Factors influencing spiritual well-being in patients receiving haemodialysis: a literature review

Rajkumari Jugjali, Kantaporn Yodchai and Ploenpit Thaniwattananon

Submitted: 28 October 2017, Accepted: 2 May 2018

Abstract

Introduction: Spiritual well-being is an integral and essential aspect of everyday life, without which other facets of human life, including the biological, psychological and social factors, may not function appropriately. Different factors might contribute to spiritual well-being among this population, but current literature concerning factors influencing spiritual well-being has not been reviewed or summarised.

Purpose: To explore the updated literature on spiritual well-being and factors influencing it in patients receiving haemodialysis.

Methods: A search of electronic databases PubMed, CINAHL, Proquest, and Science Direct was performed using the keywords hemodialysis, haemodialysis, spiritual well-being, spiritual wellbeing, and spiritual wellness. Studies published in the English language from 2006 to June 2017 were reviewed.

Results: This review identified only seven studies. From the literature it was evident that there was no agreed definition of spiritual well-being. Similarly, the inclusive concept of religion in spiritual well-being was also a debatable issue. No study was conducted with the primary aim of exploring the factors that influence spiritual well-being. Related factors from the review could be divided into internal and external. Internal factors identified were demographic (age, gender, and marital status), personal (bodily pain, vitality, religiosity, perceived health status, and level of happiness), and psychological (sleep quality, and mental health). The external factor was social functioning.

Conclusion and recommendations: Although spiritual well-being is an important aspect, information regarding the concept of spiritual well-being and the factors influencing it in patients receiving haemodialysis is relatively unknown. Therefore, further studies are warranted in the future to bridge this gap.

Keywords

End-stage renal disease, factors, haemodialysis, spiritual well-being.
Introduction

End-stage renal disease (ESRD) is a chronic and irreversible kidney disease which is increasing globally (Wetmore & Collins, 2016). The increasing prevalence of hypertension and diabetes mellitus has contributed to the high incidence of ESRD (Ghaderian et al., 2015). Patients suffering from ESRD need renal replacement therapy (RRT) for survival in the form of either haemodialysis (HD), peritoneal dialysis (PD) or kidney transplant (KT) (Rodger, 2012). Worldwide, HD is the most common method used to manage patients suffering from ESRD (Sanavi & Afshar, 2011).

When patients are on HD treatment they have to face many challenges and changes in their lifestyle. For instance, food and fluid restrictions, sexual problems, changes in body appearance, limitation in leisure activities and vacations, the feeling of being dependent on medical staff and family members, uncertainty about their future, fatigue, stress related to the fistula, and the inability to maintain a full-time job (Gerogianni & Babatsikou, 2013).

Due to different types of continuous stressors, patients receiving HD will develop feelings of hopelessness and suffering (Fayer et al., 2011). Feelings of despair will raise the question of the meaning and purpose in life (Ashrafieen, 2015). The complexity in finding meaning and purpose in life will lead to a deficiency in spiritual well-being (Bulkeley et al., 2013; Promkaewngam et al., 2014).

Spiritual well-being is crucial for proper functioning of biological, psychological, and social aspects of human life (Izadmehr et al., 2014). The biopsychosocial-spiritual model also views spiritual well-being as an essential component of health and human life (Sulmasy, 2002). Furthermore, spiritual well-being is related to psychological and psychosocial distress adjustment (Tanyi & Werner, 2003) and enhanced coping mechanism (Gonzalez et al., 2014).

Previous studies have demonstrated different negative consequences that may occur due to low spiritual well-being. For instance, a study undertaken by McClain et al. (2003) demonstrated the relationship between low spiritual well-being and feelings of hopelessness, desire to hasten death, and suicidal ideation. Similarly, poor mental health, psychological distress, and psychosomatic problems were also reported by patients receiving HD who had low spiritual well-being (Martinez & Custodio, 2014).

