




## REVIEW

# Spiritual aspects of living with infertility: A synthesis of qualitative studies

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**Aims and objectives:** To identify the spiritual aspects of patients experiencing infertility and seek a deeper and broader meaning of the involuntary childlessness experience.

**Background:** Infertility can be the cause for a spiritual crisis among some couples. Those who endure this involuntary childlessness condition frequently experience contradictory feelings and needs. In this context, core aspects of spirituality such as meaning and purpose in life are often questioned.

**Design:** A review and synthesis of qualitative empirical research was undertaken to seek a deeper understanding of the spiritual aspects of patients' experiences of infertility.

**Methods:** An aggregative synthesis was conducted according to Saini and Shlonsky (*Systematic synthesis of qualitative research*, 2012, Oxford University Press, Oxford), using thematic analysis.

**Results:** A total of 26 studies included female, male and couples. Settings revealed interviewees in different infertility phases such as diagnosis, assisted reproductive technologies and following fertility treatments. Two main themes emerged: spiritual needs and spirituality as a coping resource for infertility.

**Conclusion:** Infertility affects the holistic existence of the couples. This adversity awakens spiritual needs along with unmet needs of parenthood. Coping strategies incorporating spirituality can enhance the ability of couples to overcome childlessness and suffering.

**Relevance to clinical practice:** Infertile couples' experiences of infertility may offer an opportunity for spiritual care particularly related to the assessment of spiritual needs and the promotion of spiritual coping strategies. Effective holistic care should support couples in overcoming and finding meaning in this life and health condition.

**KEYWORDS**

fertility, holistic care, midwifery, nursing, spirituality

## 1 | INTRODUCTION

Infertility is globally regarded as a disabling issue affecting public health (Centers for Disease Control and Prevention, 2014). The defining concepts have evolved over time with inconsistent understandings arising among a variety of disciplines (Gurunath, Pandian, Anderson, & Bhattacharya, 2011). Nevertheless, emergent definitions agree that infertility is a health reproductive disability that limits in a longer or shorter period of time the ability to conceive, to carry a pregnancy and to successfully give birth to a biological child (Gurunath et al., 2011). After the International Committee for Monitoring Assisted Reproductive Technology (ICMART) and the World Health Organization (WHO) have revised the terminology (Zegers-Hochschild et al., 2009), infertility is defined as the inability to conceive and have a successful pregnancy after 12 months without contraception and having regular sexual intercourse. Two types of infertility are recognised. Primary infertility is described as the inability to conceive, carry a pregnancy or have a live birth without ever before having had a living child. In contrast, secondary infertility occurs when the inability to conceive carry a pregnancy or have a live birth happens when there has already been a living child (WHO, 2016).

A broad study conducted by the WHO across 190 countries revealed the real magnitude of this health issue after 1.9% of the 277 surveyed women, with ages between 20–44 years old being diagnosed with primary infertility (Mascarenhas, Flaxman, Boerma, Vanderpoel, & Stevens, 2012). At the same time, women who had already one living child have experienced an inability to conceive in 10.5% of the reported cases. Additionally, 48.5 million couples were reported as having difficulties in getting pregnant in 2010 (Mascarenhas et al., 2012). The decreasing numbers of births per women in the subsequent years to this systematic analysis (from 2.5 children in 2010–2015 to 2.0 children in 2095–2100), and the increasing rates of childlessness, have both evoked concerns towards the future of the next generation (United Nations, 2015).

The origins of infertility are not only biological or physical (gynaecological or reproductive and sexual transmitted diseases) but also related to exposure to environmental, chemical or occupational conditions (Centers for Disease Control and Prevention, 2014). In 40% of cases, both female and male factors are implicated in the couple's infertility (NICE, 2013). Unknown causes are also acknowledged in 30% of the situations (Centers for Disease Control and Prevention, 2014).

Global advances in assisted reproductive technology (ART) have translated into the development of fertility services, enabling couples to seek help in conceiving through resourceful techniques and medical treatments such as *in vitro* fertilisation (IVF), egg donation, sperm donation, intracytoplasmic sperm injection and embryo donation (Allot, Payne, & Dann, 2013).

The fulfilment of the couple's wish of having a bloodline family is associated with actively seeking complex and invasive medical treatments (Allot et al., 2013). In this context, men and women endure long and lasting psychological and emotional strain not only with the

### What does this paper contribute to the wider global clinical community?

- Spirituality is a mean to adapt to infertility.
- Infertility awakens spiritual needs along with unmet needs of parenthood.
- Nurses and midwives are in a privileged position to provide support and spiritual care in fertility healthcare contexts.

diagnosis process but also with treatment cycles and its adverse effects (Oddens, Tonkelaar, & Nieuwenhuyse, 1999). This situation impacts on both partners (Pasch & Dunkel-Schetter, 1997). Overall, women experiencing infertility manifest greater emotional distress (Oddens et al., 1999) and a lower quality of life and well-being compared with women who conceive naturally (McQuillan, Stone, & Greil, 2007; Oddens et al., 1999). Findings related to involuntary childlessness have revealed it to be an adverse life event with severe emotional and physical consequences (Oddens et al., 1999) capable of triggering spiritual needs and questioning the purpose and meaning of life. Although spirituality is becoming a growing theme of study in nursing literature, the assessment when caring for infertile patients is still poorly developed (Roudsari, Allan, & Smith, 2007).

Spirituality is acknowledged as a complex and dynamic concept capable of changing over time and cultures and therefore difficult to measure and define (Weathers, McCarthy, & Coffey, 2016). It is considered as "a way of being in the world in which a person feels a sense of connectedness to self, others, and/or a higher power or nature; a sense of meaning in life; and transcendence beyond self, everyday living and suffering" (Weathers et al., 2016, p. 93). Connectedness (with self, with others, with the environment), transcendence and meaning in life have been described as essential attributes to the concept (Weathers et al., 2016). Although some authors have defined its characteristics and attributes (Caldeira, Carvalho, & Vieira, 2013; Weathers et al., 2016), misconception has led to the interchangeable use of concepts such as spirituality and religiosity. The relationship between both is recognised; however, religious beliefs and practices are identified as manifestations of one's spiritual existence and a dimension of spirituality (Weathers et al., 2016). Spirituality is part of a holistic experience, particularly in times of crisis and illness (Caldeira et al., 2013; Hatamipour, Rassouli, Yaghmaie, Zendedel, & Alavi Majd, 2015; Weathers et al., 2016).

In relation to infertility, couples often resort to the use of coping strategies to deal with the effects of treatment and imposed childlessness in order to find new meaning and purpose in life. Therefore, it is essential to assess and support the spiritual coping of both individuals and couples (Pasch & Dunkel-Schetter, 1997). For example, cultural and religious practices have been identified as a resource to support transcendence through suffering (Weathers et al., 2016).

The need to design protocols to address psychosocial needs has been recognised in midwifery and in nursing practice with additional steps also being taken towards the recognition of spiritual beliefs, and with the potential for psychological interventions (Andrews, 2013). Early findings have already established a connection between infertility and religious beliefs (McQuillan et al., 2007; Roudsari et al., 2007). For instance, religious practice was associated with increased life satisfaction (McQuillan et al., 2007), and prayer was identified as a way to overcome suffering in infertile women (Roudsari et al., 2007). However, the literature lacks confirmatory evidence that spirituality and/or religiosity offer potentially positive coping strategies for couples. Calls for nursing research have been made to address this gap to identify the known attributes of spirituality and to review the empirical research, with the focus on qualitative studies in different samples and settings to ascertain potential positive benefits or associations (Weathers et al., 2016). This idea is reinforced by the need for funding to be made available for nursing research in ART (Allan, 2013) and concerning spiritual care in particular (Roudsari et al., 2007).

