religions

MDPI

Article

The spiritual journey of infertile couples: discussing the opportunity for spiritual care

Joana Romeiro[1], Sílvia Caldeira[1,*], Vivienne Brady[2], Jenny Hall[3], and Fiona Timmins[4]

[1] Universidade Católica Portuguesa, Instituto de Ciências da Saúde, Lisboa, Portugal; E-mail: joana.m.romeiro@gmail.com
[2] School of Nursing and Midwifery, Trinity College Dublin, Ireland. E-mail: bradyvi@tcd.ie
[3] Centre of Midwifery, Maternal and Perinatal Health and Faculty of Health and Social Sciences, Bournemouth University, UK. E-mail: jhall1@bournemouth.ac.uk
[4] School of Nursing and Midwifery, Trinity College Dublin, Ireland. E-mail: timminsf@tcd.ie

* Correspondence: scaldeira@ics.lisboa.ucp.pt ; Tel.: +351-217214147

Academic Editor: name
Received: date; Accepted: date; Published: date

Abstract: Infertility is a worldwide public health issue that exerts an in-depth impact on the individual, couple, families and communities. This reproductive health condition, along with fertility treatments, often forces couples to question and to find a new purpose and meaning in life, and to begin a spiritual journey. Nursing and midwifery literature comprises the care of those living with infertility, but often lacks a clear approach of the spiritual dimension, and diagnosis and interventions may not be effectively addressed. In this paper, we present a discussion about spirituality and the assessment of spiritual needs, such as hope, beliefs, meaning and satisfaction in life. In addition, spiritual needs are defined, for both nurses and midwives, and spiritual interventions are proposed in promoting couples' resilience and spiritual well-being. Spirituality should be considered from the beginning to the end of life. It is necessary to translate this into the development and implementation of specific policies regarding a spiritual approach, and also advanced education and training programs for nurses and midwives who care for infertile couples.

Keywords: infertility; spirituality; spiritual care; nursing; midwifery.

1. Introduction

Infertility is a health problem that affects couples worldwide, regardless of their ethnicity, society, culture or economic status [1–3]. The complex definition varies across disciplines [4], but is mainly described as a condition manifested through the inability to conceive and to achieve a successful clinical pregnancy after 12 months of regular and unprotected sexual intercourse [5]. Yet, this generally accepted time frame is reduced to 6 months when individuals are over 35 years old [4,6]. A primary and a secondary form of manifestation are recognised. Primary infertility happens when there is the inability to achieve conception and to have a successful live birth without ever having a child [7]. On the other hand, secondary infertility is the inability to achieve conception and have a successful live birth when individuals have already had a previous biological child [7]. This reproductive condition is silently experienced with deep and undeniable repercussions in the essence of self, whether a man or a woman [8,9]. Moreover, being involuntarily childless can defy the sense of one's completeness and wholeness due to the unfulfilled wish of parenthood [10–19]. Although infertility is identified, at first, as a physical problem, it is a broad and holistic experience commonly associated with psychological, emotional and spiritual distress [15,20–23]. Being diagnosed with infertility and receiving fertility treatment may induce an additional strain, not only

in marital relationships, but also in the societal roles individuals play [24]. Similar to other health conditions, such as chronic illness [25–27], infertility is often described as a disease that can affect the sense of well-being and life satisfaction [28]. As a result, a spiritual crisis may arise leading couples to question their meaning and purpose in life [21,29]. Nevertheless, focus has remained on the physiological and psychosocial aspects of involuntarily childlessness diagnosis and treatment [9,24,29] rather than on the spiritual dimension of living with this condition [21]. Spirituality is often described as a poorly explored dimension in nursing and midwifery practice [21], but attempts have been made to overcome some barriers [30]. The significance of this life transition within a paradigm of patient centeredness care reinforces the need for discussing the spiritual journey of infertile couples [19,31]. This paper discusses the opportunities for nurses and midwives in providing an effective holistic care based on relevant literature.

2. Living with Infertility

The complex nature of infertility is deeply experienced by most couples [32]. It´s multi-systemic impact affects the environmental and personal realms of each individual and for some this can manifest as an extreme and traumatic event [32-33], in which couples may face questions concerning the purpose and meaning of life [13]. Additionally, a person's perception of adulthood is closely related to their social and cultural background, based on several expectations. Couples are mainly expected to have children, take care of them and to preserve the bloodline inheritance [10]. This is a societal expectation in many countries, and though there is ultimately more choice and diversity in modern society, not being able to live up to perceived expectations or norms can affect the couple psychologically and make them feel inadequate. Preconceptions related to becoming a father present men with the implicit duty to generate a biological child in order to perpetuate the genetic heritage [8,34]. Men and women´s life satisfaction are, therefore, conditioned since early age by the ability to fulfill the expected role of parenthood [14,18-19].

Being a mother has not only an implicit connotation within society but is also associated to the belief in the sacred nature of motherhood [11,18]. Motherhood has been defined as a transcendental state [17,37]. The transitional process to maternity is reached through conceiving, carrying a pregnancy and giving birth, and this is compared to an expected spiritual journey [10,17]. A review over 20 years of cross-cultural phenomenological research found childbearing has the ultimate achievement of a holistic existence [17]. Pregnancy and labor are considered significant rites of passage capable of inducing a meaning and a spiritual transformation, regardless of whether women are committed or not to a religious belief [17,38].

Some infertile women have manifested craving not only for the purpose of childbearing and its implicit self-growth, but also being able to connect to other women [16,39]. Sharing similar experience of birth seems a way to perceive the wholeness of the events, and to develop a new meaning to what women have similarly experienced in their transition to motherhood [40]. The inability of going through this expected transitional process has lead authors to describe? infertility as a "non-event transition" [27] and an existential crisis [36].

Although both genders are affected by this reproductive health condition, evidence reveals that the focus on women is more evident when compared to men [41]. Nevertheless, sparse research has acknowledged the equal significance of this phenomenon to men [8,14,24,34]. Not being able to follow the natural course of conceiving leads to disconnection with self-identity and a diminished sense of self, which is manifested by depreciative descriptions of being dysfunctional [10], defective [37], sterile [37], helpless [37], impotent [18], incomplete [10], incapable [18], less of a woman [16], not a woman [11], half a man [14], low self-esteem [16,33], useless [10-11,13,18] , ugly [10], not pretty [42] and a failure [15,19,43]. Self-guilt in some cases is expressed in association with delayed motherhood, particularly in cases of advanced maternal age and when career accomplishments have occurred before trying to conceive [19,37,44].