Spiritual well-being is very important and basic in every individual (Crompton & Jackson, 2004). However, the level of spiritual well-being in patients receiving HD was reported to be low (Reig-Ferrer et al., 2012) to moderate (Eslami et al., 2014). In order to enhance the condition of patients receiving HD, health care providers such as nephrology nurses should be aware of the significance of spiritual well-being and factors influencing it. Nevertheless, current literature concerning factors influencing spiritual well-being in patients receiving HD has not been reviewed or summarised. Therefore, this literature review was conducted to explore updated literature on spiritual well-being and its related factors in patients receiving HD.

Methods

A search of four electronic databases that included PubMed, CINAHL, Proquest, and Science Direct, was performed. The search keywords were hemodialysis, haemodialysis, spiritual well-being, spiritual wellbeing, and spiritual wellness. These terms were combined in different combinations using the Boolean operators, “AND” or “OR” or both. References were retrieved after using the search terms 1) Hemodialysis OR Haemodialysis AND, and 2) Spiritual wellbeing OR Spiritual well-being OR Spiritual wellness. The following inclusion criteria were used to select the relevant articles:

1. Language: English.
2. Study population: adults aged 18 and above; suffering from ESRD receiving HD.
3. Qualitative and quantitative studies addressing spiritual well-being of HD patients.
4. Study including PhD theses published within the last 10 years (2006 to July 2017) to retrieve the most up-to-date information.

Study results

The database searches yielded a total 319 studies: PubMed (82), CINAHL (12), Proquest (157), and Science Direct (68). On the basis of the inclusion criteria, 297 articles were excluded and 22 relevant articles were selected for further review. The abstracts of the selected articles were read and the contents were skimmed to confirm whether they met the objectives of the literature review. This resulted in 13 relevant articles. However, five articles were duplicates in the databases and one study was undertaken to assess the spiritual well-being of nurses; thus it was not selected. Finally, seven articles were selected and reviewed in depth to identify the definition and the factors related to spiritual well-being in patients receiving HD.

All studies were descriptive and none of them were undertaken with the primary aim to identify the factors of spiritual well-being. Almost half of the studies were conducted in Iran (Ebrahimi et al., 2014; Eslami et al., 2014; Kharame et al., 2014), while the remaining studies were conducted in Brazil (Martinez & Custodio, 2014), Spain (Reig-Ferrer et al., 2012), and Thailand (Cheawchanwattana et al., 2014; Yodchai et al., 2016). A summary of the articles reviewed is shown in Table 1.
Definition of spiritual well-being

There was no common definition of spiritual well-being used in the literature. However, spiritual well-being in the sense of having purpose and meaning in life was mentioned by six studies (Cheawchanwattana et al., 2014; Eslami et al., 2014; Kharame et al., 2014; Martinez & Custodio, 2014; Reig-Ferrer et al., 2012; Yodchai et al., 2016).

A qualitative study conducted among patients receiving HD in Thailand reported the use of religious and spiritual beliefs and practices to accept and understand the reason for developing chronic kidney disease (CKD). Participants in the study believed that they developed CKD because of their sinful deeds and had to participate in spiritual and religious practices such as making merit, reading dharma books, chanting to save life and praying to reduce their bad actions (Yodchai et al., 2016).

The inclusive concept of religion in spiritual well-being is a debatable issue. Eslami et al. (2014) mentioned religion as one dimension of spiritual health. On the other hand, spiritual well-being was not considered to be primarily incorporated with religion (Martinez & Custodio, 2014; Reig-Ferrer et al., 2012; Yodchai et al., 2016). In addition, six studies used spirituality and spiritual well-being interchangeably. Therefore, there is a need to clarify the concept of spiritual well-being.

Factors affecting spiritual well-being

The factors identified from this review that were related to spiritual well-being in patients receiving HD are summarised in Table 2. The factors were categorised as internal and external factors.

Internal factors

Internal factors were those factors which were directly related to the patient. Internal factors were identified in six articles (Cheawchanwattana et al., 2014; Ebrahimi et al., 2014; Eslami et al., 2014; Kharame et al., 2014; Martinez & Custodio, 2014; Reig-Ferrer et al., 2012). The internal factors were further grouped into demographic, personal, and psychological factors.

