

Spirituality in Coping with Infertility Stigma: A Mixed-Methods Study

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Abstract

Spirituality and religion are often involved in the coping approaches of women facing the psychosocial challenge of infertility in several African cultures. This convergent mixed-methods study examined the role of spirituality in coping with infertility-related stigma among 384 women attending evangelical churches in Zou County, Benin Republic. Data were collected using standardized instruments, the Assessment of Spirituality and Religious Sentiments (ASPIRES) and the COMPI Coping Strategy Scale (CSS), supplemented by focus groups and interviews with 45 church leaders. Quantitative data analysis was conducted using SPSS version 25.0, and a matched mixed-methods approach was used for the qualitative data analysis. Results indicated that the Spiritual Transcendence scale was dominated by the Prayer Fulfilment subscale, and the integration of qualitative findings confirmed a prayer-centred spirituality among the surveyed women. The analysis of the coping profiles indicated that the frequency of use was, respectively, active-confronting, meaning-based, passive-avoidance, and active-avoidance. In addition, the qualitative data revealed a three-stage coping trajectory: early-stage avoidance and shame; middle-stage indifference and adaptation; and late-stage meaning-based acceptance. Regarding spirituality in coping with infertility stigma, Spiritual Transcendence significantly predicted Coping Strategies, accounting for 20.3% of the variance. In line with the massive prevalence of prayer in the women's

management of infertility stigma, the high amount of unexplained variance suggests that spirituality is much more of a coping resource than a discrete strategy. The study contributes to understanding culturally situated coping mechanisms and informs interventions for mental health support in religious communities. Implications for clinical practice and church-based counselling are discussed.

Keywords: Infertility, Stigma, Spirituality, Coping strategies, Mixed-methods

Introduction

Infertility is often depicted as an invisible wound and a personal struggle. It affects millions of individuals and couples worldwide. One in every six people of reproductive age, which represents 17.5% of the global population (Cox et al., 2022; WHO, 2023), suffers in silence, shame, and misunderstanding. Specifically, women experience infertility as the absence of an event, wishing for the occurrence of a pregnancy or a live birth (Bayefsky & Caplan, 2024; Cox et al., 2022). Beyond biomedical boundaries, infertility represents a profound existential crisis (Archetti, 2024). Navigating the challenges of infertility, women in pronatalist cultures pay a high price to society as they experience all sorts of stigmatization described in several studies (e.g., Bornstein et al., 2023; Okantey et al., 2021; Taebi et al., 2021). Examples of challenges faced include stigmatization, marital dissolution, intimate partner violence, and community exclusion (Adane et al., 2024; Bawadi et al., 2024; Gerrits et al., 2023).

Negative societal perception of infertility is responsible for such outcomes (Bornstein et al., 2023; Kuug et al., 2023; Ofosu-Budu & Häninnen, 2021). Consequently, women's mental health is affected by infertility, as shown in several studies (Abdallah et al., 2024; Assaysh-Öberg; 2023; Foti et al., 2023). Nevertheless, they develop various coping strategies. From research findings, spirituality and religious engagement serve as primary coping resources against health difficulties (Dolcos et al., 2021, Litalien et al., 2022; Pirutinsky et al., 2020). This is particularly relevant in African contexts, where spiritual worldviews permeate daily life (Naab et al., 2025). Even though infertility is one of the adverse reproductive events in the pathway to becoming a parent, and the most addressed in research (Brigance & Brigance, 2023), spiritual aspects remain less investigated.

This study addresses spirituality as a coping resource within the specific cultural and religious context of the Evangelical Church in Benin Republic, specifically in Zou County. It integrates quantitative measures of spirituality with qualitative exploration of women with infertility's lived

experiences to examine how they navigate the intersection of biological restraint, social blame, and spiritual meaning-making.

Infertility Stigma Coping Strategies

Infertility coping strategies are an individual's cognitive and behavioural tactics and efforts to modulate internal and external solicitations evaluated as exceeding personal resources in managing the stressful situation of infertility (Mirzaasgari et al., 2022; Péloquin et al., 2024). Schmidt et al. (2005) considered four types of strategies in developing the assessment of coping mechanisms for infertility stigma. These include active-avoidance, active-confrontation, passive-avoidance, and meaning-based coping strategies. Oftentimes, two or more of them are highlighted in the same study. For example, in Ghana, Kyei et al. (2022), seeking the basic coping strategies, found confrontational, distancing, self-control, social support, acceptance responsibility, escape avoidance, problem solving and positive reappraisal, and the least used was acceptance responsibility, followed by confrontational and distancing. However, the four types of infertility stigma coping strategies are reviewed hereafter from empirical studies, according to the Schmidt et al.'s (2005) framework.

Active-Avoidance

The active-avoidance behaviour is reported in several studies. Asimwe et al. (2022) found social withdrawal and avoidance of gatherings in their study. Similar findings came out in several other studies, such as Bawadi et al. (2024), Dierickx (2022), Jiang et al. (2025), Naab et al. (2025), Ofosu-Budu and Häninnen (2021), and Sharma et al. (2024). Some of these studies mentioned, in addition, self-isolation, emotional distancing, disclosure avoidance, conversation avoidance, pretending to have children, applying religious rituals, praying and visiting tombs, and activating social support systems against stress. One of the strategies found by Taebi et al. (2021) was hiding their infertility condition. For Jing et al. (2021), the active-avoidance coping strategy could sustain stigma and hinder the fertility quality of life, but Buran and Acar (2024) stated that avoidance may be an efficient strategy only in some conditions. Sharing this perspective, González Casas et al. (2025) commented that the adequacy of any coping style is condition-dependent.

Active-Confrontation

Several empirical studies report women choosing to actively confront their infertility issue. Online peer support was found to reduce feelings of isolation among women with infertility in the study of O'Connell et al. (2021). It helped them manage their infertility stress, connect, communicate, share, and seek information, developing positive coping. The active-confronting

strategy in the study of Azize Diallo et al. (2024) was expressed as mutual support among peers, self-motivation, and active engagement in church and religious activities. With Adane et al. (2024), active confrontation of infertility was revealed as help-seeking from traditional herbalists or wizards, conventional medicine, and informal foster care. Similarly, the women in Annan-Frey et al.'s (2023) study turned to herbal-based and biomedical-based strategies. Herbalist seeking was also found in Asiimwe et al.'s (2022) study.

Passive-Avoidance

The coping strategies found in Çitil Canbay et al. (2022) include self-affirmation techniques, such as dreaming to feel better, enduring, thanksgiving and hoping, believing in the power of nature, crying, and doling out. Asiimwe et al. (2022) found self-blame, hiding emotions, distractions, alcoholism, focus on money-making, obedience to the husband, and negative self-concept. Bawadi et al. (2024) found selective disclosure, and Moutzouri et al. (2024) discussed emotional adjustment. Mashaah et al. (2024) found rebellious behaviour, emotional concealment, crying, and alcohol use in their study. Like others, Smith et al. (2025) specified avoidance mechanisms as denial, disengagement, and substance use, among others, and reported that such coping strategies may delay or inhibit help-seeking and lead to exacerbated psychological distress. Meanwhile, Naab et al. (2025) explored spirituality as a coping strategy in their study.

Meaning-Based Coping

Empirical studies report spirituality and religion among the coping assets of women with infertility. Adane et al. (2024) found women's choices to include massage with holy books and the holy cross, and voluntary service to religious institutions. The strategies found by Asiimwe et al. (2022) included mental strength for self-belief and acceptance; spiritual coping through prayer, Bible reading, and hoping; optimism through belief in self, positive thinking, and concentration on work; and acceptance of the situation as the will of God. Religious and faith-based coping were also found in the studies by Akarsu and Beji (2021), Bayoumi et al. (2021), Mashaah et al. (2024), and Sharma et al. (2024).

Spirituality in Coping with Infertility Stigma

Both spirituality and religion contribute to psychological well-being, comforting and entertaining hope (Sargeant & Yoxall, 2023). Rathore and Kriplani (2023) featured the individual-focus aspect of spirituality in positioning religion at community level as an organized system of beliefs, and setting spirituality subjectively within the individual dealing with personal beliefs. As conceptualized by these authors, spirituality can play a role in

coping when the individual is dealing with adverse situations such as infertility-related stigma. This may explain why spirituality as a coping strategy was found to be positively associated with quality of life (Amjad & Ahmad, 2023). Specifically, the individual finds meaning in life in spiritual beliefs and values, in addition to gaining a sense of connectedness to God, self, and environment (Amjad & Ahmad, 2023).

