

Pain and Spirituality Among Women With Advanced Breast Cancer

Insights From a Phenomenological Study

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Abstract

Background: Women with advanced breast cancer often experience significant pain. Previous studies indicate that spirituality may serve as a resource to alter pain perceptions; yet, the role of spirituality in pain management has not been examined as a lived experience among this population.

Objective: This study qualitatively explored how women with advanced breast cancer describe their experiences with spirituality, pain, and how they perceived their spirituality as influencing their pain.

Interventions/Methods: Guided by Self-transcendence Theory, a phenomenological approach was taken. Women were recruited via tumor registry mailings through a community cancer center. Face-to-face semistructured interviews (N = 9) were conducted. An inductive, interpretive data analysis approach was used, using open-coding thematic analysis conducted by 2 investigators.

Results: Participants were Caucasian and Christian, with a mean age of 61 years. Findings revealed the complex, multidimensional nature of pain and broad encompassing experiences of spirituality. Themes included: (1) spirituality provides positive cognitive framing to help face pain; (2) spirituality elicited supportive emotions such as peace and tranquility despite pain; (3) spiritual practices serve as pain self-management tools; and (4) connection with others and service activities (aspects of spirituality) help women cope with pain.

Conclusions: While various routes were mentioned, most women found spirituality to alter pain experiences in supportive ways. Greater attention to spirituality may open new avenues of research and expand insights for development of nurse-designed pain management interventions.

What is Foundational: Women with advanced stage breast cancer identify pain as a total (physical, cognitive and emotional) experience that needs another total experience to overcome it. Spirituality is an intentional total experience that quiets the mind, and keeps the women in the present moment with a positive cognitive frame and altered positive emotional states including peace and tranquility.

Keywords: Breast cancer, Cancer, Pain, Phenomenological, Spirituality

Introduction

Despite significant advancements in symptom management, a high proportion of women with advanced breast cancer report pain.¹ The overall 5-year relative survival rate for women with metastatic breast cancer is low (15%–22%),² making symptom management a critical concern. Inadequate management of pain inhibits comfort, impedes quality of life, and can be associated with reduced survival length for cancer patients.³ Pain is one of the most feared and burdensome symptoms of cancer,⁴ calling for additional research to guide comprehensive management.

Pain has been defined as a distressing experience with interacting sensory, cognitive and emotional components, which may be associated with actual or perceived tissue damage.^{5–8} Being a complex, multidimensional phenomenon, the experience of pain is known to be modulated by alterations in thoughts and feelings.^{7,9} Pain in advanced cancer can be exacerbated by challenging thoughts and feelings associated with uncertainty about the future, lack of control, and fear of death.¹⁰ Novel approaches are needed to support patients who are experiencing these difficult thoughts and feelings, potentially improving the overall experience of pain. Spirituality is one area warranting further investigation.¹¹

Women with advanced breast cancer have cited spirituality as an important resource for facing their disease experience, including their symptoms.¹² Spirituality is most commonly defined as a dynamic process by which humans experience connection with self, others, nature or higher power, and a sense of meaning,^{13–15} thus serving as a resource when facing cancer and its associated symptoms.^{11,12} Spirituality can contribute to a broader cognitive understanding of the self and the universe,¹⁶ making a painful experience seem less significant overall. Additionally, spirituality promotes feelings of emotional safety and security in the face of difficulty.^{17,18} Due to these positive effects on thoughts and emotions, spirituality could feasibly be one avenue for altering the psychological aspects of pain, serving to modulate painful experiences.¹⁹ Additionally, there is evidence that spirituality increases the use of self-management interventions focused on relieving pain (such as exercise, relaxation, medication adherence complementary therapies, and activity cycling), thus indirectly improving this symptom.^{16,17}

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Previous quantitative studies have reported significant relationships between pain and spirituality in varying samples of cancer patients^{20–22}; however, there have also been conflicting findings.²³ The impact of spirituality on pain has currently not been examined from a qualitative perspective among women with advanced breast cancer. Additionally, explanations of the potential mechanisms underlying the relationship between spirituality and pain have not been explored. Understanding how spirituality contributes to the overall experience of pain could be the first step in developing comprehensive pain management interventions that include spirituality. Qualitatively exploring how women with advanced breast cancer describe their lived experience with pain and spirituality, this study provides insight into how these concepts relate.

Pamela Reed's theory of Self-transcendence (ST) was adapted as a conceptual framework for this research.²⁴ The theory of ST includes the concepts of vulnerability (awareness of mortality), ST (expanding boundaries on multiple personal levels), well-being (subjective sense of health or wholeness), and personal/contextual factors.²⁴ Adapted in accordance with the aims of this study, Reed's theory of ST views advanced breast cancer as a condition contributing to vulnerability, where spirituality is aligned with ST, and the lived experience of pain is the outcome which indicates an aspect of well-being. With modifications, ST theory indicates that spirituality may alter the way pain is experienced in women with advanced breast cancer.