Demographic factors affecting spiritual well-being were revealed by three studies and the factors were age (Cheawchanwattana et al., 2014; Kharame et al., 2014), gender (Cheawchanwattana et al., 2014) and marital status (Kharame et al., 2014). In a study conducted in Thailand, the participants who were above 60 years of age had higher spiritual well-being than the younger participants (Cheawchanwattana et al., 2014). Similarly, a study undertaken by Kharame et al. (2014) also reported a significant association between age and spiritual well-being. Regarding gender, female

Table 1: Summary of reviewed articles

<table>
<thead>
<tr>
<th>Author (year)/location</th>
<th>Sample</th>
<th>Study design</th>
<th>Major findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yodchai et al. (2016), Thailand</td>
<td>20 patients receiving HD for at least six months</td>
<td>Exploratory qualitative</td>
<td>Participants used religion and spirituality as coping strategies to overcome the challenges occurred due to CKD. In addition, their spiritual and religious beliefs and practices helped them to understand the reason for developing CKD and need for HD.</td>
</tr>
<tr>
<td>Cheawchanwattana et al. (2014), Thailand</td>
<td>31 ESRD patients receiving HD for at least three months and 63 pre-dialysis CKD patients with GFR less than 15 mL/min/1.73 m² for at least three months</td>
<td>Descriptive</td>
<td>Female HD patients had significantly better spiritual well-being than male (p&lt;0.001) and elderly HD patients had higher spiritual well-being scores than the younger patients (p=0.001), when patients were grouped into: above 60 years (elderly) and 60 years or lower.</td>
</tr>
<tr>
<td>Ebrahimi et al. (2014), Iran</td>
<td>72 ESRD patients receiving HD for at least three months</td>
<td>Descriptive</td>
<td>HD patients have significant positive correlation between spiritual well-being and social performance. Furthermore, positive correlation between existential well-being dimension and exhaustion, emotional health, social performance and general health dimensions.</td>
</tr>
<tr>
<td>Eslami et al. (2014), Iran</td>
<td>190 patients receiving HD for at least three months</td>
<td>Correlation</td>
<td>The study result showed a significant relationship between items of Pittsburgh sleep quality scale and spiritual well-being (p&lt;0.04).</td>
</tr>
<tr>
<td>Kharame et al. (2014), Iran</td>
<td>95 patients receiving HD for at least six months</td>
<td>Descriptive predictive</td>
<td>The study result revealed a significant positive relationship between marriage, bodily pain, vitality, social performance and domain of psychological health and spiritual well-being (p&lt;0.05).</td>
</tr>
<tr>
<td>Martinez and Custodio (2014), Brazil</td>
<td>150 patients receiving HD</td>
<td>Correlation</td>
<td>Decreased mental health and poor sleep quality, mental stress, and psychosomatic complaints were correlated with lower spiritual well-being (p&lt;0.05).</td>
</tr>
<tr>
<td>Reig-Ferrer et al. (2012), Spain</td>
<td>94 patients receiving HD</td>
<td>Descriptive</td>
<td>The study revealed a relationship between religiosity, strong beliefs in and hope for an afterlife and spiritual well-being.</td>
</tr>
</tbody>
</table>

CKD: Chronic kidney disease, ESRD: End-stage renal disease, HD: Haemodialysis
patients had a greater spiritual well-being score compared to the male patients (Cheawchanwattana et al., 2014). In addition, the literature revealed a higher level of spiritual well-being in the participants who were married (Kharame et al., 2014).

Different personal factors were recognised from the literature review. A study conducted by Kharame et al. (2014) with the aim to explore the association between the quality of life and spiritual well-being demonstrated a significant correlation between spiritual well-being, bodily pain, and vitality. Spiritual well-being was measured using the Spiritual Well-being Scale and subscales of the 36-Item Short Form Quality of Life Questionnaire (SF-36) measured bodily pain and vitality. Another study undertaken in Spain with the objective to adapt, describe and validate a multidimensional, standardised and self-administered questionnaire reported religiosity, perceived health status and level of happiness as contributing factors to spiritual well-being (Reig-Ferrer et al., 2012).