Another reason for spirituality's effect on coping is found in Garsen et al.'s (2021) meta-analysis, where they expressed the effect of religion and spirituality on mental health in terms of quality of life, life satisfaction, well-being, and distress. Indeed, the role of spirituality in mental health is well-established (Henderson et al., 2025), and the construct of spirituality can be associated with other variables (Sena et al., 2021). For example, Jing et al. (2021) found stigma to be inversely related to fertility quality of life, and the active-avoidance mode as the most important coping strategy that mediates stigma and fertility quality of life. In addition, the study showed that the meaning-based coping mode played a positive role in the relationship between stigma and fertility quality of life. Therefore, prayer or goal shifting could lead to better quality of life and low levels of perceived stigma due to transfer of infertility pressure, generating a new source of sustenance in spirituality. In this, the protective role of spirituality through prayer in the face of stigma was highlighted.

Foti et al. (2023) found importance of motherhood to be positively associated with spiritual coping, suggesting that the desire for biological offspring may lead women to turn to, or focus on, practices that uplift spirituality. With Çalışkan and Özkan (2021), spirituality was found in the coping strategies of women facing multifaceted violence in addition to infertility. Likewise, Akarsu and Beji (2021) found spirituality in the coping strategies of the women in the study. The perception of their infertility condition as the will of God pushed them to prayer. Dehghan et al. (2024) acknowledged the potential of religious and spiritual interventions to alleviate the social and psychological stress in women with infertility, and found in their study prayer and engagement in spiritual rituals as part of the coping strategies against the purposelessness of life and feelings of hopelessness.

This perception of spirituality in the coping repertoire against infertility and related stigma, was also experienced in Mpono et al. (2024), who found prayer and keeping busy as the most used coping strategies. Annan-Frey et al. (2023) found women drawing upon their religious faith to adapt, relying on their devout conviction as a vital source of spiritual support and developing religious practices like fasting and prayers, in believing that God would provide a child for them. According to Tusasiirwe et al. (2023), religious practices such as prayer and communal worship provide people with a sense of belonging that sustains hope in the face of adverse circumstances.

Moreover, Abekah et al. (2025), investigating traditional and modern approaches to infertility treatment in Ghana, reported spirituality as a component of good health in the Ghanaian cultural belief system. The treatment practices might include deliverance services, prayer camps, or fasting. From Chamberlain (2022), traditional rituals could include libation pouring to calm ancestral spirits. Extending belief in spiritual blockages or curses, infertility was sometimes culturally perceived as due to spiritual marriages or covenants that would break only through specific rituals. The centrality of spirituality and religion to life is shown in these processes of healing.

To this point, women experiencing infertility in the various studies reviewed suggest positive appraisal of spirituality or religion in coping strategies. However, the potential of religion to hinder individuals' coping mechanisms was underlined by Litalien et al. (2022) and Gezinski et al. (2021) in their studies. In addition, there is the issue of positive or negative religious coping. When some women facing infertility feel that their prayers remain unanswered, they can develop hatred towards God, taking their infertility as a curse or a punishment from Him. Wnuk (2024) presents the contrast: while positive religious coping is trusting God through an open bond with Him, negative religious coping is developing an anxious attachment to God, made of fear of Him, fear of abandonment by Him, expectation of punishment from Him, and fear of potential revenge from Him. Of the same opinion is Gheysari et al. (2023), who showed that the negative religious coping makes women have a negative appraisal of God, whom they consider a punitive force with uncertain ability to answer prayer. Hence, they develop anger towards Him. Wnuk (2024) reported that positive religious coping positively predicted positive affect. In sum, religious coping appears as a valuable coping asset for women facing infertility, and negative use may prompt psychological distress.

Method

Study Setting and Ethics

This research was conducted in Zou County, Benin Republic, between October 2025 and January 2026. The study protocol was reviewed and approved by the National Committee for Health Research Ethics in Benin Republic and by the Postgraduate School and Institutional Scientific and Ethics Review Committee (ISERC) of Pan Africa Christian University, Kenya.

Research Design

This article is the spirituality-focused part of the research addressing the influence of spirituality and resilience on managing infertility stigma. It is a correlational study employing a convergent mixed-methods design that

integrates quantitative and qualitative data to achieve comprehensive understanding (Wasti et al., 2022). Quantitative and qualitative data were collected concurrently, analysed concomitantly, and triangulated (Whitley et al., 2020). Spirituality was designed as the independent variable, and coping strategies were considered the dependent variable.

Sampling and Participants

The survey sample size of 384 participants was computed with Cochran's formula, considering 95% confidence level, 50% expected prevalence, and a 5% margin of error (Ahmed, 2024). From a three-stage multiple sampling procedure, Zou County and evangelical churches were first selected by random and purposive sampling. Next, potential participants aligned with inclusion criteria (women married for at least two years, struggling with infertility, and attending church) were randomly selected from a list provided by church management, followed by snowball sampling within congregations to give the chance of inclusion to non-registered women with the same condition. In addition, specific women and leaders were purposively selected for qualitative supplement. Finally, the mixed-methods study involved 429 participants, comprising 384 for the survey (including 8 women aged 51 to 60 in a focus group after the survey), 15 church leaders in two focus groups, 14 pastors, and 16 women's fellowship leaders who gave individual interviews.

Instruments

Demographic Questionnaire

The demographics of women with infertility participating in the study were collected with a researcher-designed questionnaire. The collected data related to age of the woman, age of husband, age at marriage, duration of marriage, type of marital relationship (monogamous, polygamous), number of children from other unions where applicable, socioeconomic conditions, and infertility treatment status.

Quantitative Data

Standardized instruments were used for quantitative data collection, including the Assessment of Spirituality and Religious Sentiments (ASPIRES) and the COMPI Coping Strategy Scale (CSS). Permission for use and licensing were obtained from the developers of these instruments.

ASPIRES

Developed by Piedmont (2010), ASPIRES is a 35-item scale integrating two domains, namely Spiritual Transcendence (ST) and Religious Sentiments (RS). The ST scale contains 23 items evaluated on a 5-point Likert-

type scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). It measures three correlated facets, namely Prayer Fulfilment (PF, 10 items), Universality (UN, 7 items), and Connectedness (CN, 6 items). PF reflects the ability to enable oneself to feel a positive connection to some greater reality. UN refers to the belief of the individual in a larger meaning and purpose in life. CN reflects the individual's feelings of belonging and responsibility to a broader human reality above all generations. The Cronbach's alphas were .95, .86, .60, and .93 respectively, for PF, UN, CN, and ST.

The RS domain comprises two scales: Religious Involvement (RI) and Religious Crisis (RC). RI is an 8-item scale that assesses the extent of the individual's involvement in practicing rituals and activities in their faith community. RC, a 4-item scale, assesses the extent to which an individual feels distressed in their relationship with God. A 5-point Likert-type scale guides responses ranging from 1 (strongly disagree) to 5 (strongly agree). The Cronbach's alpha was .89 for RI and .78 for RC scores. Age and gender-specific norms enabled interpretive standards (Piedmont, 2020). The ASPIRES demonstrated strong psychometric properties, including internal consistency, test-retest reliability, and incremental validity over personality measures (Piedmont, 2010). The cross-cultural strength of the scales as underlined in several empirical studies (e.g., Piedmont, 2020; Piotrowski et al., 2021; Tabaeian & Piedmont, 2024), supports its cross-cultural validity in West Africa.