Going through the process of an infertility diagnosis often means needing Assisted Reproductive Technologies [ART] as a therapeutic strategy to have a biological child [45]. Women generally assume the main role in engaging with fertility treatment and care [12,14] however a negotiation also has to be made with the partner and in some cultures with the extended family in order to be able to access professional health assistance and treatment [16]. Men take on generally a more passive role in any related medical treatments and in the decision-making process [15,19]. This behaviour may not be always appreciated by the woman concerned [12,14,37].

Involuntarily childlessness may dominate the couple's lives to such an extent that it leads them to delay other personal projects over fertility treatments [15,19,33]. Individuals are forced to break routines and to face several changes in a turmoil of emotions [37,46] and in induced psychological distress [24]. Nevertheless, it is important to put their own emotional responses aside in order to endure critical drug administration, hormonal level checks [19,47], and invasive procedures with recognised physical effects [12,15,19,26,37,42,44,47-48]. The treatments are hard [10,15,18-19,37,44] and characterized by contradictory feelings of hope and despair [12,33,48-49]. Hope arises every time a new treatment starts or with the positive result of a pregnancy test, but is replaced by grief and mourning with failed procedures or miscarriage [22,37,50]. A sense of loss of control over medical procedures, rigorous routines, and failed pregnancy attempts appear to go against all the achievements couples had so long struggled to attain in their lives [19,46]. Spiritual suffering is therefore triggered and constantly manifested through a mix of emotions most commonly recognised as pain [11,15-16,37,42–44,46], stress [33,37,42-43,48], anxiety [10,15,37,44,49], hurt [12,14,16,37,43], upset [10,19,37,46,51], frustration [37,43,48,52], anger [14,22,33,51], depression [33,37,42,48], emptiness [10,14,22], fear [11,44,48], giving up [15,22,43], isolation [33,42,47], loneliness [11,46,52], being lost [11,22,37], sadness [19,33,44], and being scared [16,37,42].

Financial and economic constraints emerge due to the expensive charges of unsuccessful treatment cycles and to an intensive pursuit of parenthood at all cost [49,52]. The couple's commitment to this common goal usually makes couples more supportive of each other [10,12–15,37,42,46,51]. However sexual intercourse may be considered more as a task other than a natural interaction [12,42,46]. A couple's relationship is not always reinforced and reassured, and in some situations has lead to manifestations of domestic abuse towards women [11–13], affairs by both genders [13,14,53] and divorce [11–14,42,44,53].

In extreme cases extended family may voice depreciative judgments, insults and aggressive behavior targeting infertile women [10-11,13,14,37,44,53] leading to the exclusion from social gatherings [11] or a self-withdrawal from these [12,37,46,51]. Infertile couples have often reported as not being able to match expectations or to be fully understood by others [10,12,13,15,42,44,46,47]. Connection to friends therefore becomes more sparse or absent [13,33,47]. In addition, contact with pregnant women and children are perceived by these couples as a proof of others' fertility and the recall of one's own inability to conceive [10,12,51]. This situation may lead to social interaction barriers and to isolation [14].

When pregnancy is finally reached, couples cautiously celebrate [37]. Nevertheless, the fear of something going wrong is still deep-rooted and can prevent men and women from recognising themselves as parents and engaging in normal preparation for their child's arrival [37]. With successful parenthood comes constant anxiety related to the remaining time to take care and to watch over the growth of their child [44].

In many cases, couples' resilience is triggered by the infertility experience that is lived as an opportunity for inner transformation and positive spiritual growth [14,15,42,46,51]. After a long time in medical procedures with no child, the burden of treatment leads couples to cease their unfruitful quest and to reach other forms of fulfilling their lives [54]. Focusing in their relationship, career, educational projects [15,16,51] or other possibilities such as adoption [10,12,15-16,33,37,42,52] or activities that provide close contact with children [12,52] were seen as realistic goals [51] and acknowledged by some as new purposes in life.

2.1. Epidemiological aspects of infertility

Infertility is both an intimate reproductive health condition and a worldwide growing health problem [3]. In 2010, a total of 48,5 million couples around the globe were dealing with this health problem [3], and researchers believe that these numbers do not totally address the extent of its prevalence due to different definitions across disciplines [4]. Inaccurate data has also been associated with the fact that not all individuals with this health concern perceive themselves as infertile, and this may compromise the full assessment [3,24]. Moreover, constraints related to the sensitive nature of this phenomenon might compromise couples' infertility reports [3]. Despite that, this is acknowledged as a public health priority [1].

Findings from a World Health Organization [WHO] study conducted in a diversified social and cultural sample of 190 countries revealed that 1.9% women experienced primary infertility while 10.5% reported to manifest a secondary type of reproductive health condition [3]. This resulted in 19.2 million couples not being able to have a first-born and 29.3 million couples unable to have another child [3].

Several environmental, occupational, genetic and infectious diseases have been identified as the causes of impaired reproduction [1]. Both genders are affected in 40% but the most common reasons for reproductive issues are related to gynecologic and other conditions, such as ovulatory disorders [25%], fallopian tubal damage [20%], and uterine or peritoneal abnormalities [10%]. Also, in 30% of cases of infertility, causes are unknown [55]. This health condition is not only related to physical impairment, but also results from current societal trends [24]. For instance, child-seeking behaviour was reported to have decreased between 1990 and 2010 [3]. Additionally, the need to reach economic stability, financial independency, a career, and educational goals lead men and women to delay conception [19,37,44]. All those factors are reflected in the increasing age of people that get married [56] and in the delay in having the first child, which occurs between 25 and 49 years [3]. The advanced age of couples engaging parenthood is an important aspect in fertility, as it is related to the decreasing physical ability of having a child [57]. Concerns towards the unknown future of the world's next generation are raised not only because of the aging population, but also due to the rapid decrease in fertility rates [58], with an estimated reduction of children per women in the years to come [58].

2.2. Nursing and midwifery in this specific context of care

Scientific advances in recent years lead to the development of a variety of health services in addressing infertility as a global problem, and in helping couples to achieve their fullest reproductive health potential [45]. An urge to conceive lead to the demand not only for medical and surgical treatments, but also for advanced reproduction techniques. Regardless of the growing success of these methods of conceiving, a positive outcome is not guaranteed in all cases, resulting in the pursuit of recurrent treatment cycles [45]. These procedures are regulated by specific reproductive protocols and policies in each country [39]. But, in 2007, the United Nations implemented protective measures for women´s reproductive health [59]. Infertility care was therefore included in the Fifth Millenium Development Goal, which was far from being fully accomplished in 2015. The need to improve sexual and reproductive health inequities remaines [60]. The development of such programs generated the need for an integrated interdisciplinary approach in the fertility care setting. Examples are found in the guidelines released by the National Institute for Health and Care Excellence [55].