Purpose

This study explored the meaning of both pain and spirituality for women with advanced breast cancer and examined the lived connection between women's spirituality and their perceived pain using a qualitative approach. Understanding how women experience their spirituality and its possible contribution to pain provides new insights, which can potentially improve comprehensive symptom management.

Methods

This study used a qualitative approach, using interpretive phenomenological analysis (IPA) as the guiding methodological framework. IPA aims to provide the detailed account of the personal lived experiences of participants.²⁵ This approach is viewed as a co-construction of meaning between participants and investigators, as understanding of the patients' perspectives can only be gained through interpretive analytic work of the investigators.²⁶ IPA is particularly well-suited for topics which are complex, ambiguous, and emotionally laden,²⁷ such as pain, spirituality, and their relationship. In this study, the IPA approach included in-depth semistructured interviews and open-coding thematic analysis conducted by multiple investigators. Institutional Review Board approval was obtained before beginning the research.

Participants and Setting

Women were recruited based on the following criteria—Inclusion: (1) age ≥ 21 years; (2) documented diagnosis of stage III or IV breast cancer; (3) able to speak English; (4) access to telephone; (5) able to hear normal conversation; (6) cognitively oriented; (7) living ≤ 40 miles from recruiting location (to reach participants for in-person interviews); and (8) pain ≥ 2 on a 0–10 scale. Exclusion: (1) diagnosis of major mental illness (such as schizophrenia or bipolar disorder) which could impact the ability to participate.

Recruitment included sending mailings via the tumor registry at a community-based cancer center. Potentially eligible women were identified based on a confidential search through the tumor registry using the inclusion criteria. Mailings included

a letter from the investigators, a flyer with study information, and a prestamped post card for women to send back indicating interest in participation. Women were offered a \$25 gift card as compensation for their participation. Mailings were sent out to 140 women with a 23% return rate. Primary reasons for non-participation included: too busy, not interested, and not currently experiencing pain. For women who did indicate interest in participation, primary reasons for nonenrollment included: unable to reach by telephone and not eligible.

Data Collection

Data were gathered through 9 in-depth semistructured interviews completed by the principal investigator. Interviews were primarily conducted in participants' homes. Using IPA methods, data collection continued until additional interviews did not result in new themes (saturation), generally occurring within 6–12 interviews.²⁸ The interview process included developing rapport, conducting informed consent, conducting the in-depth semistructured interview, and completing a standardized demographic form.

Following IPA procedures developed by Smith,²⁶ a guide was created to outline areas of interest for discussion in the interview. This interview guide was developed in collaboration with content experts and experienced qualitative researchers, using the theory of ST and the accompanying model for conceptual grounding.²⁴ Beginning with a broad question to explore women's experiences with advanced breast cancer, the emphasis of the interview was then focused on participants' experiences with pain and spirituality. Questions were developed to gain insights into the nature of these phenomena and their potential relationships. The interview guide was not meant to be prescriptive; questions were adapted as necessary throughout the interview process to fit the context and to gain greater depth and clarity when necessary.²⁶ See Table 1 for an overview of questions included in the interviews.

Preparation for interviewing included consultation with experienced phenomenological researchers and review of landmark phenomenological texts^{26,29,30} to gain understanding of broad and inclusive ways to explore phenomena of interest. The first author conducted all interviews, accompanied by a research assistant. Interviews were audio recorded and transcribed by a qualified transcription service. Field notes were completed after each interview and throughout the research process.

Data Analysis

Qualitative data analysis commenced at the initiation of data collection. Data were confidentially transcribed verbatim as each interview was completed. An inductive, interpretive analysis approach was used, where themes were allowed to emerge from the data, rather than applying preconceived constructs.²⁷ Verbatim transcripts of the qualitative interviews served as raw data and the analysis followed IPA procedures outlined by Smith.²⁶ Based on these predefined procedures, analysis included the following steps: (1) each interview transcript was read multiple times to ensure a thorough understanding of the entire interview; notes were taken, but no codes or themes were applied during this stage; (2) starting at the beginning of each interview transcript, the text was re-read and initial codes were identified, hand-writing them in the margins; (3) attention was then focused on the themes, applying definitions and establishing interrelationships; following additional readings, emergent codes were condensed, and themes were developed; definitions were organized into a codebook and data were then sorted electronically; themes and codes were amended throughout the analysis process as new transcripts became available; and (4) themes were organized into consistent and meaningful statements about the data; representative participant quotes were selected for each theme.

Table 1.
Interview Questions

Primary Questions	Follow-up Questions
Tell me about your journey with breast cancer. Please describe your experience with pain.	How does pain impact your experience? What are your painful sensations like? What are your thoughts like when you are experiencing pain? What are your emotions like when you are experiencing pain? When do you most feel pain? If you are feeling pain, how long does it usually last? Do you experience pain on a regular basis? What types of things help you when you feel pain? Do your activities vary by the level of pain? How do you cope with your pain/illness? What does spirituality look like for you?
How does spirituality impact your experience?	Do you engage in any spiritual practices? If so, how would you describe them? How do you express/connect with spirituality? [How] Has your spirituality changed since your breast cancer diagnosis? [How] Has your awareness of your beliefs/values/dreams changed since your breast cancer diagnosis? What role does intuition (or "inner guidance") have? [How] Have your relationships with others changed since your breast cancer diagnosis? [How] Has your relationship with nature/the environment changed since your breast cancer diagnosis? Could you describe any connection(s) you feel with a higher power, or anything beyond the ordinary/observable world? When you think about your past experiences and your future, what gives your life meaning?
[How] do you see your spirituality as impacting your pain?	Please describe your thoughts/beliefs about the relationship between your spirituality and pain. How would you describe your thoughts/beliefs about the purpose/meaning of your pain?
Are there any final thoughts you would like to share?	