COMPI Coping Strategy Scale (CSS)

The COMPI CSS was developed by Schmidt et al. (2005) and Schmidt (2006). It is a four-dimension and 19-item instrument using a four-point Likert scale: 1 (not used), 2 (used somewhat), 3 (used quite a bit), and 4 (used a great deal). The four dimensions are Active-Avoidance (4 items), Active-Confronting (7 items), Passive-Avoidance (3 items), and Meaning-Based Coping (5 items). The subscales were initially developed as part of a wider research design on infertility. The aim was to assess the frequency of use of the subscales under fertility-related stress. The CSS shows cross-cultural validity, having been applied in various settings, including Portugal (Martins et al., 2011), Egypt (Hashim et al., 2012), Iran (Aflakseir & Zarei, 2013), and Turkey (Yilmaz & Oskay, 2016). More recently, Jing et al. (2021) used the scale in China. The present study assumes the validity of the scale in Zou County, Benin.

Qualitative Protocols

Semi-structured interview and focus group guides explored infertility perceptions and stigma experiences, coping strategies, and spiritual practices and beliefs. The guides were developed from quantitative variable

conceptualizations and validated through review by experts in public health, psychology, theology, sociology, and social statistics.

Procedures

Six counselling psychology students proficient in *Fon* (the primary local language) were recruited as trained research assistants. Data were collected using interviewer-administered methods from participants who signed informed consent. Due to limitations in literacy, the survey questionnaire was administered orally. Data collection instruments were translated from French or English into *Fon* and back-translated into French to ensure consistency. The women's focus group with participants aged 51 to 60 was intended to capture longitudinal perspectives of infertility stigma experiences. Church leaders' focus groups explored institutional responses to infertility. Pastoral interviews examined theological frameworks and counselling approaches. Interviews with women's fellowship leaders were designed to assess general community perceptions.

Data Analysis

Quantitative data were analysed using SPSS 25.0. Descriptive statistics were used for demographics and the scales. ASPIRES scores were computed for each subscale and interpreted using the normative age ranges (18–25, 26–45, 46–60; Piedmont, 2020). CSS scores were calculated for the four subscales. Internal consistency was assessed with Cronbach's alpha. Simple linear regression evaluated Spiritual Transcendence as a predictor of coping strategies. Pearson correlations examined relationships between spirituality dimensions and specific coping approaches. Assumptions were verified through residual analysis. For the qualitative data, verbatim transcripts were prepared from audio recordings and field notes. Braun and Clarke's (2006) six-phase thematic analysis framework (Ahmed et al., 2025) was used, with initial coding followed by theme generation, review, definition, and naming. In addition, in a matched mixed-methods approach, participants' responses to the open-ended questions in the survey were first read, sorted, coded, and synthesized before being summarized with frequencies and percentages. This permitted quantification of the qualitative data and improved interpretation (Halevi-Hochwald et al., 2023). Joint displays comparing quantitative patterns with qualitative themes and the construction of narratives presenting interconnected findings helped achieve integration.

Results

Participant Characteristics

Survey participants (N = 384) ranged in age from 18 to 60 years (M = 31.95, SD = 8.54). Most (67.71%) were aged 18 to 34, reflecting the high-

fertility window. Other women were aged 35 to 50 (29.69%) and 51 to 60 years (2.60%). A majority (96.61%) married between ages 18 and 34, and the rest (3.39%) between 35 and 45 years. Marriage duration was predominantly 2 to 5 years (52.08%), followed by 6 to 10 years (21.36%), 11 to 20 years (19.53%), 21 to 30 years (6.25%), and 31 to 45 years (1.04%). Polygamous unions represented 26.30% of women. The highest level of formal education was primary (14.06%), secondary (9.90%), and tertiary (1.04%), while 26.04% were uneducated and 48.96% had non-formal small-scale professional training but limited formal schooling. The majority (82.55%) were self-employed and 3.91% were civil servants. Women identified as housewives (13.54%). Seeking treatment for infertility was common, with 55% having attempted conception for 1 to 5 years and 20% utilizing a combination of spiritual, medical, and herbal approaches.

Spirituality Profiles

The characteristics of the 384 surveyed women on their spirituality are reported in this section. Table 1 displays the descriptive statistics of ASPIRES.

Table 1: Descriptive Statistics of ASPIRES

ASPIRES Scales	Study sample (<i>N</i> = 384)			Developer's Normative Data (<i>N</i> = 2,989)		
	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	α
Prayer Fulfilment	39.89	7.42	.78	34.43	10.17	.95
Universality	25.59	4.05	.75	24.39	5.87	.86
Connectedness	16.67	3.21	.63	21.09	4.04	.60
ST Total	82.15	10.16	.90	79.35	17.17	.93
Religious Involvement	35.22	4.12	.42	X.01 ^a	6.2	.89
Religious Crisis	16.91	3.09	.71	7.23	2.9	.78

Note. These are ASPIRES raw scores. Source of normative data: Piedmont (2020).

^a: This value is .01 in the original source, which is concerning; the probable missing part is replaced by X. This did not affect the analysis.

As shown in Table 1, for the measures of central tendency, ASPIRES scored high on Spiritual Transcendence (*M* = 82.15, *SD* = 10.16), with the subscale Prayer Fulfilment highest (*M* = 39.89, *SD* = 7.42), followed by Universality (*M* = 25.59, *SD* = 4.05), and Connectedness (*M* = 16.67, *SD* = 3.21). Religious Sentiments showed notably high levels of Religious Involvement (*M* = 35.22, *SD* = 4.12) and Religious Crisis (*M* = 16.91, *SD* = 3.09). Internal consistency varied from unacceptable for Religious Involvement (α = 0.42) to excellent for Spiritual Transcendence (α = 0.90). The low internal consistency of the Religious Involvement subscale indicates a severe structural limitation. The findings in this study deviate from the norms for the Religious Sentiments scales. The nature of the sample (women struggling with the existential crisis of infertility) might explain this pattern.

Table 2 introduces normative age ranges and value ranges for the analysis of the scales.

Table 2: Age-Stratified Mean Scores of ASPIRES Scales

Age group (years)	ASPIRES Scales									
	Mean scores and normative scores ranges									
	ST		PF		UN		CT		RC	
1: 18-25	81.53	74-88	39.93	31-39	25.17	22-27	16.43	20-24	16.66	6-9
2: 26-45	82.46	64-87	40.00	26-39	25.85	19-28	16.61	17-22	17.04	5-8
3: 46-60	81.93	68-91	38.83	28-41	25.00	21-29	18.10	18-23	16.80	5-8

Note. Average scores by age group in this study are presented in parallel with normative mean score ranges. Source of normative value ranges: Piedmont (2020).

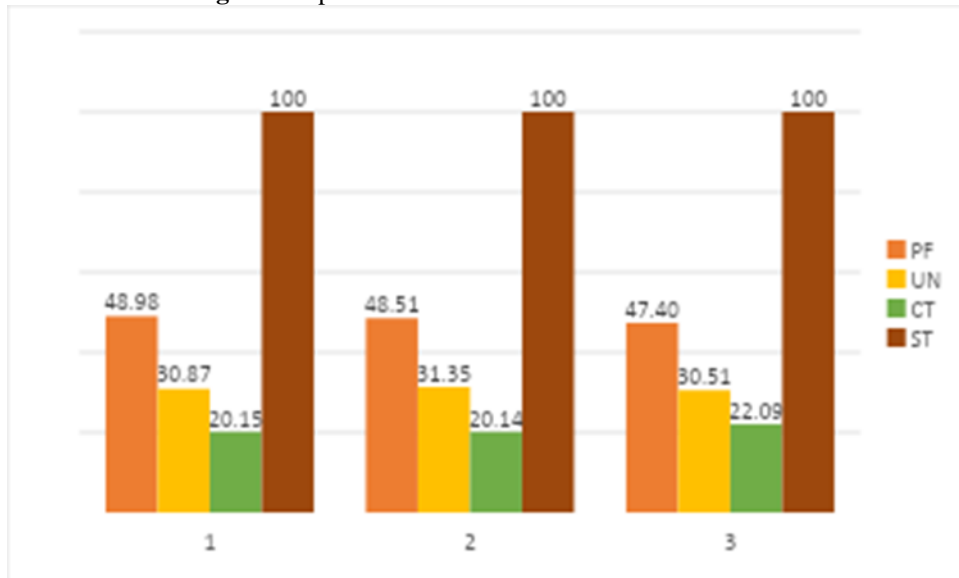
As shown in Table 2, analysis revealed consistent patterns across groups: Prayer Fulfilment scored the highest (38.83–40.00), while Connectedness displayed the lowest scores (16.43–18.10). All age groups scored within normative ranges for Spiritual Transcendence, indicating sustained spiritual engagement despite infertility duration. However, Religious Crisis scores exceeded norms in all groups (expected: 6–9; observed: 16.66–17.04), suggesting persistent spiritual struggle, as found in qualitative data from a 28-year-old participant:

“I am discouraged by life. Many judge me, I judge my God since it is He who allowed all of this.”