Studies conducted with samples of infertile people have commonly focused on the bio-psycho-social and cultural dimensions of living with this health condition [29,32,50,61–64]. Although sparse, nursing and midwifery literature addressing impaired reproduction is growing, revealing an increasing attention towards care provision, specifically in the ART settings. Advances have been achieved through protocols that are specifically designed to address psychosocial needs [65]. Recently, a positive relationship was found between the psychological status, the couple's relationship, the child-carrying rates, and psychosocial nursing interventions [64]. Scholars attention seems to keep focusing the emotional dimension of this unanticipated life and health event [66,67],

even comprising multicultural samples and socio-economic diversified environments, in both qualitative and quantitative research [24].

A person centered approach has been underlined as playing a determinant role in the implementation of policies which comprise an holistic approach, as those including spiritual needs [19,21,31,55]. Even with evidence of spiritual needs, such as hope [43] and meaning and satisfaction in life [28], a consistent and clear spiritual approach is missing in the infertility care context [21,68]. Previous studies reported that women engaging in religious practices have a coping mechanism in transcending spiritual distress [69]. These findings reveal the current trend to address spirituality through the lens of religion and religiosity [21,35], but other attributes of spirituality should be taken into account, such as connectedness, transcendence and meaning in life [70]. Spiritual needs are known to be influenced by social and cultural aspects, and to be determined by family values, which might influence the choices of treatment [35]. Yet, disturbed connectedness to self, to others (to husband or wife, relatives, friends and healthcare professionals), and to a higher power are commonly described in infertile people [24]. Early studies have concluded that nurses and midwives should receive specific training regarding spiritual assessment and interventions [71], to support couples through all stages of the journey of living with infertility, from the diagnosis to the treatments, and beyond [35,43,54]. In fact, spiritual distress may occur in infertile couples [21], and this is a nursing diagnosis listed in NANDA International, since 1978 [72], and no validation was found in infertile couples, but was, for example, in cancer patients [73]. When nurses and midwives diagnose they are confirming their autonomy in clinical reasoning, which pervades the assessment, the planning and the interventions, based on a person-centered paradigm. Infertility is a specific, vulnerable condition and has a specific context of care, which requires a particular approach, such as that of the Patient Centered Infertility Care (PCIC) [19]. This is a specific relational model based on provision of holistic and supportive care capable of connecting all intervening actors (patient, couples, family, and health care professionals) and environments or contexts (fertility clinic´s organization, protocols, policies , communities and countries) to help each in the transition to healing and perceiving well-being [19].

3. The imperative of a holistic and multidisciplinary approach

An attempt has been made to understand the wholeness of the couple in this context, but the physical, emotional, psychological, social and spiritual dimensions have been often addressed individually. Researchers have mainly focused on the psychological and social aspects of the lived experience of infertility [24,29,74]. The perception about this reproductive issue is affected by both interpersonal and intrapersonal factors [36], and several studies have been conducted in an attempt to define a pattern of human response towards infertility. Examples are found in the established relationship between a positive adjustment to infertility and age, high socioeconomic and educational status, positive self-esteem and internal locus of control and the relationship between distress and advanced age and low self-esteem [27]. Only sparse evidence has lifted the veil and uncovered the presence of a spiritual realm in individuals living with this reproductive condition [20-21]. Being a religious woman and having a supportive family was associated with positive coping and with finding meaning in infertile women [36]. A full understanding of the phenomenon, as lived by the couple, would not be possible without a holistic view of the interconnection between body, mind, soul and spirit [75]. In contrast to the biomedical model, each person is perceived to own specific needs and capable of affecting and being affected by the environment, in a particular and individual way [75]. These assumptions based on Florence Nightingale´s standards are fundamentals of the nursing and health care [76]. The ground for holistic nursing care [75] has been established and endorsed by organizations, such as the American Holistic Nurses Association (AHNA) [77]. All commonly embrace a person´s health as a dynamic process and as a result of the relationship between the individual and the environment, between the subjective and the objective aspects of the life experience [76]. Individuals are seen in their own contextualized life [75] and in a

constant balance with internal and external factors [76]. A disruption in the balanced interaction of all dimensions may compromise the individual´s ability to adapt and to deal with life's stressors [75]. Disturbance in the sense of well-being may arise and induce a change on health status towards illness [78]. Complex interactions between all of those realms determine the individual meaning, well-being and quality of life [75]. This seems to go along with the WHO´s established health concept as a state of well-being (physical, mental and social) and not merely the reductionist absence of disease or infirmity [79]. Additionally, empirical evidence have demonstrated that the individual´s perception of infertility is influenced by the meaning each individual attributes to that reproductive health condition [24]. A state of well-being is therefore defied when the expected and desired goal of parenthood is compromised by the diagnosis of infertility [28,36]. The subjection to painful procedures, the lack of control over treatment outcomes, the social pressure from partners, friends, family and community, are described as stressors which may be manifested in mental health conditions such as depression [62,80]. Emphasis is therefore placed on an integrated approach [76] provided by holistic nursing or midwifery care, based not only in a scientific knowledge-based, but also in a sensitive and intuitive therapeutic relationship [81]. Thus, seems important the practice of conventional and complementary therapies in a collaborative effort to provide multi-systemic and multidimensional care capable of regaining and maintaining health and preventing illness [75,76,78]. A fragmented approach to caring for couples who present with fertility concerns/challenges? is evident in the literature along with the need to invest in a holistic health approach [38]. The answer to complexity is only possible and continuously reaffirmed by close collaboration among different disciplines [78], as well as an integrated and interdisciplinary approach between all members of the health care team [75,78]. The WHO [82] and The Lancet Commissions report [83] provide useful guidelines for interprofessional education as a path to collaborative practice and to reach the transdisciplinary health approach.

3.1.Moving beyond emotional aspects and understanding the spiritual dimension

Scholars' concerns towards spirituality are mainly associated with holistic understanding of the human being [84]. Studies have broadly addressed spirituality in settings of persons living in different phases of the lifespan, such as childhood [85], adolescence [86] and adulthood [87-88], with focus on specific situations of extreme vulnerability, such as chronic illness [73,85,87], intensive and palliative care [88–90]. Extreme life events and death experiences are commonly found not only in nursing, but also in midwifery literature. Religious practices frequently emerge in neonatal intensive care units with the awakening of not only an individual´s emotional response but also a spiritual response [90]. Nevertheless an increasing body of evidence has raised interest in transitional events like child-bearing, child-birth or parenthood experiences [38,40,91]. Those could be seen has reminders that spirituality should be considered from the beginning to the end of life. Grieving, spiritual self-growth, self-awareness, redefinition of self-identity and meaning emerges in every life transition, such as in illness or in a life crisis.