For the first 4 interviews, 2 investigators independently reviewed the data. These investigators met to discuss the analysis, develop preliminary codes, and determine any areas requiring further exploration. Throughout the data collection and analysis process, the 2 investigators met regularly to discuss the data and emerging themes. As with other studies following IPA procedures, this process was not intended to produce a single definitive analysis or a certain inter-rater reliability score, but rather to verify that the analysis presented by the first author was systematically achieved and supported by the data.²⁷ Finally, the refined list of themes and representative participant quotations was reviewed by all authors.

For qualitative work, attention to trustworthiness (including credibility, dependability, confirmability, transferability, and authenticity) is paramount,³¹ and was built into this study at multiple points. Trustworthiness was maintained by creating a codebook throughout the data analysis process, linking each emerging code and theme to its intended meaning,³² discussing findings between 2 separate coders at multiple points throughout the analysis process,^{26,33} and cross-checking each major code with data collected from multiple participants (triangulation).³⁴ Furthermore, trustworthiness was facilitated with the use of meticulous field notes after each interview, maintaining analytic memos throughout the data analysis process, describing details about the context of the research in this published report³⁵ and presenting verbatim evidence along with each proposed theme.²⁶ Each of these measures were taken to ensure optimal trustworthiness of results.

Results

Nine women with advanced breast cancer were interviewed individually in early 2020. Duration of the interviews ranged from 45 to 60 minutes each. Eight of interviews were completed at the participants' homes and one was completed in a private room in a University research office, according to participant preference. All women in this study were Caucasian. Many were married ($n = 5$) with high levels of education (all participants reported at least "some college"). Mean age was 61 years. All participants had either Stage III or IV breast cancer. Hormonal treatment was most commonly received ($n = 4$), followed by chemotherapy ($n = 1$), chemotherapy/targeted therapy ($N = 1$), chemotherapy/hormonal ($n = 1$), and unknown treatment ($N=2$). All women reported pain

of 2 or higher on a 0–10 scale. See Table 2 for information on participant demographic and health characteristics.

Overall, findings from this study support the complex, multidimensional nature of both pain and spirituality. Pain was described as a broad, dynamic experience impacting many life domains. Some women experienced ongoing chronic pain, while others had a more cyclical encounter with this symptom. Participants often specified if they were referring to "physical" or "emotional" pain, while some women talked about these aspects interchangeably. Many women described pain as being intertwined with other symptoms and discussed how their symptom experience changed over time throughout their advanced breast cancer journey.

The phenomenology of spirituality was described in broad and encompassing ways. Overall, spirituality was experienced as a sense of embodied presence (being in the present moment), often including feelings of appreciation. Spirituality was lived out through connection to one's own sense of a higher power, family, nature, pets, and community; each seen as useful resources when facing pain. For some women, spirituality also incorporated specific spiritual practices and service activities that helped them cope with pain. Themes were identified to characterize how spirituality impacted the experience of pain that included: (1) spirituality provides positive cognitive framing to help women face pain; (2) spirituality elicited supportive emotions such as peace and tranquility despite pain; (3) spiritual practices serve as pain self-management tools; and (4) connection with others and service activities (aspects of spirituality) help women cope with pain. Overall, depth and breadth were provided about the phenomenon of spirituality and how it can contribute to experiences of pain among women with advanced breast cancer.

Theme 1: Spirituality Provides Positive Cognitive Framing to Help Women Face Pain

Participants shared how spirituality provided a constructive frame of mind to interpret their experiences with breast cancer, and specifically with their pain. Women described how a positive perspective stemming from cognitive reframing altered their relationship with pain. One participant shared that the breast cancer bone metastases were so painful that she lost nearly all function, including her ability to stand and walk. Her recovery,

Table 2.
Participant Characteristics^a

Participant #	Age (y)	Cancer Stage	Treatment Type	Marital Status	Level of Education	Employment Status
1	78	IIIA	Hormonal	Married	Some college or 2-y degree	Retired
2	61	IV	Hormonal	Divorced/separated	4-y college graduate	Retired
3	43	IV	Chemotherapy/hormonal	Married	>4-y college degree	Employed full time
4	62	IV	Targeted therapy/chemotherapy	Married	4-y college graduate	Unable to work
5	80	IV	Hormonal	Widowed	Some college or 2-y degree	Retired
6	62	IV	Hormonal	Never Married	4-y college graduate	Retired
7	61	IV	Chemotherapy	Married	>4-y college degree	Employed part time
8	47	IIIA	Unknown	Divorced/separated	Some college or 2-y degree	Unable to work
9	53	IIIA	Unknown	Married	4-y college graduate	Employed full time

^aAll participants were Caucasian (non-Hispanic or Latina) and identified as Christian for religious preference.

despite continued pain, has been supported by her spirituality, which she described as bringing about a positive framing of the situation and a sense of gratitude.

