’ perception of their life purpose, not based on any religious references.
The first results relative to the sociodemographic variables showed that most of the patients were married (61.6%). According to Chatrung, Soraijakool, and Amnatsatsue (17), the marital status of patients can represent a highly relevant factor, as receiving care from one’s partner can provide a sense of comfort.

The predominance of men in this study (74.0%) is in consonance with the percentage of 62.5% found in an investigation by Chatrung, Soraijakool, and Amnatsatsue (17) and the prevalence found in other studies (25-27). The high percentage found in these investigations can predict that men can be more affected by chronic diseases, including kidney diseases, as they tend to consider themselves invulnerable, resulting in neglected health care and exposure to situations of risk (28).

In the present study, nine participants declared having no religion and the others declared themselves Catholic, Evangelical, or Spiritists, among others, showing religious diversity. These data corroborate an investigation by Cruz et al. (26) conducted with Philippine patients undergoing hemodialysis, in which 86% of the participants were religious, and is also in consonance with national data from the Brazilian Institute of Geography and Statistics (28), which confirmed the growth of the Evangelical population and demonstrated growth in the total number ofSpiritists (2.02%). The women presented a higher percentage of religious belief. This finding can be explained by the more prevalent habit of women attending church in comparison with men, and stronger personal religious interest and commitment (17).

Religion or religious belief can provide individuals with a greater sense of well-being (17,26). Studies have analyzed the relationship between spirituality and several aspects of mental health, showing that religious people tend to present better mental health and adapt more successfully to stress (14-18). Other studies have shown the involvement of religion and health with therapeutic aims (28), demonstrating that religious people have healthier lifestyles (28) and greater quality of life (31).

With regard to the spiritual well-being of the older adults in this study, moderate levels of total spiritual well-being and existential well-being were obtained, representing a mean level of life satisfaction and purpose, and high levels of religious well-being. These findings demonstrate a positive understanding about and relationship with God and the sacred. The data also suggest that despite the stress and limitations imposed by CKD and its treatment, the older adults felt well-being related to their beliefs and moderate levels of life purpose and meaning.

Silva et al. (32) developed a study to assess the spiritual well-being of patients with obstructive lung disease (OLD) and found similar means to those in the present study. In their study, the sample presented moderate levels of total SWB, with a mean score of 94.8, and higher scores were observed in the religious well-being subscale (51.50) than existential well-being (43.37). In a study conducted in Canada with individuals undergoing hemodialysis, the mean values for existential well-being and religious well-being were lower, 42.9 and 38.8, respectively (14).

Measuring the QOL of older adults is a complex task and implies adopting multiple criteria of a biological, psychological, and sociocultural nature. Additionally, several aspects must be analyzed such as interpersonal relationships, emotional balance, good health, healthy habits, leisure, material goods, work, longevity, cognitive control, social competence, activity, income, social status, continuity of family roles, and spirituality and religiosity (33).

The aging process involves a continuous and progressive reduction in the organism’s capacity to maintain homeostatic balance. This leads to a gradual reduction in the functional ability of older adults, which can limit them in carrying out activities of daily living and, consequently, reduce health-related quality of life (HRQOL) in dimensions related to the physical health of older adults undergoing hemodialysis (34). Such data support the findings of this study, because the physical domain obtained the lowest score when compared with the other WHOQOL-BREF domains. This finding corroborates that of other studies that used different instruments to measure the physical domain (27,14,36).

The environmental and physical domains are directly related to QOL among older adults. As shown by Pereira et al. (37), older adults who live in insecure environments are less likely to go out by themselves and are thus more susceptible to isolation and depression. They also present more mobility problems and poorer physical conditions, which can affect QOL.

Davison and Jhangri (17) assessed the relationship among QOL, the health of CDK patients, and spiritual well-being, and found that SWB was moderately associated with several domains of the Kidney Disease Quality of Life Short Form–KDQOL-SF, version 1.3, including CKD effects and burden, cognitive function, sleep, quality of social interaction, and mental health. The authors also described how spirituality can affect patient health through several mechanisms, as spiritual and religious beliefs can provide meaning, hope, and comfort even in situations of extreme suffering. Furthermore, spirituality can help preserve and improve HRQOL, even with the physical, social, and emotional challenges imposed by CKD. These findings provide a possible explanation for the positive and significant correlations between SWB and the WHOQOL-BREF domains. Only the correlation between the environmental domain and RWB was not significant. However, the psychological domain was moderately correlated with total SWB, RWB, and EWB.

Brazilians express a strong faith in God, and, in the spiritual dimension, many attribute health improvements more to spiritual forces than to medical treatment received (18). With this in mind, there has been steady growth in the scientific literature about the positive relationship between spirituality and religiosity, physical health, mental health, and QOL (38).

Regarding the WHOQOL-OLD facets and correlation with the SWB scale, positive and significant correlations were found between the three SWB subscales and WHOQOL-OLD facets “past, present and future activities”, “intimacy,” and “social participation.” An analysis of the concepts of these facets shows that they are related to the WHOQOL-BREF domains, especially activities that involve social issues and the community. This result can be related to the previously mentioned limitations suffered by older adults in conducting basic activities of daily living (ADLs) throughout the aging process, limitations that are heightened by the presence of CKD. Considering that this disease imposes restrictions and limitations on patients, especially after the introduction of hemodialysis, many individuals are not able to develop their routine individual, social, and family activities (39).
Floriano and Dalgalarrondo\textsuperscript{400} stated that to understand the health and illness process and determinants of QOL among older adults, it is essential to observe this population within their family and social context, which includes their limitations, relationship networks, and beliefs.

**Study limitations**

Limitations of this study include its cross-sectional design, which does not enable the establishment of cause-effect relationships or the modification of variables or concepts over time.

**Contributions to the fields of nursing, health, and public policy**

The results of this study point to the need to provide spiritually and religious-based care, so that nurses can propose care plans, including nursing diagnoses and interventions. Furthermore, these dimensions present expected outcomes, which are often forgotten or not used by professionals, representing an additional tool for achieving comprehensive care.

**CONCLUSION**

The older adults in the study presented moderate total spiritual well-being and existential well-being and obtained high religious well-being scores. Furthermore, total spiritual well-being was positively correlated with the four WHOQOL-BREF domains (physical, environmental, psychological, and social relationships). Some facets of the WHOQOL-OLD (autonomy; past, present, and future activities; social participation; and intimacy) presented conceptual similarities with the WHOQOL-BREF domains, such as social participation; intimacy; and past, present, and future events.

In conclusion, the older adults in this study valued religiosity and spirituality in their every-day lives and treatment. These patients’ QOL was correlated with the construct of spiritual well-being, whether positively or negatively.

Previous studies and the results of this investigation point to a relationship between the construct of spiritual well-being and the QOL of patients affected by chronic illnesses, especially CKD. Although the central theme of this study is relevant to the scientific field, new studies must be conducted to scientifically demonstrate and prove the relationship between the spiritual and religious dimension and the physical, mental, social, and environmental well-being of older adults. This would produce knowledge based on concepts considered subjective and, oftentimes, empirical.

**FUNDING**

This study was funded by FAPESP—the São Paulo Research Foundation.

**REFERENCES**

34. Lucchetti G, Almeida LGC, Lucchetti ALG. Religiousness, mental health, and quality of life in Brazilian dialysis patients. Hemodial