## 1.1 | Aims

This review aims to identify the spiritual needs of individuals experiencing infertility and seek a deeper and broader meaning of the involuntary childlessness experience. Findings from qualitative evidence will help nurses and midwives as well as other healthcare professionals to acknowledge the relevance of effective holistic care. This study will provide the foundations for contextualised intervention and the development of an approach capable of enhancing the ability of individuals and couples to cope efficiently with adversity.

## 2 | METHODS

An aggregative synthesis (Saini & Shlonsky, 2012) was conducted, after a search in July 2015. This method enabled a synthesis of the qualitative evidence with the use of thematic analysis. Common themes emerged from the findings and promoted an in-depth understanding of the spiritual aspects and needs of couples living with infertility. The literature search was conducted across five scientific databases including PsycINFO, ATLA, Cumulative Index of Nursing and Allied Health Literature (CINAHL), PubMed and Maternity and Infant Care. The databases were specifically related to the aim of this review. The PsycINFO findings enabled the researchers to include studies addressing psychological aspects but also to consider the spiritual connotations. ATLA Religion Database is a theological database that was accessed in order to capture research related to spirituality, spiritual needs and religiosity in this specific population. Maternity and Infant Care was searched in order to identify studies related to infertility. CINAHL and PubMed search was directed to find specific evidence in nursing, midwifery and medical disciplines.

Search terms (with truncation) were used according to each database and were selected according to participants, exposure,

outcomes and study type (Table 1). The term spirituality was not included in the search strategy, as this was found to narrow the search in previous exploratory searches, and could increase the probability of missing valuable citations.

The search was run with no date or geographical limits. Studies considered eligible for inclusion were published in peer-reviewed journals in English, Spanish or Portuguese. Papers focusing experiences of involuntary childlessness of men, women, both genders or couple were included. For the same purpose, studies were considered eligible when the biomedical definition of infertility was recognised, whether in its primary or secondary form (Zegers-Hochschild et al., 2009). Spirituality aspects were based on the concept of Weathers et al. (2016), namely the following attributes of connectedness (self, others, God or superior being and the world) transcendence and the meaning of life. Spiritual needs were assessed based on Narayanasamy (2010) and McSherry and Smith (2012) research, which lists the need for meaning and purpose, need for love and harmonious relationships, need for forgiveness, need for a source of hope and strength, need for trust, need for expression of personal beliefs and values, need for spiritual practices, expression of concept of God or Deity or Divinity. These needs were used to identify, to extract data and to support the analysis of the included studies.

The following were excluded: quantitative or mixed method studies, dissertations and papers that exclusively addressed health professionals' experiences.

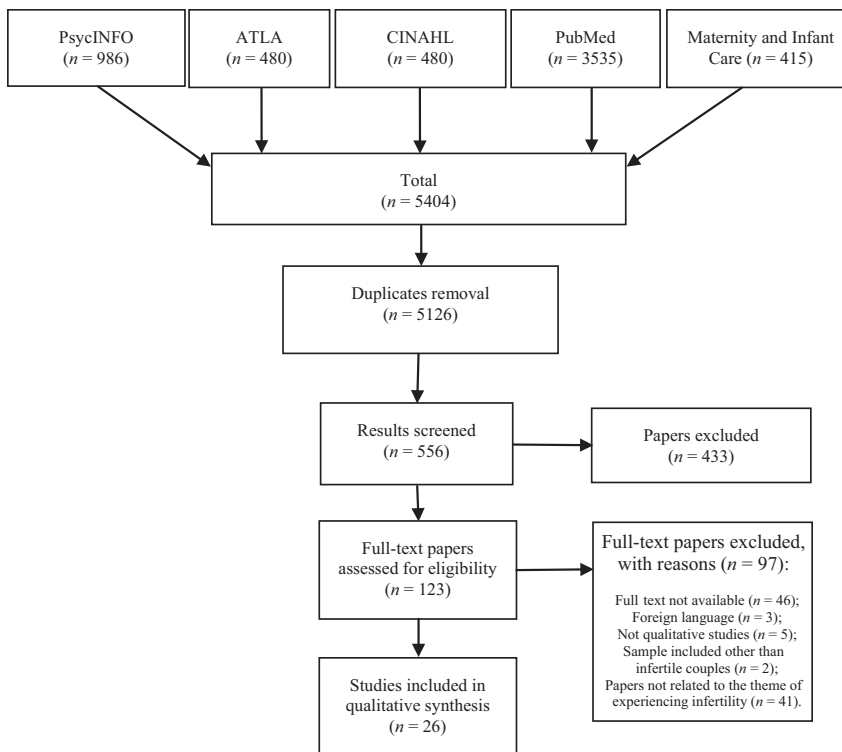
Initial search resulted in a total of 5,404 articles of which 282 were removed as duplicates. Two independent reviewers examined the results in the next phases according to the inclusion criteria. At this stage, the remaining 5,126 titles were analysed and 4,570 were excluded. All 556 abstracts were read, and 433 were excluded. The full texts (123) were read, and 26 papers were included in the synthesis (Figure 1).

The selected studies were analysed according to the Critical Appraisal Skills Programme (CASP, 2013) and simultaneously to the Consolidated Criteria for Reporting Qualitative Research (COREQ; Tong, Sainsbury, & Jonathan, 2007). The first tool (Table 2) assessed

**TABLE 1** Search terms

Participants	Woman Women Mother* Parent* Couple
Exposure	Infertil*
Outcomes	Need* Feeling* Experience* View* Perception*
Study type	Qualitative research

\*Truncation.



**FIGURE 1** Search, selection, appraisal and inclusion of the results

the articles in terms of clear statement of the aims, appropriateness of the qualitative methodology and the research design, recruitment strategy, data collection, relationship between researchers and participants, ethical issues, rigour of data analysis, clear statement of the findings and value of the research in a 10-point score (CASP, 2013). The COREQ is an instrument for reporting qualitative research comprised of 32 items and has been considered in this study to facilitate a more in-depth appraisal regarding three domains: research team and reflexivity, study design and analysis and findings (Tong et al., 2007; Table 3).

Two authors conducted the quality appraisal independently. When necessary, both researchers discussed the evaluation attributed to the qualitative evidence that could impact on its rating.

According to CASP, all articles described the aim and the value of the research. However, the majority did not demonstrate adequate consideration of the relationship between researchers and participants (Table 2).

According to COREQ, the studies also lack the participants' knowledge of the interviewer ( $n = 21$ ), the experience and training of the researchers ( $n = 20$ ) and the description of the interviewers' characteristics ( $n = 20$ ). When using COREQ, the majority of the studies lacked a description of the coding tree which was not identified in the CASP appraisal (Table 3).

Nevertheless, no articles were excluded for low quality due to the importance of every finding and its contribution to the aim of this study.

Data for each study were extracted and organised in a table to describe the main characteristics and to identify the major and minor themes. Themes were illustrated in association with quotations exclusively from the participants of the 26 included papers. This

analysis required constant reading and re-reading to truthfully reflect the evidence and also produce a broader synthesis across all papers. Similarities and differences between studies were extracted. Two researchers conducted this stage independently, and conflicts were resolved through consensual discussion.

### 3 | RESULTS

All included studies (Table 4) were published from 1991–2015, more frequently published in 2002 ( $n = 3$ ), 2009 ( $n = 3$ ), 2011 ( $n = 3$ ) and 2013 ( $n = 3$ ). Nursing and Midwifery peer-reviewed journals were the main target ( $n = 8$ ) as well as medicine ( $n = 7$ ), social sciences ( $n = 5$ ), psychology ( $n = 3$ ), therapy ( $n = 1$ ) and social work ( $n = 1$ ). One publication was not related to any specific discipline but to a multidisciplinary journal (Mogobe, 2005).