“I’ll talk about God a little bit... You go through life and you’re always saying in your prayers, what you want... You’re always asking for something... What I found is that when you have nothing, you can’t even get up and go to the bathroom, when you have nothing, you become very grateful for what you have... There comes up an acceptance, it’s like I’m grateful. I stand upright. I’m grateful that I walk. I am grateful that I can sit in my chair for more than 15 minutes. I’m grateful that like, I don’t have my back brace on right now. I’m grateful that I’m getting better. I’m grateful for my home, my family, my improving health, and I’m grateful for any time I have left. I refuse to waste one minute being upset about what might happen.” (Participant #4)

Another participant shared how spirituality helped her adjust expectations of what she could do when facing days with higher pain. She described how spirituality brought about an attitude of acceptance toward negative and changing circumstances.

“I guess that spiritually is the fact that you’ve got to keep a positive attitude. You’ll have bad days [with pain]. I feel that I’m not able to do what I used to be able to do... That’s hard to accept. You learn what your limitations are.” (Participant #6)

Women described how spirituality (often stemming from religious beliefs) brought about a favorable mindset for them during challenging times, allowing them to let go of fears and worries. This supportive mindset was described as an asset when facing pain.

“If you work it up, that’s going to be terrible. It is. I’m a firm believer that whatever your mind believes every fiber in your body makes it come true. It is a self-fulfilling prophecy and so it’s very important to check your mindset. Like when you get up in the morning, it’s like today’s going to be a good day. I don’t try to trick myself into saying there will be no pain because I know there will be, but it’s going to be a good day... I’ve [studied a lot about] how Christ has come, and He has freed you from the chains of sin and bondage. That’s a great gift, embrace it. Use your freedom. He says, I’ll take care of burden, okay, I’ll give to you. He says, don’t worry about tomorrow, okay, I won’t. I don’t need to do those things.” (Participant #4)

In general, spirituality was found to serve as a beneficial resource to help women cognitively structure their experiences with pain. With resultant positive perceptions, women were able to better face various difficult experiences associated with their cancer diagnoses, including pain.

Theme 2: Spirituality Elicited Supportive Emotions Such as Peace and Tranquility Despite Pain

Participants reported that their sense of spirituality provided experience of peace and tranquility amidst their challenging

circumstances, including their pain. Women described feeling a presence of something greater than themselves, providing solace during difficult painful times.

“I just feel like if you’re in a better mental headspace... I mean, I talked today about God, but I really believe that there are some people that it could be Buddha or any level of spirituality if you just have that connection and can help calm yourself. I think anxiety and being overwhelmed or just feeling anxious can make pain worse.” (Participant #3)

Intentionally connecting with a higher power, however, this was understood, was seen as a way to tap into this peaceful, calm state, even in the midst of discomfort. Women primarily accessed feelings like calm and tranquility through connection with a higher power, often by practicing prayer or mediation.

“They [family] see me in pain or discomfort or when I can’t do something, which I can do a whole lot more than I could before, but it still—and I think, “Thank you, God, for getting me this far.” Then I start havin’ conversations [with God]. It reduces my fear of the unknown. It reduces my pain, physical pain, considerably. It’s like it just eases up.” (Participant #7)

Overall, women described supportive emotional effects of their spirituality on their experiences with pain. These included feelings of peace, tranquility, acceptance, and calm that override fear and anxiety amidst challenges such as facing advanced breast cancer and pain. Women accessed these beneficial emotional effects in many ways, including intentional connection with their own sense of a higher power.

Theme 3: Spiritual Practices Serve as Pain Self-management Tools

Various spiritual practices were cited as important for women when coping with pain. Spiritual practices were seen as activities which allowed participants time and space to quiet the mind, explore habitual ways of thinking and connect with a sense of something greater. Prayer, meditation, visualization, reading spiritual texts, and creating art were discussed as spiritual practices that women employed, having the capacity to alter their experiences with pain. Prayer was seen as a way to connect with a sense of something greater than oneself and to ask for help.

“I worry a lot about recurrence... I know I just pray every night that whatever pain I’m havin’ is not a recurrence of anything.” (Participant #1)

“You pray because like I said, I don’t want to be hooked on any drugs. I don’t want to take drugs. I would prefer not to. You just pray that God will relieve that pain and that’s pretty much what I do. Sometimes He does. Sometimes He doesn’t.” (Participant #6)

Women described prayer and meditation as providing a focus that could quiet the mind of worries and ruminations, bringing

about a sense of comfort amidst pain. These spiritual practices also provided positive distraction from pain, redirecting challenging thoughts and emotions that can exacerbate this symptom.