They were struggling to continue serving a God who was not answering their prayers. Piedmont (2020), commenting such high values of the Religious Crisis scale, states that they reflect high levels of emotional distress, bitterness, dissatisfaction, and suspicion about others’ motivations, as characterizing such individuals. Accordingly, it stems from all interviews and pastors’ focus groups that women with infertility developed bitterness over time, and at gatherings, suspected everyone of gossiping about them.

For a focus on the Spiritual Transcendence scale, Figure 1 displays the score values in percentage.

Figure 1: Spiritual Transcendence Scale and Subscales



Note. Mean scores of Spiritual Transcendence scales in percentage per age range.
Source: Researcher, 2026.

From Figure 1, the constancy of patterns across groups is evident. Prayer Fulfilment dominated (47.40%–48.98%), while Connectedness remained lowest (20.15%–22.09%). The qualitative data shed light on these trends. Prayer appeared as the predominant expression of spirituality: 50% cited prayer for infertility-specific concerns, 65.89% identified prayer as maintaining resilience, and 29.17% listed prayer as a primary coping strategy. One participant (age 56) summarized:

“I leave everything to God.”

However, scriptural engagement was minimal (3.65% for infertility-related study), suggesting a prayer-centred rather than Scripture-centred spirituality.

The Universality subscale in this study, scoring ($M = 25.59$, $SD = 4.05$) above the normative value ($M = 24.39$; $SD = 5.87$) indicated belief in a transcendent community despite experienced isolation. This tension between high spiritual connection and social disconnection required qualitative validation. The belief in a shared inner vision that should supplant external differences made all women in the survey resent stigmatization in the Church, which is supposed to be a place of shared beliefs. A 25-year-old participant commented:

“I thought the Church would be a safe place; instead, it is at Church that there is the most stigma.”

Women advocated community education (92.71%), empathy (94.53%), and brotherly love (38.28%) as antidotes to church-based stigma. Despite the personal nature of spirituality, the church community must promote social connection as encouragement for women facing infertility and as an antidote to isolation. Unfortunately, higher stigma in the church exacerbates isolation. The failure of the church community justifies the women's advocacy for community education.

Connectedness scores below the norms for younger groups (18–45 years) reflected identity fusion with infertility. Participants described suffering continuous mockery, including the humiliating epithet “sieve uterus,” eroding self-worth. Older women (46–60 years) reported higher levels of connectedness, with one of them (age 50) explaining:

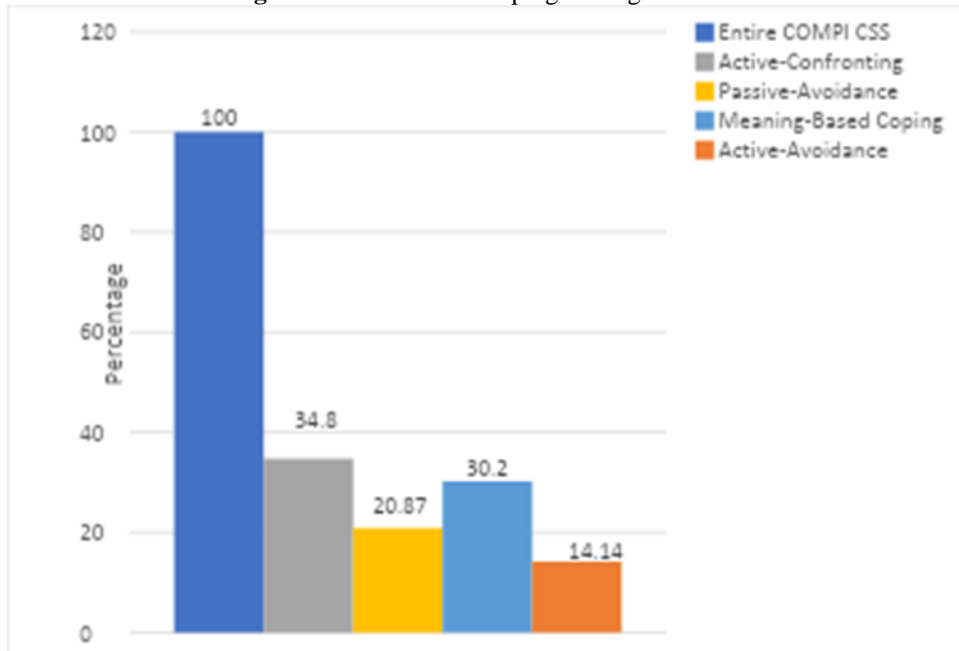
“I no longer do anything in the face of stigma, because I have let go.”

This developmental trajectory of initial identity diffusion followed by subsequent differentiation emerged as a central qualitative theme.

Infertility Stigma Coping Strategies

The measures of central tendency of the Coping Strategies Scales were: Active-Confronting ($M = 18.14$, $SD = 5.07$), Meaning-Based Coping ($M = 15.74$, $SD = 3.15$), Passive-Avoidance ($M = 10.88$, $SD = 1.89$), and Active-Avoidance ($M = 7.37$, $SD = 3.11$). Internal consistency was strong: CSS total, $\alpha = 0.78$; Active-Avoidance, $\alpha = 0.85$; Active-Confronting, $\alpha = 0.84$; Passive-Avoidance, $\alpha = 0.93$; Meaning-Based, $\alpha = 0.82$. The baseline values were: Active-Avoidance coping ($M = 6.98$, $SD = 2.27$, $\alpha = 0.68$), Active-Confronting coping ($M = 15.67$, $SD = 4.09$, $\alpha = 0.76$), Passive-Avoidance coping ($M = 9.13$, $SD = 1.97$, $\alpha = 0.46$), and Meaning-Based coping ($M = 11.20$, $SD = 2.99$, $\alpha = 0.59$). The values in this study share the trends of the baseline values. Active-Confronting emerged as the most frequently utilized coping mechanism, whereas Active-Avoidance was the least prevalent among the surveyed participants. The second most used strategy was Meaning-Based coping, followed by Passive-Avoidance. For better focus, the subscales are visualized in Figure 2 in terms of percentages of the CSS.

Figure 2: The COMPI Coping Strategies Scales



Note. The COMPI CSS subscales' mean values.
Source: Researcher, 2026.

The pattern is better visualized in Figure 2, depicting the dominance of Active-Confronting and Meaning-Based coping approaches. The qualitative data supported these results. All women in the survey sought infertility treatment, and 55.11% employed all types of treatment. This supports the high value of the Active-Confronting dimension of the scale. The Church, being the study setting, and the prayer-centred spirituality found in the previous section, are supportive of the Meaning-Based coping scoring second. In the Church, the inner self of the woman is nurtured with the values of the belief system, thereby strengthening her spirituality and shaping her perception. A 53-year-old woman mentioned:

“I often say that God’s timing is the best.”

Another woman, age 26, said:

“I often leave places where I feel depressed.”

As shown by the quantitative results, such Active-Avoidance examples were few in the survey data. Nonetheless, additional avoidance strategies emerged from female leaders: avoiding new mothers, limiting outings with husbands, restricting social exposure to unfamiliar areas, and maintaining small, selective friendships.

Passive-Avoidance was expressed, with 9.11% reporting spiritual practices exclusively, while 16.67% combined spiritual with herbal approaches due to economic constraints. These findings align with previous research. Odek et al. (2021), in Kenya, found that due to socioeconomic factors, coping mode choices were motivated by traditional and religious beliefs and spiritual intervention was sought as a source of support and coping strategy as well as a potential solution to infertility. Consequently, 20% of participants resorted to prayers.