Most participants of the 26 articles were infertile women ( $n = 403$ ), couples ( $n = 36$ ) and infertile men ( $n = 34$ ). Samples ranged from 1 (Apfel & Keylor, 2002; Seybold, 2002) to 38 participants (Guntupalli & Chenchelgudem, 2004). Studies were conducted in the UK ( $n = 5$ ), USA ( $n = 4$ ), Africa ( $n = 4$ ), Iran ( $n = 3$ ), Australia ( $n = 2$ ), Pakistan ( $n = 2$ ), Portugal ( $n = 1$ ), Israel ( $n = 1$ ), China ( $n = 1$ ), Italy ( $n = 1$ ), India ( $n = 1$ ) and Taiwan ( $n = 1$ ). A multinational approach was addressed in two online studies (Cunningham & Cunningham, 2013; Toscano & Montgomery, 2009). Two articles simultaneously presented English and Pakistani participants (Batool & Visser, 2015) and English and Iranian individuals (Roudsari & Allan, 2011).

Phenomenology ( $n = 9$ ) and grounded theory ( $n = 5$ ) were the qualitative methods most used. Interviews were the main data collection method ( $n = 23$ ). These were conducted face-to-face (Apfel

**TABLE 2** CASP (2013) quality appraisal results

References	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Final score
Apfel and Keylor (2002)	N	Y	CT	N	Y	Y	N	N	N	Y	4/10
Batool and Visser (2015)	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y	9/10
Behboodi-Moghadam et al. (2013)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10/10
Bell (2009)	Y	Y	Y	Y	Y	CT	N	Y	Y	Y	8/10
Benasutti (2003)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10/10
Bhatti et al. (1999)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10/10
Chen and Landau (2015)	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y	9/10
Cipolletta and Faccio (2013)	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y	9/10
Cunningham and Cunningham (2013)	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y	9/10
Davis and Dearman (1991)	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	9/10
Dyer et al. (2002)	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y	9/10
Dyer et al. (2004)	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y	9/10
Guntupalli and Chenchelgudem (2004)	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	9/10
Lee et al. (2009)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10/10
McCarthy (2008)	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y	9/10
Mogobe (2005)	Y	Y	Y	Y	CT	N	CT	Y	Y	Y	7/10
Mosalanejad et al. (2014)	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y	9/10
Peddie et al. (2005)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10/10
Peters (2003)	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	9/10
Peters et al. (2011)	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y	9/10
Porter and Bhattacharya (2008)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10/10
Roudsari and Allan (2011)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10/10
Seybold (2002)	Y	Y	Y	Y	Y	Y	N	N	Y	Y	8/10
Silva et al. (2012)	Y	Y	Y	U	Y	U	Y	Y	Y	Y	8/10
Su and Chen (2006)	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y	9/10
Toscano and Montgomery (2009)	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y	9/10

Y, Yes; N, No; CT, Cannot tell.

Q1: Was there a clear statement of the aims of the search? Q2: Is a qualitative methodology appropriate? Q3: Was the research design appropriate to address the aims of the research? Q4: Was the recruitment strategy appropriate to the aims of the research? Q5: Was the data collected in a way that addressed the research issue? Q6: Has the relationship between researchers and participants been adequately considered? Q7: Have ethical issues been taken into consideration? Q8: Was the data analysis sufficiently rigorous? Q9: Is there a clear statement of findings? Q10: How valuable is the research?

& Keylor, 2002; Batool & Visser, 2015; Behboodi-Moghadam, Salsali, Eftekhari-Ardabili, Vaismoradi, & Ramezanzadeh, 2013; Bell, 2009; Benasutti, 2003; Bhatti, Fikree, & Khan, 1999; Chen & Landau, 2015; Cipolletta & Faccio, 2013; Davis & Dearman, 1991; Dyer, Abrahams, Hoffman, & van der Spuy, 2002; Dyer, Abrahams, Mokoena, & van der Spuy, 2004; Guntupalli & Chenchelgudem, 2004; Lee, Choi, Chan, Chan, & Ng, 2009; McCarthy, 2008; Mogobe, 2005; Mosalanejad, Parandavar, Gholami, & Abdollahifard, 2014; Peddie, Teijlingen, & Bhattacharya, 2005; Peters, 2003; Peters, Jackson, & Rudge, 2011; Porter & Bhattacharya, 2008; Roudsari & Allan, 2011; Silva, Ferreira, Brito, Dias, & Henriques, 2012), over the telephone (Su & Chen, 2006) or online (Cunningham & Cunningham, 2013). Some studies combined interviews with informal notes or diaries (Roudsari & Allan, 2011; Seybold, 2002), self-reflexive journal (Benasutti, 2003) and observation (Guntupalli & Chenchelgudem, 2004; Seybold, 2002). A public electronic media source was used in

one case as the exclusive means of obtaining data (Toscano & Montgomery, 2009).

The prime locations selected to conduct face-to-face interviews were fertility centres or other healthcare facilities attended by couples ( $n = 14$ ). Participants' homes ( $n = 5$ ) were also considered a privileged context to collect data. Physical, emotional, psychosocial, spiritual, socio-economic and cultural aspects were explored in depth.

Descriptions of involuntary childlessness comprised two main periods in particular endured by couples: from the diagnosis of infertility to treatment (Apfel & Keylor, 2002; Batool & Visser, 2015; Behboodi-Moghadam et al., 2013; Bell, 2009; Bhatti et al., 1999; Chen & Landau, 2015; Cipolletta & Faccio, 2013; Cunningham & Cunningham, 2013; Davis & Dearman, 1991; Dyer et al., 2002; Dyer et al., 2004; Guntupalli & Chenchelgudem, 2004; Mogobe, 2005; Mosalanejad et al., 2014; Porter & Bhattacharya, 2008; Roudsari &

TABLE 3 COREQ quality appraisal results

Domain 1: Research team and reflexivity	Personal characteristics	1. Interviewer/facilitator 2. Credentials 3. Occupation 4. Gender 5. Experience and training 6. Relationship established 7. Participants knowledge of the interviewer	Total Y
			15
Domain 2: Study design	Relationship with participants	Toscano and Montgomery (2009)	N
		Su and Chen (2006)	Y
		Silva et al. (2012)	N
	Theoretical framework	Seybold (2002)	Y
		Roudsari and Allan (2011)	Y
		Porter and Bhattacharya (2008)	Y
		Peters et al. (2011)	Y
	Participant selection	Peters (2003)	Y
		Peddie et al. (2005)	Y
		Mosalanejad et al. (2014)	N
Domain 3: Analysis and findings	Setting	Mogobe (2005)	N
		McCarthy (2008)	Y
		Lee et al. (2009)	Y
	Data collection	Guntupalli and Chenichelgudem (2014)	N
		Dyer et al. (2004)	N
		Dyer et al. (2002)	N
		Davis and Dearman (1991)	N
	Data analysis	Cunningham and Cunningham (2013)	Y
		Cipolletta and Faccio (2013)	N
		Chen and Landau (2014)	Y
Domain 4: Reporting	Reporting	Bhatti et al. (1999)	Y
		Benasutti (2003)	Y
		Bell (2009)	Y
	Results	Behboodi- Moghadam et al. (2013)	Y
		Batool and Visser (2015)	U
		Apfel and Keylor (2002)	N
			N
	N – No		24
			11
			6
	U – Unclear		0
			1
			1

Y, yes; N, no; U, unclear.