“I found, all of a sudden, it’s like, wow, this really works, this deep breathing, concentrating on in and out, breathing deep. I started realizing that I was doing that at the same time that I was praying in my head, or even sometimes, if it [the pain] got bad, I’d start sayin’ it out loud...” (Participant # 7)

Visualization practices were common techniques that women used to cope with pain, which some considered an aspect of their spirituality. Women used various visualization techniques and often reported relief from their use.

“For me, at that time in my life, especially when I was first diagnosed and not feeling great [experiencing pain] and all the uncertainty, spirituality was a big help for me. I did a lot of visualization, and so I visualized that at night, I was sleeping in God’s hands. I was sleeping in his hands, and I was sleeping in his radiant light. That’s how I would fall asleep at night. Every night, I would be like, I’m in God’s hands, and he’s gonna heal me. That was just my visualization and my mantra.” (Participant # 3)

“If you focus on your pain, that’s what you are focused on, that’s what’s going on and the receptors are yelling at you. I think it’s real important not to focus on pain. It’s almost like, a block. If you can build a little brick wall up there, and go okay pain’s over here and the rest of my life’s over here, I guess I do a lot of mental imagery to control pain and to let God’s help come in.... I think it’s very important, the coping mechanisms of shutting the pain away and building a block, a wall, and trying to stay physically active and listening to God, I think all of that is very important for pain control.” (Participant # 4)

Spiritual practices such as prayer, meditation, and visualization were found to be important activities to help cope with challenges such as pain. These practices, among others, were used in the moment of facing pain and were experienced as providing inner quiet and comfort.

Theme 4: Connection With Others and Service Activities (Aspects of Spirituality) Help Women Cope With Pain

Connection and service activities each had the capacity to constructively influence pain for some women. Participants described focusing on connection to family, friends, pets, and other people with cancer as a source of strength when facing advanced breast cancer and dealing with pain.

“If you aren’t healthy mentally that can translate into having more body pain... I think spirituality and just having that connection typically brings you to a circle of people that can help with that, too, so that gives me more of a tribe, so I have people to talk to and connect with. I think that also makes you feel better so you’re not alone... So having that spirituality then leads to connection with other women and other people.” (Participant # 3)

In some cases, participation in a religious community provided connection that helped women feel supported, despite struggles with cancer and associated pain.

“Going to church every Sunday and talking to the people that I know there has helped, and their ability to sympathize with [my cancer and pain] and understand.” (Participant #5)

When asked about how spirituality plays out in their lives, many participants talked about engaging in service activities. Women described how participation in varied types of service activities (which many considered part of their spirituality) was beneficial when facing pain. Service activities such as volunteering and sharing knowledge with others provided a broader perspective on their individual lives and contributed to their sense of purpose. Participating in these service activities also brought helpful distraction to women when they were facing pain.

“That week I’m [leading the survivorship retreat], it’s not about my cancer or my pain. You know what the craziest thing is? This is gonna sound crazy, but seriously, that week I was there... I did not have pain. I remember thinking, this is gonna be scary. I’m in charge, and I’m gonna be up early and stay up late. I hope that my body can do this, and it did. I flew away thinking, I really didn’t have pain. I think ‘cause I was so focused on helping everybody else and making sure that they were having an amazing time.” (Participant # 3)

In general, connection with others and engagement in service activities were found to be significant aspects of spirituality which were helpful for women when they faced pain. These connections took many forms, including supportive relationships with family, friends, pets, and other people with cancer. Service activities also varied but seemed to provide numerous benefits. Overall, experiences of connecting with others and engaging in service activities (described as aspects of spirituality) provided women with a sense of purpose and constructive distraction, both beneficial when facing pain.

Discussion

Women in this study discussed pain as a dynamic experience that impacted many aspects of their lives. Participants experienced pain as being intertwined with other symptoms to create an inclusive experience that they often referred to broadly as “pain.” Overall, this study highlights how spirituality can serve as a beneficial resource to help women face experiences of pain in advanced disease. Many women in this study experienced spirituality as an asset when facing pain, although spirituality was lived out differently by each participant. These women with advanced breast cancer often experienced spirituality as a sense of present moment awareness, appreciation, and connection with something greater than oneself. Spirituality was lived out in broad and encompassing ways, including connection to one’s own sense of a higher power, family, nature, pets, and community. For some women, spirituality also encompassed service activities and spiritual practices, which helped bring about present moment awareness, quiet the mind, reframe thoughts, and connect to a sense of meaning when facing pain. The phenomenological view of spirituality uncovered in this study aligns closely with the conceptual approach to spirituality described in the current literature.^{13–15} These findings support the idea that spirituality is a phenomenon that is broader than following specific religious traditions¹⁶; it is a unique, dynamic experience of embodied presence (being in the present moment) that can be beneficial for women when they are experiencing pain.

Spirituality was found to be a powerful cognitive reframing technique, positively altering emotional states, and constructively impacting the experience of pain for many women. Previous research supports the idea that the frame or meaning ascribed to pain can alter the painful experience.³⁷ Some women seemed to automatically tend toward optimistic framing of their advanced breast cancer diagnoses and pain experiences through a spiritual lens, others described continually working toward maintaining an optimistic view, while a few women in the study did not seem to intrinsically align as strongly with a spiritual framing of their circumstances.