In the survey, women named specific coping strategies as praying (29.17%), crying (22.92%), self-comfort (15.10%), indifference (9.11%), calm (8.07%), rumination (5.99%), arguments (3.64%), self-isolation (3.13%), and focus on work (2.87%). One woman named several strategies, and they also moved from one strategy to another. A 38-year-old woman said:

“I have been desiring to conceive for 17 years. At first, I used to respond to provocations, but now I no longer react to hassles; on the contrary, I pray for those people.”

Senior women in focus groups concurred with this and added that self-isolation may come into play even when women are physically present at a gathering, as they avoid giving their opinion and minimize interpersonal interactions. These findings are similar to those in previous studies such as Bawadi et al. (2024), Jiang et al. (2025), and Naab et al. (2025).

All church leaders and senior women in focus groups stated that women’s coping strategies depended on the stage of their experience of infertility. One male study participant explained:

“At an early stage, they feel shame and despair and hide, self-isolate, and withdraw from some church activities. They avoid any gathering involving children or stay away from them. They cry a lot and show sadness. Some react vividly to stigmatization before crying in private. At a middle stage, they show more indifference as they start getting used to their condition and the whole surrounding situation. At a later stage, most of them overcome their shame and mingle with the community. Maybe they realize that it is the age of being a grandmother and they let go of everything. They try to be faithful observers of the Word of God. They probably tell themselves that it was God’s will for them to go through such a condition. They accept themselves, accept the situation, and hope, and some open up to any eventual act of compassion from brothers and sisters in the Church.”

This comment echoes Fubara-Manuel and Fretheim’s (2023) view that Christian spirituality involves the expressions, values, and reflections of the daily lived experience of Christian faith. Villegas (2023) also states that

Christian spirituality is a religious spirituality in which the Christian tradition embraces values and beliefs that give meaning and guide practice toward wholeness and transcendence.

This statement from the focus group suggests a three-stage coping trajectory:

- 1) An early stage characterized by shame, despair, and Active-Avoidance. Women hide their condition, withdraw from child-centred gatherings, and show observable sadness, and, at times, aggressive reactions to stigmatization before private emotional collapse.
- 2) A middle stage marked by progressive indifference and adaptation. Women reported “getting used to” their condition, with reduced emotional reactivity to provocation. A 38-year-old explained her evolution:
“At first, I used to respond, but now I no longer react to hassles; on the contrary, I pray for those people.”
- 3) A late stage that features Meaning-Based acceptance and reintegration. Women “let go” of conception goals, embrace grandmother roles, and reopen themselves to the community. They interpret infertility as divine will.

Church leaders confirmed this progression, noting that over time, women relax and open up to relationships.

Relationship Between Spirituality and Coping Strategy

From regression analysis, Spiritual Transcendence significantly predicted Coping Strategies ($\beta = 0.343$, $p < .000$), accounting for 20.3% of the variance in coping strategies. The 20.3% variance explained suggests that spirituality is one component of a multifaceted coping repertoire. From the qualitative data, environment and contextual factors influencing coping strategy selection include poverty, social support, cultural dynamics, and personality factors. However, the reliance on prayer, omnipresent across all infertility stages and coping strategies, suggests that spirituality functioned as a coping substrate rather than a discrete strategy.

Pearson correlations revealed that Spiritual Transcendence positively correlated with Active-Confronting ($r = 0.50$, $p = .000$), Passive-Avoidance ($r = 0.40$, $p = .000$), and Meaning-Based Coping ($r = 0.20$, $p = .000$), but negatively correlated with Active-Avoidance ($r = -0.14$, $p = .006$). The SPSS output of the correlation analysis is displayed in Table 3 hereafter.

Table 3: Correlation SPSS Output

Correlations						
		1	2	3	4	5
1. ST	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	384				
2. Active Avoidance	Pearson Correlation	-.141**	1			
	Sig. (2-tailed)	.006				
	N	384	384			
3. Active Confronting	Pearson Correlation	.501**	-.034	1		
	Sig. (2-tailed)	.000	.503			
	N	384	384	384		
4. Passive Avoidance	Pearson Correlation	.404**	.012	.273**	1	
	Sig. (2-tailed)	.000	.812	.000		
	N	384	384	384	384	
5. Meaning-Based	Pearson Correlation	.198**	-.127*	.111*	.425**	1
	Sig. (2-tailed)	.000	.013	.029	.000	
	N	384	384	384	384	384
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

From Table 3, all correlations were significant at the 0.01 level. The results indicate that each coping strategy was positively influenced by the spiritual state of the survey respondent, except for the active-avoidant women who, through their choice of coping strategy, testified to a decrease in their spiritual vitality. However, regarding the strength of the relationship, there was almost no relationship between spirituality and active avoidance and meaning-based coping strategies ($r < .25$). The passive-avoidance strategy had a weak relationship with spirituality ($r < .50$). Active-confronting had a moderate relationship with spirituality ($r > .50$). The correlation pattern is better understood with a focus on prayer, expectation, acceptance, and hope found in the qualitative data.

Discussion

The major findings in this study include spirituality/prayer as a coping resource than a distinct strategy, a prayer-centred spirituality, and a three-stage coping trajectory.

Prayer as a Coping Substrate than a Discrete Strategy

The negative correlation of spirituality with Active-Avoidance reveals that spiritually committed women remained present in the church despite their distress, using prayer to endure rather than escape. The same result was found in Asiimwe et al. (2022), where women practiced spiritual coping through prayer. The theme of endurance is found again in the moderate correlation of

spirituality with Passive-Avoidance, suggesting that spirituality enabled endurance (“waiting on God,” as a woman said), but without active resistance. Endurance was also reported in previous studies, alongside thanksgiving, as noted by Çitil Canbay et al. (2022).

The strong positive correlation of spirituality with Active-Confronting echoes concentration on prayer: as women engaged in active problem-solving, they confronted their infertility through spiritual supplication. This resonates with findings on supplication and seeking blessings (Dehghan et al., 2024).

Finally, the weaker correlation with Meaning-Based Coping indicates that while some women achieved acceptance, many maintained hope for conception, limiting existential reframing. These two behaviours align with findings in previous studies: acceptance of the situation of childlessness was found by Taebi et al. (2021), and, in addition, as the will of God in Asimwe et al.’s (2022) study. Hope maintenance was found by Çalışkan and Özkan (2021).

Spirituality significantly predicts coping strategy utilization but explains relatively little variance. This seems to place spirituality within a coping repertoire, alongside many other strategies. This finding aligns with previous research. For example, Annan-Frey et al. (2023) found religious and spiritual strategies for coping, where the women in the study drew upon their religious faith to adapt and relied on their devout conviction as a vital source of spiritual support. However, from the qualitative data, prayer is the spontaneous spiritual practice of women in this study, suggesting that, whatever the strategy in use, prayer is always present in addition. Consequently, prayer functions as a substrate in any act of coping. Thus, spirituality appears as a coping resource. The small amount of explained variance found in the analysis suggests that factors influencing coping strategy selection, namely poverty limiting access to treatment, social support hindered by infertility stigma, religious and cultural dynamics (polygamy, lineage pressure), and personality factors, were not captured by the linear mixed model applied. A context-specific model will more effectively integrate structural factors and cultural features with spirituality for better outcome.

The Three-Stage Coping Trajectory

As an existential crisis, infertility generates trauma and is experienced with grief (Archetti, 2024; Assaysh-Öberg, 2023). The three-stage coping trajectory, from avoidance through confrontation, to acceptance, recalls the grief stages in Kübler-Ross (1969), but with culturally specific expressions. Early shame reflects the “spoiled identity” described by Goffman (1963) within collectivist contexts where individual worth derives from social role fulfilment. Middle-stage indifference signifies emotional regulation through culturally-shaped feminine endurance. Late-stage meaning-making uses

theological resources (such as God's timing or God's will) to reconstruct identity beyond biological reproduction.

Clinical and Pastoral Implications

In clinical practice, the results of this study can inform interventions on multiple levels. For mental health practitioners, the high scores of ASPIRES on the Religious Crisis scale suggest the need for routine screening for spiritual struggle among women with infertility, regardless of their religious or spiritual engagement.

The religious crisis observed among spiritually engaged women require nuanced assessment beyond simple religiosity measures. Cognitive-behavioural family therapy interventions might address maladaptive cognitions such as "God is punishing me", while preserving adaptive spiritual and religious practices.