The psychological factors identified were mental health, beliefs in and hope for an after life, and quality of sleep. Two studies reported mental health as a contributing factor to spiritual well-being (Kharame et al., 2014; Martinez & Custodio, 2014). A study by Reig-Ferrer et al. (2012) reported a correlation of spiritual well-being with beliefs in and hope for an after life. In addition, a study conducted by Eslami et al. (2014) with the aim to explore the association between the quality of sleep and spiritual well-being demonstrated a significant correlation between these two variables.

**External factors**

This present review revealed only social functioning as the one external factor that was related with spiritual well-being.

**Table 2: Summary of factors related to spiritual well-being**

<table>
<thead>
<tr>
<th>Factors</th>
<th>Sub-factors</th>
<th>Example and references</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demographic</td>
<td>Age</td>
<td>Older age people have higher spiritual well-being (Cheawchanwattana et al., 2014) Age was related with spiritual well-being (Kharame et al., 2014)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td>Marital status was related with spiritual well-being (Kharame et al., 2014)</td>
</tr>
<tr>
<td>Personal</td>
<td>Bodily pain</td>
<td>Bodily pain and vitality correlated with spiritual well-being (Kharame et al., 2014)</td>
</tr>
<tr>
<td></td>
<td>Vitality</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Religiosity</td>
<td>Religiosity, perceived health status, and level of happiness were associated with spiritual well-being (Reig-Ferrer et al., 2012)</td>
</tr>
<tr>
<td></td>
<td>Perceived health status</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Level of happiness</td>
<td></td>
</tr>
<tr>
<td>Psychological</td>
<td>Mental health</td>
<td>Mental health was related with spiritual well-being (Kharame et al., 2014; Martinez &amp; Custodio, 2014)</td>
</tr>
<tr>
<td></td>
<td>Beliefs in and hope for after life</td>
<td>Beliefs in and hope for after life was associated with spiritual well-being (Reig-Ferrer et al., 2012)</td>
</tr>
<tr>
<td></td>
<td>Quality of sleep</td>
<td>Quality of sleep was correlated with spiritual well-being (Eslami et al., 2014)</td>
</tr>
<tr>
<td><strong>External factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social functioning</td>
<td></td>
<td>Social functioning was related with spiritual well-being (Ebrahimi et al., 2014; Kharame et al., 2014)</td>
</tr>
</tbody>
</table>

Two studies that were undertaken with the aim of examining the correlation between spiritual well-being and quality of life demonstrated a relationship between spiritual well-being and social functioning (Ebrahimi et al., 2014; Kharame et al., 2014). In both studies, social functioning was assessed with one subscale of the SF-36 and spiritual well-being was assessed with the Spiritual Well-being Scale.

**Discussion**

Previous studies undertaken in patients receiving HD with the primary objective to identify the definition and related factors of spiritual well-being could not be located, which suggested that the current picture is incomplete.

Definitions used in the literature to define spiritual well-being were not consistent. However, six of the reviewed articles viewed spiritual well-being as having a sense of purpose and meaning in life (Cheawchanwattana et al., 2014; Eslami et al., 2014; Kharame et al., 2014; Martinez & Custodio, 2014; Reig-Ferrer et al., 2012; Yodchai et al., 2016). Therefore, regardless of the differences in the definitions, a unified definition of spiritual well-being is plausible. The words spiritual well-being and spirituality have been used interchangeably by six studies included in this review. Spirituality lacks universal definition as it consists of many spiritual taxonomies and its meaning differs depending upon individual understanding and choice (McSherry & Cash, 2004). Butt (n.d.) has mentioned spirituality as being positive and negative and spiritual well-being as a state that represents positive aspects of spirituality. Similarly, Domocmat (2014) has conceptualised spirituality as a journey or process of finding an ontological view and spiritual well-being as an outcome of this process. However, literature has used spiritual well-being and spirituality interchangeably.
Whether these two constructs carry the same meaning and are interchangeable should be made clear.