The current study uncovered how spirituality can bring about affirming emotional states (such as peace and tranquility), which many women found beneficial when facing pain. Prior evidence suggests that aspects of spirituality, such as connection with a higher power and meaning, may provide a sense of safety and security in the face of difficulty,^{17,18} and that emotional states can significantly impact pain experiences.⁹ Women in this study talked about how spirituality provided solace when facing overwhelming feelings of anxiety and fear, which helped decrease their pain. This finding is supported by prior work showing that activation of fear, anxiety, and anger can exacerbate pain, while supportive

emotional experiences such as calm and relaxation can lessen this symptom.^{7,37} Findings from this study support the idea that pain has interconnected physical, cognitive, and emotional components working together to create the total painful experience.⁵⁻⁷

Previous research supports the use of practices such as meditation, prayer, and visualization as components of comprehensive pain management.^{9,38-40} Women in this study reported finding comfort in these practices and seeing them as opportunities to redirect or transcend challenging thoughts and provide constructive distraction, which is supported by prior research.³⁹ Alterations in emotions and opportunities for distraction can both be powerful in the modulation of pain experiences.⁷ In this study, women used varying spiritual practices (with a main focus on prayer, meditation, and visualization) when facing pain, and described a sense of relief from their use.

Women in this study also described connection with others and service activities as important aspects of their spirituality, helping them cope with pain. Various types of social support have been found to contribute to the amelioration of the experience of pain in women with breast cancer⁴¹ and prior research highlights the value of social support when facing pain.^{42,43} Women in this study described the importance of service activities in pain alleviation, aligning with prior findings that chronic pain sufferers who engaged in volunteer work reported a greater sense of purpose and decreased pain.⁴⁴ The sense of safety, comfort, and meaningful distraction provided by connection to others and service activities can be important for women with advanced breast cancer when facing pain.

The Theory of ST, which guided this work, was predominantly supported by the findings, and was potentially extended. Women described an enhanced sense of spirituality subsequent to their advanced breast cancer diagnosis, aligning with Reed's view of vulnerability facilitating ST.²⁴ ST theory was also supported in that spirituality was seen as a helpful resource, having the capacity to modify experiences of pain. Overall, participants in this study described varying degrees and interpretations of spirituality. Despite most women in this study relaying a strong personal sense of how spirituality impacted their pain experiences, some participants seemed to experience less intrinsic connection to this phenomenon. This finding illuminates to a need for investigation into whether the strength of relationships in ST theory may vary among women with different characteristics. Findings potentially extend ST theory, as some women described their pain (an aspect of well-being) as impacting their experience with spirituality (ST). This could add a novel dimension to the traditional view of ST theory, in that well-being may have the capacity to alter ST among women with advanced breast cancer. Overall, findings reflect the fact that all women with advanced breast cancer experience varying perceptions of, and experiences with, spirituality, and that spirituality can serve as a supportive resource for some women when facing pain.

Limitations

As with all studies, limitations exist. First, women in this sample were extremely homogenous, with the majority identifying as Caucasian, Christian, and married. These results may not reflect the experiences of spirituality and pain of women from different racial, ethnic and religious backgrounds. Due to the nature of the study, women who had a greater connection to spirituality and a stronger sense of how spirituality impacted their pain experiences were likely more interested in participating. Because participants were recruited from one community-based cancer center, this center's management of pain and spirituality likely play a role in the reports from their patients. Importantly, the intent of qualitative research is not to generalize the findings. These findings reflect the interpretation of the phenomena of interest (pain, spirituality, and the contribution

of spirituality to pain) as experienced by a specific subset of women with cancer.

Implications for Practice

These findings have the potential to expand nurses' understanding of pain and spirituality among Caucasian women with advanced breast cancer. This enhanced understanding can facilitate improved management of pain among this population, which could include addressing spirituality. Based on these findings, nurses are encouraged to use multidimensional or open-ended assessments of pain. Furthermore, nurses are urged to explore the unique nature of spirituality in their patients by assessing spiritual needs, with the understanding that pain and spirituality likely mean different things to different patients. By encouraging patients to explore their own unique spirituality, patients may experience alterations in their thoughts and emotions, and therefore changes in their symptom experiences. Nurses can use interventions to enhance spirituality, such as meditative practices,⁴⁰ prayer,³⁸ and art making,⁴⁵ even for women who do not already align with a strong sense of spirituality. These evidence-based interventions can be adapted based on individual preferences and potentially included as part of comprehensive symptom management.

Further Research

Additional research is needed to further explore how spirituality contributes to alleviation of pain experiences through the alteration of cognitive and emotional states. Research examining the mechanisms underlying spirituality's effects on thoughts and emotions is warranted. Although many women in this study described the supportive effects of spirituality when facing pain, not all participants aligned as strongly with this view. Additional research is needed to explore individual characteristics or other factors that contribute to women's sense of spirituality and, therefore, the capacity for spiritual beliefs and practices to impact their pain.