For church-based counsellors, the qualitative data reveal the dual role of religious communities as both stressor and resource. The experience of feeling stigmatized in church calls for institutional interventions: education challenging pronatalist theologies, support groups normalizing infertility, and pastoral training in reproductive health and infertility stigma sensitivity.

The three-stage coping model shows potential for stage-adapted interventions: early-stage crisis intervention, mid-stage support groups, and late-stage meaning-centred counselling.

The prayer-centred spirituality profile indicates that interventions engaging women's existing prayer practices, such as prayer journaling and intercessory communities, may prove more acceptable than purely cognitive or behavioural approaches. Meanwhile, the low level of scriptural engagement suggests opportunities for bibliotherapy using infertility narratives (Hannah, Sarah, and others) to normalize struggle and model faithful endurance.

Limitations

Limitations include the cross-sectional design, which prevents causal inference; the relatively low level of reliability exhibited by the Religious Sentiments subscales, suggesting cultural measurement challenges; and the evangelical-specific sample, limiting generalizability to other religious traditions. In addition, the 20.3% variance explained suggests the influence of non-measured factors such as family and marital dynamics, economic resources, and medical prognosis. Future research could employ longitudinal designs tracking coping evolution and refining the trajectory with age-related features; incorporate dyadic analysis of couples' spiritual dynamics, and examine male partners' stigma experiences. Comparative studies across Christian denominations, Islamic communities, and traditional religious practitioners would further illuminate tradition-specific coping resources.

Conclusion

This study shows a prayer-centred spirituality profile in the study context. This specific form of spirituality enabled engaged women with infertility in the evangelical church to bear rather than escape, endure without active resistance, confront through spiritual supplication, and accept the infertility condition or maintain hope to conceive, limiting existential reframing. The study establishes that spirituality, particularly prayer-centred transcendence, acts as a substrate, serving as an important but partially effective coping strategy for women. In addition, the study reveals a three-stage coping trajectory from avoidance and shame through indifference, adaptation, and endurance, to meaning-based acceptance, mediated by spiritual practices.

The three-stage coping trajectory offers opportunities for stage-appropriate support. The existence of a religious crisis despite high engagement, along with the documented experience of church-based stigma, suggests that religious communities must address internal contradictions between theological ideals of compassion and cultural practices of exclusion to alleviate the burden of stigma. The prayer-dominated spirituality is an opportunity for mental health care to integrate spiritual resources while challenging stigma-promoting beliefs for improving well-being among this vulnerable population.

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References:

1. Abdallah, M., Dawood, A. S., Amer, R., Baklola, M., Elkalla, I. H. R., & Albehoty, S. B. (2024). Psychiatric disorders among females with prolonged infertility with or without in vitro fertilization/intracytoplasmic sperm injection failure: A cross-sectional study. *The Egyptian Journal of Neurology Psychiatry and Neurosurgery*, 60(1), 60-83. <https://doi.org/10.1186/s41983-024-00858-0>
2. Abekah, I. A., Abraham, W. K., Fynn, Y. G., Gyan, P., Adeyiga, M., M., & Ankrah, P. P. (2025). Traditional and modern approaches to infertility treatment: A case study in Tamale Teaching Hospital. *ARC Journal of Public Health and Community Medicine*, 10(2), 22-31. <https://doi.org/10.20431/2456-0596.1002004>
3. Adane, T. B., Berhanu, K. Z., & Sewagegn, A. A. (2024). Ethiopian women experiencing infertility: Sociocultural challenges and coping strategies. *Cogent Social Sciences*, 10(1), 2324973. <https://doi.org/10.1080/23311886.2024.2324973>
4. Aflakseir, A. & Zarei, M. (2013). Association between coping strategies and infertility stress among a group of women with fertility problem in Shiraz, Iran. *Journal of Reproduction and Infertility*, 14(4), 202-206. <http://www.ncbi.nlm.nih.gov/pmc/articles/pmc3911816/>
5. Ahmed, S. K. (2024). How to choose a sampling technique and determine sample size for research: A simplified guide for researchers. *Oral Oncology Reports*, 12, 100662. <https://doi.org/10.1016/j.oor.2024.100662>
6. Ahmed, S. K., Mohammed, R. A., Nashwan, A. J., Ibrahim, R. H., Abdalla, A. Q., Ameen, B. M. M., & Khedhir, R. M. (2025). Using thematic analysis in qualitative research. *Journal of Medicine, Surgery, and Public Health*, 6, 100198. <https://dx.doi.org/10.1016/j.glmedi.2025.100198>
7. Akarsu, R. H. & Beji, N. K. (2021). Spiritual and religious issues of stigmatization Women with infertility: A qualitative study: Spiritual and religious issues of stigmatization. *Journal of Religion and Health*, 60(1), 256-267. <https://doi.org/10.1007/s10943-019-00884-w>
8. Amjad, A. & Ahmad, K. (2023). Spiritual coping and quality of life in infertile couples: Evidence from a fertility center in Lahore, Pakistan. *Research Journal for Societal Issues*, 5(1), 241-254. <http://dx.doi.org/10.56976/rjsi.v5i1.82>
9. Annan-Frey, L., Boateng, E. A., Lomotey, A., Lartey, C., & Dzomeku, V. (2023). Lived experiences and coping strategies of persons seeking infertility treatment in the Kumasi metropolis: A descriptive

- phenomenological study. *BMC Women's Health*, 23(1), 74. <https://doi.org/10.1186/s12905-023-02194-6>
10. Archetti, C. (2024). Infertility as trauma: Understanding the lived experience of involuntary childlessness. *Culture, Medicine, and Psychiatry*, 48, 940-960. <https://doi.org/10.1007/s11013-024-09871-7>
 11. Asiimwe, S., Osingada, C. P., Mbalinda, S. N., Musingo, M., Ayebare, E., Namutebi, M., & Muwanguzi, P. A. (2022). Women's experiences of living with involuntary childlessness in Uganda: A qualitative phenomenological study. *BMC Women's Health*, 22, 532. <https://doi.org/10.1186/s12905-022-02087-0>
 12. Assaysh-Öberg, S., Borneskog, C., & Ternström, E. (2023). Women's experience of infertility & treatment – A silent grief and failed care and support. *Sexual & Reproductive Healthcare*, 37, 100879. <https://doi.org/10.1016/j.srhc.2023.100879>
 13. Azize Diallo, A., Anku, P. J., & Darkoa Oduro, R. A. (2024). Exploring the psycho-social burden of infertility: Perspectives of infertile couples in Cape Coast, Ghana. *PLoS One*, 19(1), e0297428. <https://doi.org/10.1371/journal.pone.0297428>
 14. Bawadi, H., Al-Hamdan, Z. M., Clark, C. J., Hall-Clifford, R., Hamadneh, J. M., & Al-Sharu, E. E. (2024). Infertile Jordanian women's self-perception about societal violence: An interpretative phenomenological study. *International Journal of Women's Health*, 16, 593-603. <https://doi.org/10.2147/IJWH.S451950>
 15. Bayefsky, M. J. & Caplan, A. (2024, August 08). Treating infertility as a missing capability, not a disease: A capability approach. *Journal of Medical Ethics*, 51(6), 416-419. <https://doi.org/10.1136/jme-2024-109877>
 16. Bayoumi, R. R., Koert, E., Boivin, J., Viswanath, K., & McConnell, M. (2021). Quality of life of Sudanese patients attending a fertility clinic: A mixed method study. *Health Psychology and Behavioural Medicine*, 9(1), 1006-1030. <https://doi.org/10.1080/21642850.2021.2007773>
 17. Bornstein, M., Huber-Krum, S., Norris, A. H., & Gipson, J. D. (2023). Infertility and perceived chance of conception among men in Malawi. *Human Fertility*, 26(3), 504-511. <https://doi.org/10.1080/14647273.2023.2190042>
 18. Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
 19. Brigance, C. A. & Brigance, M. L. (2023). A qualitative study of a couple experiencing reproductive trauma: An attachment perspective through a duoethnography. *Journal of Couple & Relationship*