**TABLE 4** Characteristics of the included studies

Author (Year) Country of publication	Aim	Qualitative method	Setting (country of study)	Participants	Data collection method	Key findings
Apfel and Keylor (2002) UK	An analytic case illustrates some of the ways analysis can be a treatment of choice for people using assisted reproduction	Case study	Face-to-face sessions and telephone sessions (UK)	One woman	Psychoanalysis sessions	No main theme was identified
Batool and Visser (2015) UK	To explore the experiences of infertile women in two different cultures. To explore the psychosocial impact of infertility as reported by women living in the UK and Pakistan	Phenomenology	Convenient place to the UK and to the Pakistani participants (UK Pakistan)	14 involuntarily childless women who had been in a relationship for more than 2 years and were pursuing infertility treatment (UK sample consisted of eight women, Pakistan sample consisted of six women)	Semi-structured in-depth interviews	Five major themes were identified: Desire for Motherhood, Response to Diagnosis, Impact of Infertility, Coping responses, Treatment and Future options
Behboodi-Moghadam et al. (2013) Japan	To explore and describe the experiences of Iranian infertile women regarding infertility	Qualitative	Referral centre in Tehran (Iran)	10 women who were seeking infertility treatment at an infertility treatment centre for primary infertility (in each case a female factor had been recognised) in Tehran Iran	Semi-structured interviews	Four main themes were identified: abuse, marital instability, social isolation, loss of self-esteem
Bell (2009) USA	To understand how poor and working-class women actively resist and negotiate the dominant ideologies surrounding infertility	Qualitative	South-eastern Michigan (several locations: private study rooms of public libraries women's homes researchers' office fast food restaurant) (USA)	20 women of low SES (socio-economic status) having experienced involuntary childlessness for at least 1 year having less than a college degree and being between the ages of 18 and 44	In-depth interviews with women of low SES	Two main themes were identified: Setting the Scene: The Context of Experience, Negotiating Infertility Experiences
Benasutti (2003) USA	Explore the experiences of women who have lived through infertility and the meanings they associate with it	Phenomenology	Participants' homes (USA)	Four women from a group of women to which the researcher had spoken to previously because of the similar experience	Interviewed in-depth and self-reflexive journal	Six main categories were identified: reactions during experience, differences during experience, support learning during experience, benefits after experience, advice after experience

(Continues)



**TABLE 4** (Continued)

Author (Year) Country of publication	Aim	Qualitative method	Setting (country of study)	Participants	Data collection method	Key findings
Bhatti et al. (1999) England	To explore the contextual factors that influence the health-seeking behaviour of infertile women in the lower socio-economic group in Pakistani women	Qualitative	Several locations: a low-income densely populated urban community, outpatient department of a primary care hospital, and gynaecology clinics of a secondary and a tertiary care hospital (Pakistan)	17 infertile women in the lower socio-economic group in Pakistani	In-depth interviews	Twelve main themes were identified: socio-demographic information, duration to seek care, choices of healthcare providers, allopathic doctors, traditional birth attendants (dais), Hakims, homeopathic doctors, spiritual healers, terms used for infertility, causes of infertility, effects of infertility on women's well-being, coping with infertility
Chen and Landau (2014) USA	Understanding long-term psychosocial implications of first childbirth at postnatal fertile age following assisted reproductive treatment	Qualitative— constructivist naturalistic paradigm	Fertility clinic at the Chaim Sheba Medical Center (Israel)	20 women whose average age at childbirth was 45 that attend a fertility clinic at the Chaim Sheba Medical Center	Semi-structured interviews	Four main themes were identified: premotherhood period, motherhood experience, perception of effects of late motherhood on children, coping strategies of both participants and children
Cipolletta and Faccio (2013) UK	Explores the time experience of Italian couples undergoing medically assisted reproductive treatment (ART)	Phenomenology	Fertility clinic of a public hospital in Northern Italy (Italy)	Nine women and seven men undergoing a medically assisted reproductive programme at a fertility clinic in Italy	Semi-structured interviews	Four main themes were identified: present moment, waiting, hope, death
Cunningham and Cunningham (2013) England	The experiences of women living with and through infertility will be illuminated alongside consideration of the expanding and developing role of the fertility nurse in supporting patients through complex infertility journeys	Qualitative	Online (World Wide Web)	Nine women living with and through infertility that participated in online life-story interviews	Asynchronous online life-story interviews	Three main themes were identified: approaching the clinic, relatedness: within and around the clinic, liminality and infertility

(Continues)



**TABLE 4** (Continued)

Author (Year) Country of publication	Aim	Qualitative method	Setting (country of study)	Participants	Data collection method	Key findings
Davis & Dearman (1991) USA	To explore how infertile women coped with their inability to bear children	Qualitative	Medical centre (USA)	30 infertile women of sample population attended by a physician who specialised in infertility at a large medical centre	Semi-structured interview	Six main themes were identified: increasing the space or distancing one-self from reminders of infertility, instituting measures for regaining control, acting to increase self-esteem by being the best, looking for hidden meaning in infertility, giving in to feelings, sharing the burden with others
Dyer et al. (2002) UK	Explores the concerns and experiences related to involuntary childlessness of infertile women living in a diverse cultural urban community in South Africa	Grounded Theory	Infertility clinic in a tertiary referral centre —Groote Schuur Hospital in Cape Town South Africa (Africa)	30 women seeking treatment to infertility (from the local community as the Groote Schuur Hospital in Cape Town South Africa) when doing their first visit to an infertility clinic in a tertiary referral centre	In-depth semi-structured interviews	Five main themes were identified: psychosocial suffering, marital instability, stigmatisation and abuse, social pressure, support and secrecy
Dyer et al. (2004) UK	Explores reproductive health knowledge health-seeking behaviour and experiences related to involuntary childlessness in men suffering from couple infertility	Grounded theory	Infertility clinic of Groote Schuur Hospital in Cape Town South Africa (Africa)	27 men suffering from couple infertility were recruited at their first presentation to the infertility clinic at Groote Schuur Hospital	Semi-structured in-depth interviews	Nine main themes were identified: demographic information, knowledge of human fertility, knowledge of causes of infertility, expectations and concepts of modern infertility management, treatment-seeking behaviour, experiences of infertility, effects on marital relationships, experiences in the family setting, experiences in the community

(Continues)

**TABLE 4** (Continued)

Author (Year) Country of publication	Aim	Qualitative method	Setting (country of study)	Participants	Data collection method	Key findings
Guntupalli & Chenichelgudem (2004) UK	To highlight important aspects of infertility such as perceptions causes and treatment-seeking behaviour in Chenchu tribe of the Nallamalai forest area India	Qualitative descriptive and exploratory	Three villages Jangamreddypally Mannanur and Padara (India)	Unstructured interviews were carried out in 38 women who have had infertility at some point in time In-depth interviews were carried out in 16 women Five older Chenchu women one mantrasani (midwife) two Shamans (spiritual healers) and two herbalists were selected as key informants	Qualitative techniques such as participant observation in-depth interviews and unstructured key informant interviews	Three main themes were identified: perceptions and knowledge, treatment-seeking behaviour and consequences
Lee et al. (2009) UK	To provide an in-depth description of the gains perceived by Chinese men and women and how they reconstructed their lives after unsuccessful IVF treatment	Grounded Theory	An assisted reproduction clinic (China)	Four couples and another six Chinese women who experienced unsuccessful IVF treatment were recruited from an assisted reproduction clinic	In-depth interviews	Three main themes were identified: personal gain, interpersonal gain and transpersonal gain
McCarthy (2008) USA	To explore the phenomenon of women's experience with infertility in the aftermath of unsuccessful medical treatment	Phenomenological	Participants' homes (USA)	22 women after unsuccessful medical treatment	Interviews	One main theme was identified: living an existential paradox: Searching for hope in the light of lost dreams
Mogobe (2005) Africa	To understand and theoretically explain the phenomenon of infertility from the perspective of those who were experiencing it	Qualitative	Gynaecological clinic at Princess Marina Hospital, (Republic of Botswana—Africa)	40 women attending the gynaecological clinic at Princess Marina Hospital	Interviews with open-ended questions	Two main themes were identified denying self and preserving self
Mosalanejad et al. (2014) Iran	To explore the lived experience of infertile women from increasing and decreasing factors of hope in infertile women with failure in infertility treatment	Phenomenology	Rasekh Infertility centre (Iran)	23 Infertile women that attended to Rasekh Infertility Clinic in Jahrom in 2012	Semi-structured interviews	Two main themes were identified: increasing hope factors (spiritual resources family interaction and support and media) and decreasing hope factors (nature of treatments and negatively oriented mind) (Continues)