Spirituality has a complex and multidimensional nature [70] and is considered to be a human dimension, innate to existence [84,92], and difficult to strictly define. Spirituality is "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" [70]. Connectedness, transcendence and meaning in life were therefore identified as the main attributes of spirituality, regardless a religious affiliation [70]. The need to apprehend the subjective nature of this concept led researchers to develop instruments of measurement in specific populations and settings [92].

Although recognised by several authors as an essential dimension in life and health, the WHO´s definition of health still lacks a full approach of spirituality [93]. This gap seems to be related to the biomedical model and the poor development and implementation of policies towards effective holistic care [93]. Spiritual well-being is considered by many as the missing fourth dimension of health [94]. The way in which the dynamic relationship between personal (self), communal (with

others), environmental and transcendental domains occur is reflected in one´s spiritual health and spiritual well-being [92]. Emphasis in emotional status and psychological well-being has buried spiritual well-being under the cognitive approach of the mind instead of an in-depth understanding of the spirit [92]. Findings have proven that defective or absent harmonious relationships between self, others, environment or higher power compromises the wholeness of one´s spirit [84,92], and impacts one´s psychological health [95].

Similar to biological needs, hope, forgiveness, justice, love, creativity, peace, joy, trust, identity, self-worth, adoration, harmonious relationships, meaning, purpose in life and religious practices are expressions of spiritual needs [92]. Not meeting those spiritual needs can create a spiritual instability and induce spiritual distress defined as "a state of suffering related to the impaired ability to experience meaning in life through connectedness with self, others, world or a Superior Being" [89]. Therefore, the lack of a fundamental need such as meaning and purpose in life as perceived by infertile people may induce spiritual distress in this population[15,18,20,22,37,42,46]. If not resilient or capable of effectively coping with this adversity, then self-healing may be compromised and suffering may be manifested through isolation [10–13,33,37,46,47,51], low-self-esteem [16,33], anxiety [10,15,37,44,49] and depression [33,37,42,48]. Those with infertility have also reported using rituals like prayer [10,16,20,37,42,48], meditation [37], attending church, sanctuaries and shrines [16,46,48], in a spiritual path to transcend suffering and strengthen their hope in their parenthood pursuit. Religious practices are commonly addressed as a way for couples to find meaning in life and to prevent hopeless [15,37]. But these are not the only spiritual resources they use. Other non-religious coping strategies are described to help individuals regain some kind of spiritual comfort [20] through becoming persistent and resilient [15] in facing failure and focusing on the positive outcomes of this adverse event [22].

Developments made towards the linkage of healing, health and illness with spirituality are still far from full understanding [70,92]. Many links keep unknown and several proposals for further research are still emerging from current literature [93]. People dealing with infertility are still lacking a spiritual and integrative health approach [21,68].

3.2. Opportunities to provide spiritual care

Spirituality is considered an essential aspect of providing holistic and person centered care [81]. A person centered approach, promotion of self-awareness and empowerment of each person are advocated principles in assessing and caring for the human being [75-76,78]. Despite that, diagnosis and interventions are not effectively addressed, and depreciative reports of infertile individuals towards fertility services and health staff are commonly expressed [68]. An alarming absence of connectedness with health professionals is reported, and the interactions are often described as distant, dehumanized and lacking sensitivity [10,12,19,33,37,42,47,96]. Professionals' concerns towards the biological causes of infertility and its cure makes them focus on the physical condition and treatment procedures rather than on the wholeness of the infertile person or couple [19,42,47]. Consequently, a sense of mistrust and humiliation is described by patients along with the sense of their emotional, psychological and spiritual needs being actively neglected [42]. Communication [19,33], information [19,33,46,52,96], promotion of realistic hope [33,47], accessibility of care [16,19,33,96], support [18-19,33,42,47], and empowerment [33,47,96] were identified as areas in need for further improvement. These aspects are crucial in the relationship established between staff and patients, and are affecting future interactions between people living with infertility and health caregivers and the decision-making process. Distant interactions and defective communication associated with the exhaustive treatment procedures have been pointed as one of the main reasons to quit fertility treatment [54].

Nurses and midwives have been identified as having a main role in all In Vitro Fertilization [IVF] processes [19,33]. In some cases, their intervention is negatively perceived and linked with the enhancement of patient´s sense of lost control [37,47], and in reinforcing the passive role of individuals in the decision-making process [47,52]. Unappreciated comments and information

352 denials made infertile patients conscious of the poor availability of the team to answer to their
353 specific needs [42,52,96]. Unrealistic hope nurtured by the health care team is seen as unfruitful, as
354 the high expectations are normally shattered after a few attempts without positive conception results
355 [47].

356 Professionals' unawareness of the spiritual needs assessment, and the lack of organizational
357 environment conditions to provide spiritual care have induced lower levels of satisfaction in fertility
358 services [20]. The inability to cope with all involved, the clinical and the treatment procedures, lead
359 to burden and, consequently, to treatment withdrawals [54]. The high rates of burden in this
360 population may therefore reflect the existing gap in the provision of effective holistic care [20].
361 Mandatory interventions towards promoting hope and resilience are essential to empower and help
362 infertile individuals in achieving well-being [20]. Nurturing care, capable of transcending the
363 physical reality is grounded in the nursing spiritual care principles of a "healing presence,
364 therapeutic use of self, intuitive sense, exploration of the spiritual perspective, patient-centeredness,
365 meaning-centered therapeutic intervention and creation of a spiritual nursing environment" [91]. A
366 sensitive approach to care comprises the respect for values and beliefs regardless of a religious
367 affiliation [20]. Though workload [20] and lack of training to deal with patient´s spiritual issues [68]
368 emerge in nursing and midwifery disciplines as barriers in bringing this dimension into practice
369 [30]. Nevertheless, efforts have been made to perceive this context of living with infertility as an
370 opportunity to provide spiritual care [20]. Advanced education and improving communication skills
371 to adequately assess distress have been reported as emergent in the provision of accurate
372 information to infertile couples and in enhancing empowerment in the decision-making regarding
373 fertility treatments [54].