- Therapy*, 22(2), 105-129.
<https://doi.org/10.1080/15332691.2022.2142716>
20. Buran, G. & Toptaş Acar, B. (2024). The effect of social and emotional capacities on coping strategies and stress in infertile individuals. *Current Psychology*, 43, 29984-29994
<https://doi.org/10.1007/s12144-024-06504-5>
21. Çalıřkan, A. & Özkan, F. S. (2021). Marital violence against infertile women and their coping strategies. *Journal of Psychiatric Nursing*, 12(4), 297-306. <https://dx.doi.org/10.14744/phd.2021.46503>
22. Chamberlain, A. M. (2022). *The spiritual identity of women coping with infertility in a religion stressing fertility* (Publication No. 29999797) [Doctoral dissertation, Fielding Graduate University]. ProQuest Dissertations & Theses Global. <https://search.proquest.com/openview/0debd6c8a8c828c33fcd9be3ccdf776f/1?pq-origsite=gscholar&cbl=18750&diss=y>
23. Çitil Canbay, F., Çitil, E. T., Şadiye Çitil Şap, T., & Şap, O. (2022). Identifying experiences and hopelessness levels of women receiving infertility treatment: A mixed method study. *The American Journal of Family Therapy*, 50(2), 205–226.
<https://doi.org/10.1080/01926187.2021.1905570>
24. Cox, C. M., Thoma, M. E., Tchangalova, N., Mburu, G., Bornstein, M. J., Johnson, C. L., & Kiarie, J. (2022). Infertility prevalence and the methods of estimation from 1990 to 2021: A systematic review and meta-analysis. *Human Reproduction Open*, 2022(4), hoac051. <https://doi.org/10.1093/hropen/hoac051>
25. Dehghan, M., Khodabakhshi-Koolae, A., Heidari, H., & Najdi, N. (2024). Improving daily spiritual experiences and hope among infertile women: The impact of spiritually integrated psychotherapy. *Journal of Research Development in Nursing and Midwifery*, 21(1), 34-37
https://nmj.goums.ac.ir/browse.php?a_id=1562&sid=1&slc_lang=en&ftxt=0
26. Dierickx, S. (2022). With the kanyaleng and the help of God, you don't feel ashamed: Women experiencing infertility in Casamance, Senegal. *Culture, Health & Sexuality*, 24(2), 268-283.
<https://doi.org/10.1080/13691058.2020.1833366>
27. Dolcos, F., Hohl, K., Hu, Y., & Dolcos, S. (2021). Religiosity and resilience: Cognitive reappraisal and coping self-efficacy mediate the link between religious coping and well-being. *Journal of Religion and Health*, 60(4), 2892–2905. <https://doi.org/10.1007/s10943-020-01160-y>
28. Foti, F. L., Karner-Hutuleac, A., & Maftai, A. (2023). The value of motherhood and psychological distress among infertile women: The

- mediating role of coping strategies. *Frontiers in Public Health*, 11, 1024438. <https://doi.org/10.3389/fpubh.2023.1024438>
29. Fubara-Manuel, J. I. & Fretheim, S. (2023). Orality, gender, and West African Christian spirituality: Exploring women's voices. *Religion Compass*, 17(1), e12453. <https://doi.org/10.1111/rec3.12453>
30. Garssen, B., Visser, A., & Pool, G. (2021). Does spirituality or religion positively affect mental health? Meta-analysis of longitudinal studies. *The International Journal for the Psychology of Religion*, 31(1), 4-20. <https://doi.org/10.1080/10508619.2020.1729570>
31. Gerrits, T., Kroes, H., Russell, S., & van Rooij, F. (2023). Breaking the silence around infertility: A scoping review of interventions addressing infertility-related gendered stigmatisation in low- and middle-income countries. *Sexual and Reproductive Health Matters*, 31(1), 2134629. <https://doi.org/10.1080/26410397.2022.2134629>
32. Gezinski, L. B., Carlsen, B., & Hawkins, C. (2021). Motherhood and assisted reproduction in a religious context: Genes, stigma and supports in Utah, United States. *Health and Social Care in Community*, 29(1), 1738-1746. <https://doi.org/10.1111/hsc.13279>
33. Gheysari, A., Farahaninia, M., & Hasanpoor-Azghady, S. B. (2023). Religious coping and health-promoting life style among Iranian infertile women. *Journal of Client-Centered Nursing Care*, 9(4), 255-266. <https://doi.org/10.32598/JCCNC.9.4.159.1>
34. Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. Simon & Schuster, Inc.
35. González Casas, D., Dorado Barbe, A. I., & Gálvez Nieto, J. L. (2025). Profiles of coping strategies in university students in relation to personal and academic variables. *Educación XXI*, 28(1), 103-130. <https://doi.org/10.5944/educxx1.39618>
36. Halevi-Hochwald, I., Green, G., Sela, Y., Radomyslsky, Z., Nissanholtz-Gannot, R., & Hochwald, O. (2023). Converting qualitative data into quantitative values using a matched mixed-methods design: A new methodological approach. *Journal of Advanced Nursing*, 79, 4398–4410. <https://doi.org/10.1111/jan.15649>
37. Hashim, S. A., Soliman, S. M., & Mansour, S. E. (2012). Couples adjustment to failed assisted reproductive technology after counseling. *Nature and Science*, 10(6), 61-74. https://www.sciencepub.net/nature/ns1006/010_8796ns1006_61_74.pdf
38. Henderson, R. R., McCarty, D. L., Currier, J. M., Stefurak, J. T. R., Parker, S. M., & Lambert, A. G. (2025). Is spirituality a verb? How Christian A. A. members conceptualize spirituality. *Journal of*

- Spirituality in Mental Health*, 27(4), 582–604.
<https://doi.org/10.1080/19349637.2024.2441275>
39. Jiang, L., Xiao, L., & Zhong, Y. (2025). Stigma experience of female infertility patients in China: A phenomenological study. *African Journal of Reproductive Health*, 29 (1), 38-45.
<https://doi.org/10.29063/ajrh2025/v29i1.4>
40. Jing, X., Gu, W., Zhang, L., Miao, R., Xu, X., Wang, M., Ramachandran, H. J., & Wang, W. (2021). Coping strategies mediate the association between stigma and fertility quality of life in infertile women undergoing in vitro fertilization-embryo transfer. *BMC Women's Health*, 21(1), 386. <https://doi.org/10.1186/s12905-021-01525-9>
41. Kübler-Ross, E. (1969). *On death and dying*. Macmillan.
42. Kuug, A. K., James, S., & Sihaam, J-B. (2023). Exploring the cultural perspectives and implications of infertility among couples in the Talensi and Nabdam Districts of the upper east region of Ghana. *Contraception and Reproductive Medicine*, 8(28).
<https://doi.org/10.1186%2Fs40834-023-00225-z>
43. Kyei, J. M., Manu, A., Dwomoh, D., Kotoh, A. M., Agyabeng, K., & Ankomah, A. (2022). Ways of coping among women with infertility undergoing assisted reproductive technologies in Ghana. *Pan African Medical Journal*, 41(29).
<https://doi.org/10.11604/pamj.2022.41.29.31319>
44. Litalien, M., Atari, D. O., & Obasi, I. (2022). The influence of religiosity and spirituality on health in Canada: A systematic literature review. *Journal of Religion and Health*, 61(1), 373-414.
<https://doi.org/10.1007/s10943-020-01148-8>
45. Martins, M. V., Peterson, B. D., Almeida, V. M., & Costa, M. E. (2011). Direct and indirect effects of perceived social support on woman's infertility related stress. *Human Reproduction*, 26(8), 2113-2121. <https://doi.org/10.1093/humrep/der157>
46. Mashaah, T., Gomo, E., Maradzika, J. C., Madziyire, M. G., & January, J. (2024). Psychological, sociocultural, and coping experiences of women with infertility using traditional healthcare services in Harare urban, Zimbabwe: A qualitative study. *African Journal of Reproductive Health*, 28(6), 25-38.
<https://pubmed.ncbi.nlm.nih.gov/38979653/>
47. Mirzaasgari, H., Momeni, F., Pourshahbaz, A., Keshavarzi, F., & Hatami, M. (2022). The relationship between coping strategies and infertility self-efficacy with pregnancy outcomes of women undergoing in vitro fertilization: A prospective cohort study.