Further work is needed which can phenomenologically explore pain and spirituality in women of varying racial, ethnic, and religious backgrounds. Future research may also continue to examine the role of spiritual practices such as prayer, meditation, and visualization in comprehensive pain management, because women in this study found these self-management practices helpful in their daily lives. It must also be acknowledged that some women may benefit from various culturally derived belief systems to cope with cancer-related pain, and that the findings from this study are based on a sample of women all aligning with a Christian faith-based belief system. Future work can explore additional cognitive and emotional routes to alter pain experiences and expand the inquiry to a more diverse sample of women with other cultural backgrounds and religious belief systems. Research focused on developing and testing interventions based on individual preferences in spiritual practices is essential.

Conclusion

Four major themes emerged in the study that may provide a foundation for further exploration of the link between spirituality and pain in women with advanced breast cancer. Overall, pain was seen as a dynamic, multidimensional experience that impacted many aspects of women's lives. Spirituality was unique to each participant, but overall included a sense of present moment awareness, appreciation, and connection with something greater than oneself. Spirituality was lived out through connection with a higher power, family, nature, pets, and community. Many women in this study described how spirituality served as a beneficial mental framing technique, which was able

to alter their relationship with pain. Women's sense of spirituality was able to support them emotionally, offering a sense of peace and tranquility despite challenges such as advanced breast cancer and pain. For women in this study, their spiritual practices were important activities to offer comfort and provide support in self-management of pain. Participants also described the value of connection to others and service activities for coping with pain. In general, women who had a strong sense of their own unique spirituality were able to experience greater support when facing pain, altering their experiences with this symptom. This study highlights the value of further integrating spirituality into palliative care. Additional research is needed to explore how these broad aspects of spirituality may be harnessed as part of comprehensive symptom management, especially among more diverse groups of women.

Conflict of interest statement

The authors declare that they have no financial conflict of interest with regard to the content of this report.