374 A holistic approach to the care of infertile couples may be effective when a thorough assessment
375 of their physical, emotional, psychological, cultural, social and spiritual needs is implemented and
376 when interventions are taken towards experiences in and beyond the fertility clinic. Nurses and
377 midwives must be prepared, aware, present and supportive in keeping hope, healing, spiritual
378 well-being, psychological adaptation, life satisfaction and a state of well-being [35,81], within a
379 multidisciplinary healthcare team. Equally essential is to be respectful of each human singularity as
380 well as their personal values, religion and beliefs [20], in the context of living with infertility.

381 **4. Conclusions**

382 Dealing closely with situations of chronic illness and death experiences has awakened a broad
383 interest by health teams in the development of a spiritual approach in care, particularly in caring for
384 vulnerable people. Similarly, the intense life experience lived by infertile persons has deep
385 manifestations in the sense of self and meaning in life, and can also be considered an emergent
386 opportunity for spiritual care. Spirituality should be considered from the beginning to the end of life,
387 and couples express suffering when facing this situation, from the diagnosis of infertility to the
388 treatment and beyond. This dominates the individual's thoughts, feelings and purpose in every
389 aspect of their lives. This unanticipated event when associated with the inability in transitioning and
390 creating a new meaning in life may pose individuals to a crossroad between the decision of
391 continuing the pursuit of having a biological child and the decision to adopt a child. Although the
392 need for a theoretical integrated approach has been recognised in the fertility setting, the biomedical
393 approach still prevails and fragmented attention is still given to the patient with poor consideration
394 of spirituality. Infertility is not the merely absence of a desired state of parenthood instead it is a
395 more complex experience with several internal and external dimensions being affected by this
396 reproductive health condition. Hope and resilience are the main issues in the fertility healthcare
397 services, however the success is not guaranteed. Following interactions with staff are therefore
398 affected and sometimes with extreme reactions like withdrawal from treatment. The translation into
399 the development and implementation of specific policies regarding the spiritual approach is needed,
400 as infertility is a growing and wide ranging health problem. Equally essential is collaborative team
401 work and recognition of own discipline limitations in providing counselling and spiritual comfort.
402 An integrated approach respectful of the boundaries of each discipline´s fields of intervention is the

answer to an increased quality in nursing and midwifery care and promotion of the patient´s well-being.

Future research is needed in adapting existing instruments for measuring spiritual well-being, hope, resilience and life satisfaction in this population. Longitudinal and cross-cultural studies should be implemented in order to understand how spiritual needs evolve through diagnosis, treatment and beyond. The impact of this reproductive conditioning is usually addressed in small samples and by gender which poses the need for a broaden understanding of this reality lived by couples and the impact it exerts on a relationship. In addition, the effect that religious belief has in patient´s decision-making in engaging medical treatments for infertility and how faith in believers and non-believers evolves through all phases of diagnosis, treatment and after ceasing ART. Evidence related to the effectiveness of nursing and midwifery spiritual interventions are essential to develop a more integrated and holistic approach to care not only in infertile individuals that pursue ART but in those who experience this reproductive conditioning outside fertility clinics.

In conclusion, it is nursing and midwifery disciplines and professionals responsibility to develop evidence-based knowledge and practice that guarantee a higher quality of care to people, who endure the struggle of not having a biological child.

Author Contributions: J.R. and S.C. were responsible for the study design, collected the data, and draft the manuscript; J.R., S.C., V.B., J.H., and F.T contributed in the critical reflection in the manuscript. The final manuscript was approved by all authors.

Conflicts of Interest: The authors declare no conflict of interest.

Abbreviations

The following abbreviations are used in this manuscript:

AHNA	American Holistic Nurses Association
ART	Assisted Reproductive Technologies
IVF	In Vitro Fertilization
PCIC	Patient Centered Infertility Care
WHO	World Health Organization

References

1. Centers for Disease Control and Prevention. "National Public Health Action Plan for the Detection, Prevention, and Management of Infertility". *U.S. Department of Health and Human Services* (Internet), 2014. Available from: http://www.cdc.gov/reproductivehealth/infertility/pdf/drh_nap_final_508.pdf (accessed on 8 August 2016).
2. WHO. "World Report on Disability" (Internet). *WHO*, 2011. Available from: http://apps.who.int/iris/bitstream/10665/70670/1/WHO_NMH_VIP_11.01_eng.pdf (accessed on 17 July 2016).
3. Maya N. Mascarenhas, Seth R. Flaxman, Ties Boerma, Sheryl Vanderpoel, and Gretchen A. Stevens. "National, Regional, and Global Trends in Infertility Prevalence Since 1990: A Systematic Analysis of 277 Health Surveys". *PLOS Medicine* 9(12) (2012):1–12.