- International Journal of Reproductive Biomedicine*, 20(7), 539-548.
<https://doi.org/10.18502/ijrm.v20i7.11556>
48. Moutzouri, M., Sarantaki, A., Koulierakis, G., & Gourounti, K. (2024). Coping strategies associated with emotional adjustment during the dyadic experience of infertility and its treatment: A systematic review. *Journal of Mother and Child*, 28(1), 61-69.
<https://pubmed.ncbi.nlm.nih.gov/articles/PMC11265839/>
49. Mpono, E. P., Kobenge, F. M., Mengne, G. L., Belinga, E., Kasia, J. M., & Egbe, T. O. (2024). The support systems and coping strategies of infertile women attending the out-patient consultation unit of CHRACERH Yaoundé, Cameroon: A cross-sectional study. *Open Journal of Obstetrics and Gynecology*, 14(6), 869-887.
<https://doi.org/10.4236/ojog.2024.146070>
50. Naab, F., van der Wath, A. E., Kyei, J. M., & Armah, D. (2025, March 31). Spirituality as a coping strategy for infertility: A scoping review. *Journal of Religion & Health*. <https://doi.org/10.1007/s10943-025-02302-w>
51. O'Connell, S. B. L., Gelgoot, E. N., Grunberg, P. H., Schinazi, J., Da Costa, D., Dennis, C.-L., Rosberger, Z., & Zelkowitz, P. (2021). 'I felt less alone knowing I could contribute to the forum': Psychological distress and use of an online infertility peer support forum. *Health Psychology and Behavioural Medicine*, 9(1), 128-148.
<https://doi.org/10.1080/21642850.2021.1884556>
52. Odek, A. W., Kwaka, T., Mulinge, M., & Koyi, S. (2021). An assessment of the coping strategies to address infertility among couples in Kisumu County, Kenya. *African Journal of Health Sciences*, 34(3), 384-391.
<https://www.ajol.info/index.php/ajhs/article/view/212325/200237>
53. Ofosu-Budu, D. & Hänninen, V. (2021). Explanations for infertility: The case of women in rural Ghana. *African Journal of Reproductive Health*, 25(4), 142-152. <https://pubmed.ncbi.nlm.nih.gov/37585801/>
54. Okantey, G. N. O., Adomako, E. B., Baffour, F. D., & Lim, D. (2021). Sociocultural implications of infertility and challenges in accessing assisted reproductive technology: Experiences of couples from two health facilities in southern Ghana. *Marriage & Family Review*, 57(5), 375-396. <https://doi.org/10.1080/01494929.2021.1880529>
55. Péloquin, K., Arpin, V., Jacmin-Park, S., Beaulieu, N., & Brassard, A. (2024). A dyadic study of attachment, coping, and quality of life in couples seeking fertility treatment. *Journal of Sex & Marital Therapy*, 50(5), 659-674. <https://doi.org/10.1080/0092623X.2024.2347422>
56. Piedmont, R. L. (2010). *Assessment of spirituality and religious sentiments scale technical manual* (2nd ed.). Timonium.

57. Piedmont, R. L. (2020). *Assessment of Spirituality and religious sentiments scale technical manual* (3rd ed.). Timonium.
58. Piotrowski, J. P., Żemojtel-Piotrowska, M., Piedmont, R. L., & Baran, T. (2021). The Assessment of Spirituality and Religious Sentiments (ASPIRES) scale: Examining a spiritual transcendence nomological net in Polish context. *Psychology of Religion and Spirituality*, 13(1), 36-45. <https://psycnet.apa.org/doi/10.1037/rel0000273>
59. Pirutinsky, S., Cherniak, A. D., & Rosmarin, D. H. (2020). COVID-19, mental health, and religious coping among American Orthodox Jews. *Journal of Religion & Health*, 59(5), 2288-2301. <https://doi.org/10.1007/s10943-020-01070-z>
60. Rathore, L. N. & Kriplani, V. (2023). Integrating spirituality into psychotherapy practice in mental health: ethical issues, challenges and possible way out. *International Journal of Health Sciences and Research*, 13(3), 167-173. <https://doi.org/10.52403/ijhsr.20230316>
61. Sargeant, S. & Yoxall, J. (2023). Psychology and spirituality: Reviewing developments in history, method and practice. *Journal of Religion and Health*, 62, 1159–1174. <https://doi.org/10.1007/s10943-022-01731-1>
62. Schmidt, L. (2006). Infertility and assisted reproduction in Denmark: Epidemiology and psychosocial consequences. *Danish Medical Bulletin*, 53(4), 390-417. <https://pubmed.ncbi.nlm.nih.gov/17150146/>
63. Schmidt, L., Christensen, U., & Holstein, B. E. (2005). The social epidemiology of coping with infertility. *Human Reproduction*, 20(4), 1044-1052. <https://doi.org/10.1093/humrep/deh687>
64. Smith, C. M., Tang, M. Y., Clark, G., & Madgwick, S. (2025). How do coping strategies influence fertility-related information seeking/avoidance? *Human Fertility*, 28(1), 2488759. <https://doi.org/10.1080/14647273.2025.2488759>
65. Sena, M. A. dB., Damiano, R. F., Lucchetti, G., & Peres, M. F. P. (2021). Defining spirituality in healthcare: A systematic review and conceptual framework. *Frontiers of Psychology*, 12, 756080. <https://doi.org/10.3389/fpsyg.2021.756080>
66. Sharma, A., Srivastava, R., Patel, R., Saraswathy, K. N., Puri, M., Babu, N., & Mahajan, C. (2024). Kinship support and coping with infertility: A qualitative study of women struggling with infertility from Delhi-NCR, India. *Women's Studies International Forum*, 108, 103018. <https://doi.org/10.1016/j.wsif.2024.103018>
67. Tabaecian, S. R. & Piedmont, R. L. (2024). Factor analysis and reliability of the Assessment of Spirituality and Religious Sentiments (ASPIRES) Scale in an Iranian sample. *Mental Health, Religion &*

- Culture*, 27(2), 176-188.
<https://doi.org/10.1080/13674676.2022.2150999>
68. Taebi, M., Kariman, N., Montazeri, A., & Majd, H. A. (2021). Infertility stigma: A qualitative study on feelings and experiences of infertile women. *International Journal of Fertility and Sterility*, 15(3), 189-196. <https://doi.org/10.22074/ijfs.2021.139093.1039>
69. Tusasiirwe, S., Nabbumba, D., & Kansiiime, P. (2023). Religion and spirituality in social work in Uganda: Lessons for social work education. *Social Work Education*, 42(2), 202-219. <https://doi.org/10.1080/02615479.2022.2104243>
70. Villegas, D. R. (2023). Mysticism as a dimension of Christian spirituality. *Interpretation: A Journal of BIBLE and Theology*, 77(2), 122-131. <https://doi.org/10.1177/00209643231155536>
71. Wasti, S. P., Simkhada, P., van Teijlingen, E. R., Sathian, B., & Banerjee, I. (2022). The growing importance of mixed-methods research in health. *Nepal Journal of Epidemiology*, 12(1), 1175-1178. <https://doi.org/10.3126/nje.v12i1.43633>
72. Whitley, G. A., Munro, S., Hemingway, P., Law, G. R., Siriwardena, A. N., Cooke, D., & Quinn, T. (2020). Mixed methods in pre-hospital research: Understanding complex clinical problems. *British Paramedic Journal*, 5(3), 44-51. <https://doi.org/10.29045/14784726.2020.12.5.3.44>
73. Wnuk, M. (2024). The mechanisms underlying religious coping and hopelessness: Role of meaning in life and affectivity. *Pastoral Psychology*. <https://doi.org/10.1007/s11089-024-01181-4>
74. World Health Organization (2023). *Infertility prevalence estimates, 1990–2021*. WHO Press.
75. Yilmaz, T. & Oskay, U. Y. (2016). The Copenhagen Multi-centre Psychosocial Infertility (COMPI) fertility problem stress and coping strategy scales: A psychometric validation study in Turkish infertile couples. *International Journal of Caring Sciences*, 9(2), 452-462. https://internationaljournalofcaringsciences.org/docs/9_Yilmaz_original_9_2.pdf