In addition, whether the concept of religion is related to spiritual well-being should also be clarified. In this present literature review, the study conducted by Eslami et al. (2014) incorporated the concept of religion with spirituality. However, Martinez and Custodio (2014) and Reig-Ferrer et al. (2012) did not. In recent studies, religion is believed to be independent of spirituality (Fisher, 2011; Domocmat, 2014). However, the study undertaken by Tanyi (2002) with the aim of clarifying the meaning of spirituality concluded that spirituality may or may not be associated with religion. The lack of theoretical discussion of the conceptualisation and unclear definition of spiritual well-being makes it difficult to measure. Complexity in the assessment of spiritual well-being will cause health care providers difficulty in developing and applying spiritual care interventions.

None of the studies reviewed had the primary objective of exploring factors influencing spiritual well-being in patients receiving HD and, therefore, did not provide separate information about the factors of spiritual well-being. Almost all the factors influencing spiritual well-being were measured using the subscale of quality of life or a single-item questionnaire. Therefore, the questionnaire used in the literature might not adequately measure the variables. Only the factors, for instance, sleep quality and mental health were assessed using a specific questionnaire that measured sleep quality (Eslami et al., 2014) and mental health (Martinez & Custodio, 2014). Hence, future studies are warranted to explore the factors that influence spiritual well-being in patients receiving HD.

From this literature review it is evident that information regarding spiritual well-being and factors influencing it in patients receiving HD is in its infancy and demands further study. In addition, various limitations were identified in the primary studies. Firstly, the definition of spiritual well-being was unclear, which needs theoretical discussion. Secondly, future studies should pay attention to using a questionnaire that specifically measures the factors under study. Finally, the sample sizes need to be larger as almost all of the studies had a sample size of less than 100.

Limitations of this review
The findings of this review should be interpreted with caution as this study itself has some limitations. Firstly, the literature search for this review was limited to 10 years. Secondly, only articles in the English language were collected. Thirdly, a restricted number of databases were searched. These limitations may have contributed to the limited number of study results. Furthermore, this was not a systematic review and a standardised critical appraisal method was not implemented to conduct this review.

Implications for nursing practice
Without spiritual well-being other aspects of human life such as the biological, psychological and social factors may not function appropriately; therefore, the spiritual aspect of patients should be considered by health care providers. The information gained from this review regarding factors influencing spiritual well-being can be used to develop care management strategies to enhance spiritual well-being of patients who receive HD. For instance, strategies to enhance sleep quality can be implemented as this review revealed correlation between quality of sleep and spiritual well-being. The knowledge obtained can aid in conducting future interventional research studies to improve the spiritual well-being of patients receiving HD. Future studies with the primary objective of investigating factors and exploring the concept of spiritual well-being in patients receiving HD should be undertaken.

Conclusion
Spiritual well-being is an important aspect of human life. Holistic nursing care is not possible without addressing the spiritual aspects of patients. However, there was no common definition of spiritual well-being, which makes it difficult to have a deeper and more accurate understanding. This complexity will subsequently lead to difficulty in assessing and implementing caring strategies related to spiritual well-being that may result in ignorance of spiritual aspects of patients by health care providers. In addition, the busy setting of renal care may also aid in the ignorance of spiritual aspects by the health care providers. Hence, there is a need to clarify the concept of spiritual well-being. Various internal and external factors related to spiritual well-being were identified in this literature review. However, these findings should be interpreted with caution because there were no studies conducted with the primary aim of identifying the factors related to spiritual well-being, resulting in inadequate information.

Acknowledgement
We would like to thank the Graduate School, Prince of Songkla University for providing partial funding for this study. We are also grateful to Geoffrey Cox for editing this paper.

References
Factors influencing spiritual well-being in patients receiving haemodialysis: a literature review


WHY MANAGE THE RISK WHEN WE CAN REDUCE IT?

ANTI-REFLUX VALVE WITH AN AUTO-OPEN/CLOSE FUNCTION

Reduce the need for pressure haemostasis after removing the internal needle.

Automatically opens and closes in accordance with circuit attachment/removal.