4. Sumana Gurunath, Zabeena. Pandian, Richard A. Anderson, and Siladitya Bhattacharya. "Defining infertility—a systematic review of prevalence studies". *Human Reproduction Update* 17(5) (2011):575–88.
5. Fernando Zegers-Hochschild, Geoffrey David Adamson, Jacques de Mouzon, Osamu Ishihara, Ragaa Mansour, Karl G. Nygren, Elizabeth A. Sullivan, Sheryl van der Poel, International Committee for Monitoring Assisted Reproductive Technology, and World Health Organization. "The International Committee for Monitoring Assisted Reproductive Technology (ICMART) and the World Health Organization (WHO) Revised Glossary on ART Terminology, 2009". *Human Reproduction.* 24(11) (2009): 2683–87.
6. American Society for Reproductive Medicine. "Infertility: an overview" (Internet). *American Society for Reproductive Medicine*, 2012 Available from: http://www.reproductivefacts.org/uploadedFiles/ASRM_Content/Resources/Patient_Resources/Fact_Sheets_and_Info_Booklets/infertility_overview.pdf (accessed on 18 July 2016).
7. WHO. "Infertility definitions and terminology" (Internet). *World Health Organization*, 2016. Available from: http://www.who.int/reproductivehealth/topics/infertility/definitions/en/ (accessed on 7 April 2016)
8. Nicky Hudson, and Lorraine Culley. "The bloke can be a bit hazy about what"s going on': men and cross-border reproductive treatment". *Reproductive BioMedicine Online* 27 (2013):253– 60.
9. Lauri A. Pasch, and Christine Dunkel-Schetter. "Fertility Problems: Complex Issues Faced by Women and Couples". *Health Care for Women: Psychological, Social, and Behavioral Influences.* Washington DC, USA: American Psychological Association (1997):187–201.
10. Syeda Shahida Batool, and Richard Oliver de Visser. "Experiences of Infertility in British and Pakistani Women: A Cross-Cultural Qualitative Analysis". *Health Care for Women International* 37 (2016):180–196.
11. Zahra Behboodi-Moghadam, Mahvash Salsali, Hasan Eftekhar-Ardabily, Mojtaba Vaismoradi, and Fatemeh Ramezanzadeh. "Experiences of infertility through the lens of Iranian infertile women: A qualitative study". *Japan Journal of Nursing Science* 10 (2013):41–6.
12. Lubna Ishaq Bhatti, Fariyal F. Fikree, and Amunullah Khan. "The quest of infertile women in squatter settlements of Karachi, Pakistan: a qualitative study". *Social Science & Medicine* 49 (1999):637–49.
13. Silke J. Dyer, Naeemah Abrahams, Margaret Hoffman, and Zephne M. van der Spuy. " "Men leave me as I cannot have children": women´s experiences with involuntary childlessness". *Human Reproduction* 17(6) (2002):1663–8.
14. Silke J. Dyer, Naeemah Abrahams, Margaret Hoffman, and Zephne M. van der Spuy. " `You are a man because you have children': experiences, reproductive health knowledge and treatment-seeking behaviour among men suffering from couple infertility in South Africa". *Human Reproduction* 19(4) (2004):960–7.
15. Geok Ling Lee, W. H. Hui Choi, Celia H. Y. Chan, Celia L. W. Chan, and Ernest H. Y. Ng. "Life after unsuccessful IVF treatment in an assisted reproduction unit: a qualitative analysis of gains through loss among Chinese persons in Hong Kong". *Human Reproduction* 24(8) (2009):1920–29.
16. Dintle K. Mogobe. "Denying and Preserving Self: Batswana Women's Experiences of Infertility". *Afrikan Journal of Reproductive Health* 9(2) (2005):26–37.
17. Christina Prinds, Niels Christian Hvidt, Ole Mogensen, and Niels Buus. "Making existential meaning in transition to motherhood—A scoping review". *Midwifery* (2013): 1–9.
18. Inês Rafaela Valente Silva, Augusto Miguel Nunes dos Santos Ferreira, Marta Alaxandra Faria de Brito, Nuno Miguel Baptista Dias, and Carolina Miguel Graça Henriques. "As vivências da mulher infértil". *Revista de Enfermagem Referência* 8 (2012):181-89.

19. Nicola Cunningham, and Tom Cunningham. "Women's experiences of infertility – towards a relational model of care". *Journal of Clinical Nursing* 22(2013):3428–37.
20. Robab Latifnejad Roudsari, and Helen T. Allan. "Women's Experiences and Preferences in Relation to Infertility Counselling: A Multifaith Dialogue". *International Journal of Fertility and Sterility* 5(3) (2011):158–67.
21. Robab Latifnejad Roudsari, Helen T. Allan, and Pam A. Smith. "Looking at infertility through the lens of religion and spirituality: a review of the literature". *Human Fertility* 10(3) (2007):141– 49.
22. Maureen Patrice McCarthy. "Women´s Lived Enperience of Infertility After Unsuccessful Medical Intervention". *Journal of Midwifery & Women's Health* 53(4) (2008):319–24.
23. Holli Powel Kennedy, Martha Griffin, and Gary Frishman. "Enabling conception and pregnancy, Midwifery Care of Women Experiencing Infertility". *Journal of Nurse-Midwifery*. 43(3) (1998):190–207.
24. Arthur L. Greil, Kathleen Slauson-Blevins, and Julia McQuillan. "The experience of infertility: A review of recent literature". *Sociol Health Illn* 32(1) (2010):140–62.
25. Betty R. Ferrel, Elizabeth Johnston Taylor, Gary R. Sattler Marsha Fowler, and B. Lynn Cheyney. "Searching for the meaning of pain". *Cancer practice* 1(3) (1993):185–94.
26. Dara Seybold. "Choosing Therapies: A Senegalese Woman's Experience with Infertility". *Health Care for Women International* 23(6–7) (2002):540–9.
27. Stephanie Koropatnick, Judith Daniluk, and H. Anthony Pattinson. "Infertility: a non-event transition". *Fertility and Sterility* 59(1) (1993):163–71.
28. Julia McQuillan, Rosalie A. Torres Stone, and Arthur L. Greil. "Infertility and Life Satisfaction Among Women". *Journal of Family Issues* 28(7) (2007):955–81.
29. Björn J. Oddens, Isolde den Tonkelaar, and Hugo Nieuwenhuyse. "Psychosocial experiences in women facing fertility problems—a comparative survey". *Human Reproduction* 14(1) (1999):255–61.
30. Josephine Attard, Donia Baldacchino, and Liberato Camilleri. "Nurses' and midwives' acquisition of competency in spiritual care: a focus on education". *Nurse Education Today* 12 (2014):1460–6.
31. Inge W. H. van Empel, Willianne L. D. M. Nelen, Eveline T. Tepe, Esther A. P. van Laarhoven, Christianne M. Verhaak, and Jan A. M. Kremer. "Weaknesses, strenghts and needs in fertility care according to patients". *Human Reproduction* 25(1) (2010):142–9.
32. Roni Berger, Marilyn S. Paul, and Lisa A. Hewshaw. "Women´s experience of infertility: a multi-systemic perspective". *Journal of International Women´s Studies* 14(4) (2013):54–68.
33. Valerie. L. Peddie, Edwin van Teijlingen, and Siladitya Bhattacharya. "A qualitative study of women's decision-making at the end of IVF treatment". *Human Reproduction* 20(7) (2005):1944–51.
34. Lisa Hinton, and Tina Miller. "Mapping men's anticipations and experiences in the reproductive realm: (in)fertility journeys". *Reproductive BioMedicine Online* 27 (2013):244–52.
35. Andrew Dutney. "Religion, infertility and assisted reproductive technology". *Best Practice & Research Clinical Obstetrics and Gynaecology* 21(1) 2007:169–80.
36. Neah N. Mahajan, Deborah A. Turnbull, Michael J. Davies, Umesh N. Jindal, Nancy E. Briggs, and John E. Taplin. "Adjustment to infertility: the role of intrapersonal and interpersonal resources/vulnerabilities". *Human Reproduction* 24(4) (2009):906–12.
37. Sharyl Eve Toscano, and Rebecca M. Montgomery. "The Lived Experience of Women Pregnant (Including Preconception) Post In Vitro Fertilization Through the Lens of Virtual Communities". *Health Care for Women International* 30 (2009):1014–36.