**TABLE 4** (Continued)

Author (Year) Country of publication	Aim	Qualitative method	Setting (country of study)	Participants	Data collection method	Key findings
Peddie et al. (2005) UK	To examine the circumstances surrounding the decision-making process (as perceived by the respondents) at the end of unsuccessful IVF treatment	Qualitative	Participants' home Designated nonclinical room within the IVF Unit (UK)	25 women who had decided to end treatment after unsuccessful IVF	Semi-structured interviews	Ten main themes were identified: difficulty with acceptance of infertility, stress associated with IVF, unrealistic expectations of treatment, pressure from media and society, insufficient information specific to the individual, social and professional opportunity costs, physical and emotional pressure exerted on the couples' relationship, information provision and communication skills, lack of continued support from the IVF unit and whose decision
Peters (2003) Australia	To explore the lived experience of women who accessed IVF programs and who were not successful in achieving a full-term pregnancy	Phenomenological	(Australia)	6 women were voluntarily recruited from infertility support groups for the study	Conversational interviews with open-ended questions	Five main themes were identified: keeping secrets, why me? trying different avenues, getting it wrong and being let down
Peters et al. (2011) Australia	To explore couples' stories of remaining childless despite treatment with ART	Qualitative	Participants' homes (Australia)	Ten people (five married couples) who had been diagnosed with infertility and despite undergoing ART that remained childless	Interviews	Three main themes were identified: the difficulties of living a different narrative, the strong dyadic bond, and setting achievable goals and redirecting creativity
Porter and Bhattacharya (2008) UK	Examine infertile couples' perceptions of the information available from various sources in the context of achieved pregnancy or continuing treatment	Grounded theory	Participants' homes (UK)	Twenty-seven couples attending the fertility clinic at Aberdeen Maternity Hospital for the first time agreed to participate and 25 couples were followed up	Semi-structured interviews	Four main themes were identified: respondents' background, seeking information, conceiving naturally, helping themselves

(Continues)

TABLE 4 (Continued)

Author (Year) Country of publication	Aim	Qualitative method	Setting (country of study)	Participants	Data collection method	Key findings
Roudsari and Allan (2011) Iran	Explore Muslim and Christian women's experiences and preferences with regard to infertility counselling To explore the experiences of infertile women regarding counselling in a wider religious context and a larger ethnic mixture	Grounded theory	Fertility clinics (two referral hospitals in London and one Iranian Infertility Research Centre in Mashhad) (UK Iran)	30 infertile women affiliated to different denominations of Islam (Shiite and Sunni) and Christianity (Protestantism Catholicism Orthodoxies) were interviewed	Semi-structured in-depth interviews observation of nonverbal behaviours during the interviews and the writing of postinterview notes and diaries	One main theme was identified: relying on a higher being (Appraising the meaning of infertility religiously, applying religious coping strategies, gaining a faith-based strength)
Seybold (2002) USA	Examine a Senegalese woman's experience in selecting treatments for infertility	Ethnography	Participants' room (Africa)	1 infertile Senegalese woman	Observation and informal records	Three main themes were identified: therapies for infertility, factors influencing baby's therapy selection process, social economical and political influences on treatment choice
Silva et al. (2012) Portugal	Understanding the experiences and impact of unsuccessful fertility treatments of infertile women who wanted children	Phenomenology	Fertility clinic (Portugal)	Four women diagnosed with infertility that wished to have biological children and were under fertility treatments and that had already underwent at least one unsuccessful fertility treatment	Semi-structured interview	Six min categories were identified: meaning of being a mother, wish to have children, meaning of infertility, infertility consequences, difficulties experienced, support
Su & Chen (2006) Taiwan	To explore the lived experience of infertile women who terminated treatment after <i>in vitro</i> fertilisation (IVF) failure	Phenomenology	A medical centre (Taiwan)	24 infertile women who had experienced IVF failure one year ago and given up their treatment	Telephone interviews	One main theme was identified: transforming hope. (Accepting the reality of infertility, acknowledging the limitations of treatment involving high technology, re-identifying one's future)
Toscano and Montgomery (2009) USA	To explore and describe the experience of pregnancy via <i>in vitro</i> fertilisation (IVF) and to identify common themes related to their psychological emotional and physical health as described within electronic communities	Phenomenology	Websites blogs and other public postings, Online communities of women pregnant or attempting pregnancy via IVF (World Wide Web)	26 women from seven different countries (the United States Australia England Ireland Canada Columbia and Borneo) living the experience of trying to achieve pregnancy (preconception) pregnant and mothers of children that were born through IVF	Public electronic media sources (websites blogs and other public postings) with content related to experiences during a pregnancy resulting from IVF	Five main themes were identified: preconception turmoil including stress, conception experienced with cautious joy and existing within the balance between fear and uncertainty belief in a higher power and magical thinking, sorrow, birth synonymous with healing, breaking the silence through connection and shared experience

Allan, 2011; Seybold, 2002; Silva et al., 2012; Toscano & Montgomery, 2009) and living beyond the treatment (Bell, 2009; Benasutti, 2003; Chen & Landau, 2015; Guntupalli & Chenchelgudem, 2004; Lee et al., 2009; McCarthy, 2008; Peddie et al., 2005; Peters, 2003; Peters et al., 2011; Su & Chen, 2006; Toscano & Montgomery, 2009).

Two main themes were synthesised as follows: expression of spiritual needs and spirituality as a coping resource for infertility, both based on the themes described in each study (Table 4). The themes are presented below with extracted quotations from the original study (Table 5).

Infertility challenged many women and men to face not only a physical but also a spiritual journey in order to achieve the goal of having a child. Indeed, the majority of the participants faced hardship when dealing with this life event (Batool & Visser, 2015; Bell, 2009; Bhatti et al., 1999; Chen & Landau, 2015; Cipolletta & Faccio, 2013; Davis & Dearman, 1991; Dyer et al., 2002; McCarthy, 2008; Mogobe, 2005; Mosalanejad et al., 2014; Peddie et al., 2005; Peters, 2003; Peters et al., 2011; Toscano & Montgomery, 2009). Coping strategies aiming to adapt and transcend suffering included the development of resilience (Lee et al., 2009; Peters et al., 2011) and maintaining or regaining hope (Bhatti et al., 1999; Cipolletta & Faccio, 2013; Davis & Dearman, 1991; Lee et al., 2009; Mosalanejad et al., 2014; Peddie et al., 2005; Porter & Bhattacharya, 2008; Toscano & Montgomery, 2009).

## 4 | DISCUSSION

This review focused on synthesising the outcomes from qualitative research concerning spiritual aspects of couples living with infertility. In general, results of this review are in line with literature, which links infertility and spirituality. Nevertheless, specific data were still found to be limited. Overall infertility was perceived as a condition that affected the couple's existence on a holistic level. One of the core findings revealed that physical, emotional, psychological, social and spiritual dimensions of the individual underwent several changes due to this living experience. Previous qualitative and quantitative studies have focused on psychosocial aspects (Greil, Slauson-Blevins, & McQuillan, 2010; Oddens et al., 1999). In addition, a growing body of nursing and midwifery literature has acknowledged the significance of the spiritual dimension in reproductive care (Roudsari et al., 2007). Therefore, this study exceeded the existing evidence giving a new insight into the spiritual assessment of infertile couples.