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References

- Puetzler J, Feldmann RE, Brascher AK, Gerhardt A, Benrath J. Improvements in health-related quality of life by comprehensive cancer pain therapy: a pilot study with breast cancer outpatients under palliative chemotherapy. *Oncol Res Treat*. 2014; 37:456–462.
- American Cancer Society. *Cancer Facts and Figures: 2019*. Atlanta: American Cancer Society; 2019. <https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2019/cancer-facts-and-figures-2019.pdf>.
- National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®): Adult cancer pain [v.1.2018]. Plymouth Meeting, PA: National Comprehensive Cancer Network; 2018.
- Siler S, Borneman T, Ferrell B. Pain and suffering. *Semin Oncol Nurs*. 2019; 35:310–314.
- Wang Y, Jackson T, Cai L. Causal effects of threat and challenge appraisals on coping and pain perception. *Eur J Pain*. 2016; 20:1111–1120.
- Williams AC, Craig KD. Updating the definition of pain. *Pain*. 2016;157:2420–2423.
- Bushnell C, Ceko M, Low L. Cognitive and emotional control of pain and its disruption in chronic pain. *Nat Review Neurosci*. 2013;14:502–511.
- IASP Subcommittee on Taxonomy. International Association for the Study of Pain. IASP pain terms - 1979. *Pain*. 1979;6:247–252.
- Zeidan F, Vargo D. Mindfulness meditation-based pain relief: a mechanistic account. *Ann N Y Acad Sci*. 2016;1373:114–127.
- Arnstein P. Adult cancer pain: an evidence-based update. *J Radiol Nurs*. 2018; 37:15–20.
- Flanigan M, Wyatt G, Lehto R. Spiritual perspectives on pain in advanced breast cancer: a scoping review. *Pain Manag Nurs*. 2019; 8:S1524–9042.
- Krigel S, Myers J, Befort C, Krebill H, Klemp J. “Cancer changes everything!”: exploring the lived experiences of women with metastatic breast cancer. *Int J Palliat Nurs*. 2014;20:334–342.
- Steinhauser K, Fitchett G, Handzo G, et al. State of the science of spirituality and palliative care research part I: definitions, measurement, and outcomes. *J Pain Symptom Manage*. 2017;54:428–440.
- Weathers E, McCarthy G, Coffey A. Concept analysis of spirituality: an evolutionary approach. *Nurs Forum*. 2016;51:79–96.
- Sun K, So Young C, Jin Sook K. Evolutionary concept analysis of spirituality. *J Korean Acad Nurs*. 2017;47:242–256.
- Harvey I. Assessing self-management and spirituality practices among older women. *Am J Health Behav*. 2008;32:157–168.
- Yeager K, Sterk C, Quest T, Dilorio C, Vena C, Bauer-Wu S. Managing one's symptoms: a qualitative study of low-income African Americans with advanced cancer. *Cancer Nurs*. 2016;39:303–312.
- Renz M, Reichmuth O, Bueche D, et al. Fear, pain, denial, and spiritual experiences in dying processes. *Am J Hosp Palliat Med*. 2018;35:478–449.
- Wiech K, Fairias M, Kahane G, Shackel N, Tiede W, Tracey I. An fMRI study measuring analgesia enhanced by religion as a belief system. *Pain*. 2009;139:467–476.
- Bai J, Brubaker A, Meghani S, Bruner D, Yeager K. Spirituality and quality of life in black patients with cancer pain. *J Pain Symptom Manage*. 2018;56:390–398.
- Delgado-Guay MO, Chisholm GB, Williams J, Frisbee-Hume S, Ferguson A, Bruera E. Frequency, intensity, and correlates of spiritual pain in advanced cancer patients assessed in a supportive/palliative care clinic. *Palliat Support Care*. 2016;14:341–348.
- Wang Y, Lin C. Spiritual well-being may reduce the negative impacts of cancer symptoms on the quality of life and the desire for hastened death in terminally ill cancer patients. *Cancer Nurs*. 2016;39:E43–E50.
- Miller M, Xu D, Lehto R, Moser J, Wu H-S, Wyatt G. Pain and spirituality outcomes in women with advanced breast cancer within a randomized controlled trial of foot reflexology. *Oncol Nurs Forum*. XXXX;XX:XX–XX.
- Reed P. Pamela Reed's Theory of Self-Transcendence. In: Smith M, Parker M, eds. *Nursing Theories & Nursing Practice*. Philadelphia, PA: A. Davis Company; 2015:411–420.
- Smith J, Flowers P, Larkin M. *Interpretative Phenomenological Analysis: Theory, Method and Research*. London: SAGE; 2009.
- Smith J. Semi-structured interviewing and qualitative analysis. In: Smith J, Harre R, Van Langenhove L, eds. *Rethinking Methods in Psychology*. London: SAGE; 1995:9–27.
- Smith J, Osborn M. Interpretative phenomenological analysis as a useful methodology for research on the lived experience of pain. *Br J Pain*. 2015;9:41–42.
- Guest G, Bunce A, Johnson L. How many interviews are enough? An experiment with data saturation and variability. *Field Methods*. 2006;18:59–82.
- Benner P. *Interpretive Phenomenology: Embodiment, Caring, and Ethics in Health and Illness*. Thousand Oaks, CA: SAGE Publications; 1994.
- Van Manen M. *Researching Lived Experience: Human Science for an Action Sensitive Pedagogy* (2nd ed.). London, Ontario, Canada: Athlone Press; 1997.
- Connolly L. Trustworthiness in qualitative research. *Medsurg Nurs*. 2016;25:435–436.
- Lincoln YS, Guba EG. *Naturalistic Inquiry*. Newbury Park, CA: Sage Publications; 1985.
- McAlister M, Clemson D, Ehlert K, Kajfez R, Faber C, Kennedy M. Qualitative coding: an approach to assess inter-rater reliability. *Am Soc Eng Ed*. 2017.
- Carter N, Bryant-Lukosius D, DiCenso A, Blythe J, Neville A. The use of triangulation in qualitative research. *Oncol Nurs Forum*. 2014;41:545–547.
- Glesne C. *Becoming Qualitative Researchers: An Introduction*, 5th Edition. New York, NY: Pearson; 2016.
- Lazenby M. Understanding and addressing the religious and spiritual needs of advanced cancer patients. *Semin Oncol Nurs*. 2018;34:274–283.
- Peters M. Emotional and cognitive influences on pain experience. *Mod Trends Pharmacopsychiatry*. 2015;30:138–152.
- Eilami O, Moslemirad M, Naimi E, Babuei A, Rezaei K. The effect of religious psychotherapy emphasizing the importance of prayers on mental health and pain in cancer patients. *J Relig Health*. 2019;58:444–451.
- Kwekkeboom K, Cherwin C, Lee J, Wanta B. Mind-body treatments for the pain-fatigue-sleep disturbance symptom cluster in persons with cancer. *J Pain Symptom Manage*. 2010;39:126–138.
- Wren A, Shelby R, Soo M, Huysmans Z, Jarosz J, Keefe F. Preliminary efficacy of a lovingkindness meditation intervention for patients undergoing biopsy and breast cancer surgery: a randomized controlled pilot study. *Support Care Cancer*. 2019;27:3583–3592.
- Hughes S, Jaremka L, Alfano C, et al. Social support predicts inflammation, pain, and depressive symptoms: longitudinal relationships among breast cancer survivors. *Psychoneuroendocrinology*. 2014;42:38–44.
- Davis C. Greater social support may help alleviate pain in patients with cancer. *Oncol Nurs*. 2020;13:14.
- Galloway S, Meadors D, Boselli D, Walsh D. Anxiety, depression, pain, and social support in a large representative cancer population. American Society for Clinical Oncology 2019 Annual Meeting; May 31–June 4, 2019; Chicago, IL.
- Salt E, Crofford L, Segerstrom S. The mediating and moderating effect of volunteering on pain and depression, life purpose, well-being, and physical activity. *Pain Manag Nurs*. 2017;18:243–249.
- Kim KS, Loring S, Kwekkeboom K. Use of art-making intervention for pain and quality of life among cancer patients: a systematic review. *J Holist Nurs*. 2018;36:341–353.