38. Lynn Clark Callister, and Inaam Khalaf. "Spirituality in Childbearing Women". *The Journal of Perinatal Education* 19(2) (2010):16–24.
39. Hala Mahmoud Obeidat, Adlah M. Hamlan, and Lynn Clark Callister. "Missing Motherhood: Jordanian Women´s Experiences with Infertility". *Advances in Psychiatry* 7 (2014):1-7
40. Linda Bennington. "The relationship among maternal infant bonding, spirituality, and maternal perception of childbirth experience" (Internet). (Virginia): *Virginia Commonwealth University*, 2010. Available from: http://scholarscompass.vcu.edu/etd/2242/ (accessed on 29 July 2016).
41. Lorraine Culley, Nicky Hudson, and Maria Lohan. "Where are all the men? The marginalization of men in social scientific research on infertility". *Reproductive BioMedicine Online* 27 (2013):225–35.
42. Rita Diana Benasutti. "Infertility: Experiences and Meanings". *Journal of Couple & Relationship Therapy* 2(4) (2003):51-71.
43. Tsann-Juu Su, and Yueh-Chih Chen. "Transforming Hope: The Lived Experience of Infertile Women Who Terminated Treatment After in Vitro Fertilization Failure". *Journal of Nursing Research* 14(1) (2006):46–54.
44. Wendy Chen, and Ruth Landau. "First Childbirth and Motherhood at Post Natural Fertile Age: A Persistent and Intergenerational Experience of Personal and Social Anomaly?" *Social Work in Health Care*. 54 (2015):16–32.
45. Lynley Allot, Deborah Payne, and Leona Dann. "Midwifery and Assisted Reproductive Technologies". *New Zealand College of Midwives*. 47 (2013):10–13.
46. Debora C. Davis, and Catherine N. Dearman. "Coping strategies of infertile women". *JOGNN* 20(3) (1991):221–8.
47. Katheleen Peters. "In pursuit of motherhood: The IVF experience". *Contemporary Nurse* 14(3) (2003):258-70.
48. Leili Mosalanejad, Nehle Parandavar, Morteza Gholami, and Sareh Abdollahifard. "Increasing and decreasing factors of hope in infertile women with failure in infertility treatment: A phenomenology study". *Iran Journal of Reproductive Medicine* 12(2) (2014):117–24.
49. Sabrina Cipolletta, and Elena Faccio. "Time experience during the assisted reproductive journey: a phenomenological analysis of Italian couples' narratives". *Journal of Reproductive and Infant Psychology* 31(3) (2013):285–98.
50. Roberta J. Apfel, and Rheta G Keylor. "Psychoanalysis and Infertility Myths and Realities". *International Journal of Psychoanalysis* 83 (2002):85–104.
51. Kathleen Peters, Debra Jackson, and Trudy Rudge. "Surviving the adversity of childlessness: Fostering resilience in couples". *Contemporary Nurse* 40(1) (2011):130–40.
52. Ann V. Bell. "'It´s way out of my league ": Low-income Women's Experiences of Medicalized Infertility". *Gender and Society* 23(5) (2009):688–709.
53. Aravinda Meera Guntupalli, and P. Chenchelgudem. "Perceptions, causes and consequences of infertility among the Chenchu tribe of India". *Journal of Reproductive and Infant Psychology* 22(4) (2004):249–59.
54. Jacky Boivin, Alice D. Domar, Daniel B. Shapiro, Tewes H. Wischmann, Barth C. J. M. Fauser, and Christianne Verhaak. "Tackling burden in ART: an integrated approach for medical staff". *Human Reproduction* 27(4) (2012):941–50.
55. NICE. "Fertility, Assessment and treatment for people with fertility problems". *National Institute for Health and Care Excellence;* 2013.
56. United Nations. World Fertility Report 2013. Fertility at the Extremes (Internet). New York, 2014. Available from:

http://www.un.org/en/development/desa/population/publications/pdf/fertility/worldFertilityReport2013.pdf (accessed on 31 July 2016)

57. David B. Dunson, Donna D. Baird, and Bernardo Colombo. "Increased infertility with age in men and women". *Obstetrics & Gynecology* 103(1) (2004):51–6.
58. United Nations. "World Population Prospects, key findings and advance tables" (Internet). *Department of Economic and Social Affairs, Population Division*, 2015. Available from: http://esa.un.org/unpd/wpp/publications/files/key_findings_wpp_2015.pdf (accessed on 31 July 2016).
59. United Nations. "Millennium Development Goals 2015" (Internet), 2016. Available from: http://www.un.org/millenniumgoals/bkgd.shtml (accessed on 31 July 2016).
60. United Nations. "The Millennium Development Goals Report 2015" (Internet), 2015. Available from: http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf (accessed on 31 July 2016).
61. Sara Mesquita da Silva, Jacky Boivin, and Sofia Gameiro. "Self-Regulation and Wellbeing When Facing a Blocked Parenthood Goal: A Systematic Review and Meta-Analysis". *PLoS ONE* 23 (2016):1–20.
62. Prasanta K. Deka, and Swarnali Sarma. "Psychological aspects of infertility". *BJMP* 3(3) (2010):a336.
63. A. Lalos, O. Lalos, L. Jacobsson, and B. von Schoultz. "Psychological reactions to the medical investigation and surgical treatment of infertility". *Gynecologic & Obstetric Investigation* 20(4) (1985):209–17.
64. Ka-Ming Chow, Mei-Chun Cheung, and Irene K. M. Cheung. "Psychosocial interventions for infertile couples: a critical review". *Journal of Clinical Nursing* (2016): 11–13.
65. Rebecca Jean Payne, and Barbara Ponder. "Supporting the couple with Conception Challenges". *The Nurse Practitioner* 36(8) (2011):39–45.
66. Nicola Cunningham. "Lost in transition: Women experiencing infertility". *Human Fertility* 17(3) (2014):154–58.
67. Florence Naab, Roger Brown, and Susan Heidrich. "Psychosocial Health of Infertile Ghanaian Women and Their Infertility Beliefs". *Journal of Nursing Scholarship* 45(2) (2013):132–40.
68. Jan P. Vlasblom, Jenny T. van der Steen, Martin N. Walton, and H. Jochemsen. "Effects of nurses' screening of spiritual needs of hospitalized patients on consultation and perceived nurses' support and patients' spiritual well-being". *Holistic Nursing Practice* (2015):346–56.
69. Alice D. Domar, Allan Penzias, Jeffery A. Dusek, Amora Magna, Dalia Merari, Barbara Nielsen, and et al. "The stress and distress of infertility: Does religion help women cope?" *Sexuality, Reproduction & Menopause* 3(2) (2005):45–51.
70. Elizabeth Weathers, Geraldine McCarthy, and Alice Coffey. "Concept Analysis of Spirituality: An Evolutionary Approach". *Nursing Forum* (2015):1–18.
71. Lesa Miller. "Health Care Clinicians' Compliance with Conducting Spiritual Assessments and Providing Spiritual Care to Infertile Women" (Project Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Nursing Practice). (Walden): *Walden University*, 2015.
72. Tracy Heather Herdman, and Shigemi Kamitsuru. "NANDA International Nursing Diagnoses: Definitions & Classification, 2015-2017". *Oxford: Wiley Blackwell* (2014) 513 p.
73. Sílvia Caldeira, Fiona Timmins, Emília Campos de Carvalho, and Margarida Vieira. "Clinical Validation of the Nursing Diagnosis Spiritual Distress in Cancer Patients Undergoing Chemotherapy". *International Journal of Nursing Knowledge* (Internet), 2015. Available from: http://onlinelibrary.wiley.com/doi/10.1111/2047-3095.12105/abstract (accessed on 2016 Aug 30).