This research identified meaning of life, connectedness to self, to others and beyond as characteristics of the couple's experience of childlessness, in line with the recent analysis of the concept of spirituality (Weathers et al., 2016). Individuals who are not religious perceive themselves as spiritual beings (Weathers et al., 2016), and similarly, this study found that, whether addressing religion or not, the couples frequently had a transcendent discourse when analysing the quotations (Benasutti, 2003; McCarthy, 2008; Roudsari & Allan, 2011; Toscano & Montgomery, 2009). Attributes of spirituality

(Weathers et al., 2016) were clearly present, despite the stage each infertile individual reported to be in. Interestingly, spirituality is still considered a poorly explored field in this healthcare context (Roudsari et al., 2007). Nevertheless, meaning in life for couples appeared to be defied in this study by unsuccessful conception, pregnancy and birth of a biological child. Furthermore, an eager wish to become a parent and undergo the transitional process was an expected outcome of adulthood and marriage (Batool & Visser, 2015; Cunningham & Cunningham, 2013; Dyer et al., 2004; Mogobe, 2005; Silva et al., 2012). This finding is consistent with other researchers' statements of how motherhood is important as a transition in making existential meaning (Prinds, Hvidt, Mogensen, & Buus, 2013). Self-identity based on men and women's assumptions of future parenthood faded away when individuals acknowledged themselves as being reproductively impaired (Seybold, 2002). Barriers in conceiving and reaching the goal of parenthood proved to influence the values, the identity and the beliefs of the couple, and so, meaning in life is reappraised by resisting the previous purpose of their existence (Peters, 2003). Early research reported that females who did not perceive infertility as a disability had a higher life satisfaction score in comparison with fertile women (McQuillan et al., 2007). Satisfaction seems to be connected to meaning of life and to the significance that individuals attribute to their goals in life (Park, 2016). The construction of a new meaning is not accepted from the beginning. These findings could explain why in this review couples are not willing to give up without a struggle engaging in an intense pursuit of all possible methods to achieve their desire to have a child (Cipolletta & Faccio, 2013; Porter & Bhattacharya, 2008). The awareness of infertility manifests itself in self-questioning (Peters, 2003) and engaging in medical and traditional treatments. Individuals perceive this as the only purpose in life and they deeply transform their existence through changes in daily routines (Bell, 2009; Cunningham & Cunningham, 2013; Peters, 2003; Porter & Bhattacharya, 2008) to enhance reproduction probabilities (Bell, 2009; Cunningham & Cunningham, 2013; Peters, 2003; Porter & Bhattacharya, 2008).

In other words, infertility appeared to be a synonym of treatment and translated into active pursuit of a cure. This situation was culturally determined by the underlying beliefs and meanings that prevailed in the couple's social background. Social role fulfilment had a close relationship with motherhood and fatherhood, with recognised consequences to self and to community survival in developing countries (Batool & Visser, 2015; Cunningham & Cunningham, 2013; Dyer et al., 2002; Mogobe, 2005; Silva et al., 2012). The search for the ultimate purpose in life with the additional social pressure evoked suffering. Therefore, this review has provided insight to what other authors had stated towards spiritual distress and the unfulfilled spiritual needs (Caldeira et al., 2013). As far as it could be determined, these findings contribute to making a clear connection between the experience of living with infertility and the spiritual needs as defined before (McSherry & Smith, 2012; Narayanasamy, 2010). A spiritual crisis was proven to arouse in waves of hope and despair lived by men and women during fertility cycles (Bhatti et al., 1999; Cipolletta & Faccio, 2013; Mosalanejad et al., 2014; Peddie

**TABLE 5** Main themes and quotations from the original studies

Main themes	Subthemes	Citation/Example	References
Expression of spiritual needs	Need for purpose in life	"You do feel like a bit of a failure doing it (IVF) because you think everyone else can do it (have children) without having to resort to this. Why do we have to resort to this? Yet another why do I have to be different? Why can't I just be normal?" (Peters, 2003, p. 261)	Dyer et al. (2002), Peters (2003), Peddie et al. (2005), McCarthy (2008), Lee et al. (2009), Mosalanejad et al. (2014)
	Need for meaning in life	"Leaving a genetic mark is extremely important for me now. The longer down the road we've travelled the more compelling it has become. A child is a symbol of our love and also a record of us... No one remembers you because you kept a clean house." (Cunningham & Cunningham, 2013, p. 3431)	Davis and Dearman (1991), Dyer et al. (2002), Mogobe (2005), McCarthy (2008), Bell (2009), Peters et al. (2011), Roudsari and Allan (2011), Silva et al. (2012), Lee et al. (2009), Cunningham and Cunningham (2013), Batool and Visser (2015)
	Need for love	"I have a partner I share this problem I feel very much supported and since I have his support I come to feel much better because like I was saying earlier when he is here I sleep comfortably." (Mogobe, 2005, p. 32)	Benasutti (2003), Dyer et al. (2004), Guntupalli and Chenchelgudem (2004), Mogobe (2005), Toscano and Montgomery (2009), Mosalanejad et al. (2014), Batool and Visser (2015)
	Need for harmonious relationships	"When I see any woman in a state of pregnancy it makes me upset. I wish to see myself in this condition. ... When someone says 'This is my child' at that time I think I am deprived of this possession. Whenever I listen to the news of newborns around me I can't sleep that night. ... My sister and sister-in-law avoid coming to my home, perhaps they think I will cast evil eyes at their children." (Batool & Visser, 2015, p. 8)	Bhatti et al. (1999), Dyer et al. (2002), Benasutti (2003), Dyer et al. (2004), Guntupalli and Chenchelgudem (2004), Toscano and Montgomery (2009), Behboodi-Moghadam et al. (2013), Batool and Visser (2015), Chen and Landau (2015)
	Need for forgiveness	"Today I'm sixty and my daughter ... says: 'You're so old why didn't you have me earlier. ... why didn't you have me sooner?' This does something to me it's hard... I always do the calculations in my head... when I'm this age she'll be that age. ... She says: 'my friend's mother is thirty' I think it's hard for her... my husband looks old. ... " (Chen & Landau, 2015, p. 25)	Chen and Landau (2015)
	Need for a source of hope	"We leave in constant fear we live in hopes and fears that mean trembling of treatment failure" (Moslanejad et al., 2014, p. 121)	Davis and Dearman (1991), Bhatti et al. (1999), Peters (2003), Peddie et al. (2005), Porter and Bhattacharya (2008), Toscano and Montgomery (2009), Lee et al. (2009), Cipolletta and Faccio (2013), Moslanejad et al. (2014)
	Need for a source of strength	"It doesn't really go away. This is like something died but nobody else knows it. Only you know it. And so nobody else is mourning." (McCarthy, 2008, p. 322)	Benasutti (2003), McCarthy (2008), Lee et al. (2009), Toscano and Montgomery (2009), Roudsari & Allan, (2011), Peters et al., (2011), Batool and Visser (2015)
	Need for trust	"my marriage was deteriorating ... not because of this but certain characteristics seemed to develop during this [treatment period] and it didn't help... It will either make or break a marriage." (Benasutti, 2003, p. 59)	Benasutti (2003), Guntupalli and Chenchelgudem (2004), Peddie et al. (2005), McCarthy (2008), Behboodi-Moghadam et al. (2013), Toscano and Montgomery (2009), Roudsari and Allan (2011)
	Need for expression of personal beliefs and values	"I still feel like 'Where am I? Where am I going? Where am I supposed to be?' If God hasn't chosen me to be a mother what is my purpose? That is my biggest question. What am I doing? Why have I been put on earth? ... And it makes me angry that I have to search for something. I want to be a mom. Why do I have to find something else to replace that?" (McCarthy, 2008, p. 321)	Dyer et al. (2002), Seybold (2002), Guntupalli and Chenchelgudem (2004), Mogobe (2005), McCarthy (2008), Lee et al. (2009), Toscano and Montgomery (2009), Roudsari and Allan (2011)
	Need for spiritual practices	"I do my prayer so I cope with things" (Roudsari & Allan, 2011, p. 162)	Davis and Dearman (1991), Benasutti (2003), Mogobe (2005), Toscano and Montgomery (2009), Roudsari and Allan (2011), Moslanejad et al. (2014), Batool and Visser (2015)
	Need for expression of concept of God or Deity or Divinity	"Due to this issue I feel myself closer to religion and Allah. ... I offer my prayers regularly and pray for a child. I think if I didn't have this platform I would have died." (Batool & Visser, 2015, p. 10)	Davis and Dearman (1991), Bhatti et al. (1999), Dyer et al. (2002), Benasutti (2003), Peters (2003), Guntupalli and Chenchelgudem (2004), Mogobe (2005), McCarthy (2008), Bell (2009), Toscano and Montgomery (2009), Roudsari and Allan (2011), Silva et al. (2012), Chen and Landau (2014), Moslanejad et al. (2014), Batool and Visser (2015)