SAFETY NEEDLE REDUCES THE LIKELIHOOD OF NEEDLE STICK INJURY

The needle’s tip passes through the inside of the safety protector so that the safety feature is automatically activated covering the tip of the needle reducing the likelihood of needle stick injury.

The circuit-side male luer pushes the slide core inside the cannula forwards, which pushes the backflow prevention valve open, and the blood passes through the slide core and flows into the dialysis circuit.
The requirements of antimicrobial catheter lock solutions:

What should they do and what can they do?

Catheter lock solutions are instilled into central venous access systems to have certain effects in this location. These access systems can be either dialysis catheters, Hickman-type lines or port-a-cath systems. The latter are used mainly in parenteral nutrition and for the administration of medication in oncology patients. These access systems are approved as medical devices and are CE marked. The central venous access is inserted in the subclavian, jugular or femoral veins.

The use of Antimicrobial Lock Solutions have been recommended in the "Hygiene Guideline complementing the German Dialysis Standard" and in the Position statement of European Renal Best Practice (ERBP)". Pure heparin solutions containing no antimicrobial agent do not meet this criterion. Antibiotics are associated with the development of resistant which is a major drawback. Highly concentrated citrate solutions and taurolidine-citrate solutions are therefore conceivably useful in this application.

Highly concentrated citrate solutions (30% and 46.7%) cause major adverse effects such as cardiac arrests and embolism that are a significant risk for the patient. TauroLock™ as an antimicrobial lock solution has proven useful in dialysis, oncology and parenteral nutrition for many years and has meanwhile become established in the prevention of catheter-related infections.

TauroLock™ prevents catheter infections:

- **ONCOLOGY**
  - 1.2 mg
  - 1.2 mg
  - 2 mg
  - 4 mg
- **DIALYSIS**
  - 0.2 mg
  - 0.4 mg
  - 1 mg
  - 1.5 mg
- **PARENTERAL NUTRITION**
  - 0.1 mg
  - 0.5 mg
  - 1 mg
  - 4 mg

TauroLock™ is safe:

- TauroLock™ is biocompatible and non-toxic. In contrast to highly concentrated citrate there is no protein precipitation if using TauroLock™.
- The consumption of free citrate and citrate in the blood is not altered.

TauroLock™ is effective:

- The consumption of free citrate and citrate in the blood is not altered.
- Free citrate is not reduced significantly.

TauroLock™ is cost-effective:

- The cost of TauroLock™ is less than the cost of traditional citrate solutions.

TauroLock™ is easy to use:

- Can be used in all types of catheters.
- Easy to administer.

TauroLock™ is safe:

- TauroLock™ is biocompatible and non-toxic. In contrast to highly concentrated citrate there is no protein precipitation if using TauroLock™.

Renal Nutrition, Nursing and Allied Health Professionals Symposium

A joint symposium of ISN Renal Health Professionals Working Group (ISN RHP WG) and International Society of Renal Nutrition and Metabolism (ISRNM)

PRE-CONGRESS SYMPOSIUM April 12, 2019
MELBOURNE, AUSTRALIA

This one-day symposium provides a unique opportunity for clinicians, nurses, dieticians, other allied health professionals, epidemiologists, and scientists to interact and exchange information about various aspects in managing patients with kidney disease. The speakers are all internationally leading nurses, nephrologists, gerontologists, dieticians, exercise professionals, palliative care experts, and scientists.

The symposium specifically deals with exercise in kidney disease, nutritional challenges such as low protein diets, eating on dialysis, changing nutritional behavior through telehealth, and managing the obese but protein-energy wasted kidney patients. A specific nursing session addresses challenges such as intradialytic hypotension, increasing home therapies, renal supportive care, and global nephrology nursing.

April 12, 2019 // Start: 08:30 // End: 16:00 // Educational hours: 6

CHECK OUR 5 PRE-CONGRESS COURSES AT A GLANCE

Melbourne Convention and Exhibition Centre (MCEC), 1 Convention Centre Pl, South Wharf VIC 3006, Australia

www.isnwcn2019.org