74. Angela L. Palmer-Wackerly. "Dancing Around Infertility: The Use of Metaphors in a Complex Medical Situation". (Ohio): *The Ohio State University*, 2012.
75. Ioanna Papathanasiou, Melachrini Sklavou, and Lambrini Kourkouta. "Holistic nursing care: theories and perspectives". *American Journal of Nursing Science* 2(1) (2013):1–5.
76. Barbara Montgomery Dossey. "Theory of Integral Nursing". *Advances in Nursing Science* 31(1) (2008):E52–73.
77. American Holistic Nurses Association (Internet). "American Holistic Nurses Association", 2016. Available from: http://www.ahna.org/ (accessed on 8 July 2016).
78. Liz McEvoy, and Anita Duffy. "Holistic practice - a concept analysis". *Nurse Education in Practice* 8 (2008):412–9.
79. WHO. "Mental health: a state of well-being" (Internet). *World Health Organization*. 2016. Available from: http://www.who.int/features/factfiles/mental_health/en/ (accessed on 8 April 2016).
80. Marie Thompson. "Infertility's Effect on Stress, Anxiety and Depression from an Adlerian Perspective" (Internet) (Partial Fulfillment of the Requirements for The Degree of Master of Arts in Adlerian Counseling and Psychotherapy). *The Faculty of the Adler Graduate School*, 2013. Available from: http://alfredadler.edu/sites/default/files/Thompson%20MP%202013.pdf (accessed on 8 July 2016).
81. Monir Ramezani, Fazlollah Ahmadi, Eesa Mohammadi, and Anoushirvan Kazemnejad. "Spiritual care in nursing: a concept analysis". *International Nursing Review* 61 (2014):211–19.
82. WHO. "Framework for Action on Interprofessional Education & Collaborative Practice". *World Health Organization* 64 (2010).
83. Julio Frenk, Lincoln Chen, Zulfiqar A. Bhutta, Jordan Cohen, Nigel Crisp, Timothy Evans, Harvey Fineberg, Patricia Garcia, Yang Ke, Patrick Kelley, Barry Kistnasamy, Afaf Meleis, David Naylor, Ariel Pablos-Mendez, Srinath Reddy, Susan Scrimshaw, Jaime Sepulveda, David Serwadda, and Huda Zurayk. "Health professionals for a new century: transforming education to strengthen health systems in an interdependent world". *The Lancet Commissions*. 29 (2010):1–36.
84. Aru Narayanasamy. "Recognizing spiritual needs. In: Spiritual assessment in healthcare practice". Wilfred McSherry and Linda Ross. *Cumbria: M&K Publishing* (2010):37–55.
85. Cheryl L. Petersen. "Spiritual care of the child with cancer at the end of life: a concept analysis". *Journal of Advanced Nursing* 70(6) (2014):1243–53.
86. Daniele Corcioli Mendes Espinha, and Regina Aparecida Garcia de Lima. "Spiritual dimension of children and adolescents with cancer: an integrative review". *Acta Paulista de Enfermagem* 25 (2012):161–5.
87. Khadijeh Hatamipour, Maryam Rassouli, Farideh Yaghmaie, Kazem Zendedel, and Hamid Alavi Majd. "Spiritual Needs of Cancer Patients: A Qualitative Study". *Indian Journal of Palliative Care* 21(1) (2015):61–7.
88. Carla Braz Evangelista, Maria Emília Limeira Lopes, Solange Fátima Geraldo da Costa, Fátima Maria da Silva Abrão, Patrícia Serpa de Souza Batista, Regina Célia de Oliveira. "Spirituality in patient care under palliative care: A study with nurses". *Escola Anna Nery - Revista de Enfermagem* 20(1) (2016):176–82.
89. Lucila C. Nascimento, and Willyane A. Alvarenga, Sílvia Caldeira, Tâmisa M. Mica, Fabiane C. S. Oliveira, Raquel Pan, and et al. "Spiritual Care: The Nurses' Experiences in the Pediatric Intensive Care Unit". *Religions*. 7(27) (2016):1–11.
90. Sílvia Caldeira, and Jenny Hall. "Spiritual leadership and spiritual care in neonatology". *Journal of Nursing Management* 20 (2012):1069–75.
91. Susan Crowther, and Jennifer Hall. "Spirituality and spiritual care in and around childbirth". *Women and Birth* (2015):1–6.

92. John Fisher. "The Four Domains Model: Connecting Spirituality, Health and Well-Being". *Religions* 2 (2011):17–28.
93. Francesco Chirico. "Spiritual well-being in the 21st century: it´s time to review the current WHO´s health definition". *Journal of Health and Social Sciences* 1(1) (2016):11–6.
94. Neera Dhar, Santosh Kumar Chaturvedi, and Deoki Nandan. "Spiritual health, the fourth dimension: a public health perspective". *WHO South-East Asia Journal of Public Health*. 2(1) (2013):3–5.
95. James Carmody, George Reed, Jean Kristeller, and Phillip Merriam. "Mindfulness, spirituality, and health-related symptoms". *Journal of Psychosomatic Research* 64 (2008):393–403.
96. Maureen Porter, and Siladitya Bhattacharya. "Helping themselves to get pregnant: a qualitative longitudinal study on the information-seeking behaviour of infertile couples". *Human Reproduction* 23(3) (2008):567–72.