(Continues)



TABLE 5 (Continued)

Main themes	Subthemes	Citation/Example	References
Spirituality as a coping resource for infertility	Positive approach	"I needed to jump health-first into taking control of my life and fulfilling my lifelong dream. ... I put on a positive face took on a positive attitude and even began mediating so I could learn how to talk my embryos into sticking to me. I might add at this point my (partner) thought I had lost my mind. I would take scented baths and sit and meditate and actually visualize my embryos making their way to my uterus and sticking to the uterine wall. ... I guess my positive attitude and meditation helped my second IVF fulfilled our dreams. ... It was the most magical day of our lives." (Toscano & Montgomery, 2009, p. 1026)	Benasutti (2003), Su and Chen (2006), Porter and Bhattacharya (2008), Lee et al. (2009), Toscano and Montgomery (2009), Peters et al. (2011), Roudsari and Allan (2011)
	Proactiveness	"I have already taken into account that if it does not succeed I will try everything surely until I am 40 years old." (Cipolletta & Faccio, 2013, p. 290)	Bhatti et al. (1999), Benasutti (2003), Peters (2003), Dyer et al. (2004), Mogobe (2005), Peddie et al. (2005), Porter and Bhattacharya (2008), Bell (2009), Lee et al. (2009), Toscano and Montgomery (2009), Cipolletta and Faccio (2013), Batool and Visser (2015)
	Acceptance	"I was ready to give up. I said 'Bruce I think we should get a divorce. I don't think I can give you a child. It's hard for me to give you a child. It seems like I can't conceive so maybe it's best that we get a divorce and you marry another woman that can give you children. I'm not capable of doing it. I'm willing to go through life without children.'" (Benasutti, 2003, p. 64)	Davis and Dearman (1991), Bhatti et al. (1999), Benasutti (2003), Dyer et al. (2004), Guntupalli and Chenchelgudem (2004), Mogobe (2005), Porter and Bhattacharya (2008), Bell (2009), Lee et al. (2009), Toscano and Montgomery (2009), Roudsari and Allan (2011), Cunningham and Cunningham (2013), Batool and Visser (2015), Chen and Landau (2015)
	Emotional strategies	"(...) Crying and crying and crying days and days it's horrible (...) It's horrible! (...) It's like to die more a part of me is something that goes away it's a part of me that goes away it's my dream fading it's horrible." (Silva et al., 2012, p. 186)	Davis and Dearman (1991), Bhatti et al. (1999), Apfel and Keylor (2002), Dyer et al. (2002), Benasutti (2003), Dyer et al. (2004), Mogobe (2005), Peddie et al. (2005), McCarthy (2008), Porter and Bhattacharya (2008), Bell (2009), Lee et al. (2009), Toscano and Montgomery (2009), Peters et al. (2011), Roudsari and Allan (2011), Silva et al. (2012), Behboodi-Moghadam et al. (2013), Cipolletta and Faccio (2013), Cunningham and Cunningham (2013), Batool and Visser (2015), Chen and Landau (2015)
	Religious strategies	"I had always been a Christian but this was the first time I had ever just turned everything over to God. I asked him to just close one door for me if he didn't want me to pursue IVF. If he closed just one door I would stop but he didn't... It was the most glorious thing in the world. Everything we went through every tear I cried was all worth it because we were blessed with a miracle from God!! Our boy is truly a precious gift!! Don't give up your dreams they can come true!!!" (Toscano & Montgomery, 2009, p. 1025)	Davis and Dearman (1991), Bhatti et al. (1999), Seybold (2002), Benasutti (2003), Guntupalli and Chenchelgudem (2004), Mogobe (2005), McCarthy (2008), Toscano and Montgomery (2009), Roudsari and Allan (2011), Silva et al. (2012), Mosalanejad et al. (2014), Batool and Visser (2015), Chen and Landau (2015)



et al., 2005). The waiting that precedes treatment results is a period of great anxiety and expectation followed in most cases by disappointment due to an unsuccessful pregnancy. This psychological roller coaster has been early described (Dyer, 2010; McQuillan et al., 2007; Oddens et al., 1999) and was in line with the emotions and feelings reported in this review, for instance pain (Behboodi-Moghadam et al., 2013; Benasutti, 2003; Chen & Landau, 2015; Davis & Dearman, 1991; Lee et al., 2009; Mogobe, 2005; Su & Chen, 2006; Toscano & Montgomery, 2009), stress (Benasutti, 2003; Mosalanejad et al., 2014; Peddie et al., 2005; Su & Chen, 2006; Toscano & Montgomery, 2009) and anxiety (Batool & Visser, 2015; Chen & Landau, 2015; Cipolletta & Faccio, 2013; Lee et al., 2009; Toscano & Montgomery, 2009). Similar to cancer patients (Ferrel, Taylor, Sattler, Fowler, & Cheyney, 1993), pain in involuntarily childlessness is associated with the acknowledgement of a disease capable of triggering one's sense of loss, loss of control and helplessness (Cunningham & Cunningham, 2013; Davis & Dearman, 1991; Toscano & Montgomery, 2009). Immediate effects were not only manifested physically but also in self-identity (Batool & Visser, 2015; Behboodi-Moghadam et al., 2013; Benasutti, 2003; Cunningham & Cunningham, 2013; Dyer et al., 2002, 2004; Lee et al., 2009; Mogobe, 2005; Mosalanejad et al., 2014; Peddie et al., 2005; Silva et al., 2012; Su & Chen, 2006; Toscano & Montgomery, 2009). The intensive physical, emotional and spiritual endurance is such that awakens a sense of powerlessness. Early literature addresses the connection of pain with perceived illness and spiritual well-being helping to understand why in some cases individuals decided to cease fertility care to regain control over their life (Ferrel et al., 1993).

Spiritual distress and spiritual needs have been reported as a fading away with time and remain until after the birth of a child or in times of making the decision to end the treatment (Bell, 2009; Lee et al., 2009; McCarthy, 2008; Peddie et al., 2005; Su & Chen, 2006; Toscano & Montgomery, 2009). Physical timing did not seem to correspond with spiritual readiness. The biological and ideal age to conceive did not match the timeframes established by couples to reach their parental goal (Chen & Landau, 2015; Cunningham & Cunningham, 2013; Toscano & Montgomery, 2009). This contradictory outcome was also mentioned by other scholars (Locke & Budds, 2013). Although some women reported being ready to become a mother as soon as they got married, reproductive conditioning was a barrier (Dyer et al., 2004). In addition, it is known that delayed motherhood and advanced age decrease fertility along with the ability to naturally conceive (Dunson, Baird, & Colombo, 2004). The loss of the ability to plan the future induced participants' resentment towards the self in addition to a sense of failure (Batool & Visser, 2015; Behboodi-Moghadam et al., 2013; Benasutti, 2003; Cunningham & Cunningham, 2013; Dyer et al., 2002; Dyer et al., 2004; Lee et al., 2009; Mogobe, 2005; Mosalanejad et al., 2014; Peddie et al., 2005; Silva et al., 2012; Su & Chen, 2006; Toscano & Montgomery, 2009). Grief was perceived over the loss of the hope for child and all the related experiences of pregnancy, labour and parenting (Apfel & Keylor, 2002; McCarthy, 2008; Toscano & Montgomery, 2009). This was

described as a traumatic process (Peddie et al., 2005), and infertile women expressed the need to be spiritually supported.

Transformative spiritual learning is proven to be triggered by adversity but with different implications when compared to fertile couples (Klobucar, 2016). These assumptions are also presented in this review as individuals' self-references were necessarily transformed, inducing them to reframe their self-existence. Coping strategies to overcome this vulnerable phase were described as the search for Western medicine or traditional practices (Bhatti et al., 1999; Dyer et al., 2004; Lee et al., 2009; Mogobe, 2005; Peters, 2003; Porter & Bhat-tacharya, 2008). Also alternative strategies of fulfilling parenthood, such as adoption, taking care of others or remaining childless were found (Batool & Visser, 2015; Bell, 2009; Benasutti, 2003; Bhatti et al., 1999; Lee et al., 2009; Mogobe, 2005; Peddie et al., 2005; Toscano & Montgomery, 2009). The identified need for inner meaning was intrinsic to the couple's relationship despite the outcomes of the infertility experience, as every human being needs to find meaning in life that may guide the sense of self-existence (Park, 2016).

Connectedness as a spiritual attribute (Weathers et al., 2016) was closely related to a sense of failure by carrying infertility or postponing motherhood (Chen & Landau, 2015; Cunningham & Cunningham, 2013; Toscano & Montgomery, 2009). Partners often remain the main support to each other (Greil et al., 2010). The closeness felt between partners helped to deal with and adjust to the diagnosis and treatments (Batool & Visser, 2015; Benasutti, 2003; Bhatti et al., 1999; Davis & Dearman, 1991; Dyer et al., 2002; Dyer et al., 2004; Lee et al., 2009; Peters et al., 2011; Toscano & Montgomery, 2009), as adverse events have proven not to transform or redefine but to enhance the marital relationship that already existed (Greil et al., 2010). Furthermore, current results suggest that if a partnership was already vulnerable involuntarily, childlessness mixed with cultural influences may quickly induce individual affairs, polygamy or divorce (Behboodi-Moghadam et al., 2013; Benasutti, 2003; Bhatti et al., 1999; Chen & Landau, 2015; Dyer et al., 2002; Dyer et al., 2004; Guntupalli & Chenchelgudem, 2004). These findings contribute to the existing evidence that associates intimate partner violence with infertility and subfertility in low- and middle-income countries (Stellar, Garcia-Moreno, Temmerman, & Poel, 2015). However, although domestic violence emerged from women in the included studies, it was not always acknowledged (Behboodi-Moghadam et al., 2013; Bhatti et al., 1999; Dyer et al., 2002). Emotional and physical abuse from the partner and extended family (Batool & Visser, 2015; Behboodi-Moghadam et al., 2013; Chen & Landau, 2015; Dyer et al., 2002; Dyer et al., 2004; Guntupalli & Chenchelgudem, 2004; Toscano & Montgomery, 2009) made women spiritually vulnerable without the support, the love and the harmonious relationships they needed to achieve a state of spiritual well-being (Mahajan et al., 2009). Furthermore, the social displacement and self-disconnection from family, friends and other pregnant couples led to isolation (Batool & Visser, 2015; Behboodi-Moghadam et al., 2013; Bhatti et al., 1999; Davis & Dearman, 1991; Dyer et al., 2002; Peddie et al., 2005; Peters, 2003; Peters et al., 2011; Toscano & Montgomery, 2009).

A close relationship between dissatisfaction with the infertility care provided and the healthcare professionals' lack of assessment of spiritual needs was recognised and perpetuated in defective interventions (Lee et al., 2009; McCarthy, 2008; Mogobe, 2005; Mosalanejad et al., 2014; Roudsari & Allan, 2011). This concurs with the previous described gap in patient-centred care in infertility services (van Empel et al., 2010). The need to be understood (Davis & Dearman, 1991) and supported (Silva et al., 2012) was well documented, in this review, in all phases of involuntary childlessness, from the diagnosis, through treatment and beyond (Cunningham & Cunningham, 2013). Even though formal counselling based on emotional and psychological assessment was determined by healthcare professionals, spiritual and religious support was most valued by infertile couples (Roudsari & Allan, 2011) and a core finding in this study.

The transcendence from suffering to a state of satisfaction and spiritual well-being reflected the effective use of coping strategies. Overcoming spiritual distress was often achieved by a positive approach, proactiveness, acceptance, emotional strategies and religious strategies, which are core strategies of coping. For example, prayer was considered a religious practice closely related to spirituality that exercised a positive influence on individuals' health and well-being (Simão, Caldeira, & Carvalho, 2016). Moreover, in this study, prayer was reported in the narratives of the participants and is considered an important aid in the adjustment to being childless, to regaining hope and feeling empowered by connecting with a higher power (Batool & Visser, 2015; Benasutti, 2003; Mogobe, 2005; Mosalanejad et al., 2014; Roudsari & Allan, 2011; Toscano & Montgomery, 2009).

## 5 | CONCLUSION

Spirituality and spiritual needs are clearly manifested by many individuals experiencing involuntarily childlessness, although not always recognised. This synthesis highlights its contribution to the understanding of this phenomenon by identifying expressions of spiritual needs and spirituality as a coping strategy in the circumstance of living with infertility. The analysis provided a clear connection between infertility and spirituality, but specific data were still found to be limited.

Some innovative outcomes have been identified in this synthesis, but considering some limitations, caution is needed when making conclusions. First, the small number of interviewees, the differences in age and marital status and the inclusion of different qualitative study designs in this synthesis may compromise the transferability of the findings. In addition, using fertility clinics' assessments to select participants was also recognised in previous studies as a possible bias due to the fact that this population might only be composed of individuals with financial resources to access these facilities. Also, the large number of studies included women and few included couples or men. Those results are not surprising and reaffirm frequent concerns towards the feminine gender experience. Although in general terms women seemed to endure more when compared to men,

it is suggested that both genders are equally affected, in psychological and social dimensions. Despite knowing that these individuals are living a long journey, only one study was based on a longitudinal approach, and these findings underline the remaining gap of how this experience evolves through time.

## 6 | RELEVANCE TO CLINICAL PRACTICE

Despite the limitations, these findings constitute a valuable contribution in understanding the experience of those living with infertility in a broader and holistic sense. A longitudinal approach of this dimension would enable new insight towards the progression of the spiritual journey in couples facing this adverse event. Exploration of the way in which each gender evolves and transcends suffering could also be interesting for the development of the knowledge about this phenomenon.

It is acknowledged that there is a lack of empirical studies in literature that analyse infertility through a spiritual perspective and this gap could be transformed in an opportunity to improve research and to provide evidence-based practice and patient-centred care in nursing and midwifery education and training aimed at the development of effective holistic approaches in a fertility care context, strictly related to the meaning of life.

## CONTRIBUTIONS

Study design: JR, SC, VB; data collection and analysis: JR, SC, VB and manuscript preparation: JR, SC, VB, FT, JH.

## CONFLICT OF INTEREST

None to declare.

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