# Role of Religion and Spirituality in the Patient Pain Experience

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## Introduction

In the United States, as we grapple with the "opioid epidemic" and state-led marijuana legislation, there is increased interest in understanding the experience of pain in greater depth in order to find more effective ways to treat it. Likewise, the biomedical traditional approach to pain management shows improvements in less than half of patients treated. Since 22% of Americans experience moderate to severe pain at least twice a week, medical providers should be seeking auxiliary interventions for the control of pain. Spirituality, as most are aware, is not equivalent to religion. There are multiple different definitions in the research literature, so for the purposes of this chapter, *spirituality* refers to a person's beliefs and practices related to feelings of connectedness and meaning making, whereas *religion* refers to the community-level beliefs and practices. As most research integrates these two definitions, the term R/S is generally used to refer to integrated beliefs and practices in the area of religion, spirituality, and health.

Numerous research studies show chronic pain sufferers in general seek coping mechanisms through R/S beliefs and practices. Strong spiritual well-being is linked with a better ability to cope with pain. Therefore, in the interest of supporting the patient's experience so that they can reduce their pain levels and function at their highest level, it behooves us as providers to assess spiritual and psychological distress. Likewise, this suggests that incorporating spiritual providers into the integrated pain care team would be helpful to support patients in developing strategies to make meaning and connection in their lives.

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## Background/Historical Perspective

### R/S and Health

R/S can have a powerful impact on health in general, both positive and negative. Regular religious attendance (2 × per month or more), even after controlling for multiple possible confounders, was found to have as powerful a positive effect as smoking has a negative effect on health. Additionally, regular religious attendance is correlated with a 7 year longer life span for Caucasians, and 12 years for African-Americans. Alternatively, long-term spiritual struggles can significantly increase morbidity and mortality rates.

While immediately following the terrorist attacks on September 11, 2001, in the United States there was a significant increase in attendance at religious services for approximately 2 years, there since has been a steady decline in regular religious attendance at religious services. Despite this change in practice, a belief in a higher power or some form of spirituality remains high with only 3.1% of Americans identifying themselves as atheistic. During recent years, even while attendance at formal religious services was dropping, individuals increased their use of prayer to address health concerns. This relationship held true even after controlling for socioeconomic status, health status, age, and health insurance status.

### R/S and Pain

Among individuals with chronic pain, 61% of patients report regularly using prayer to cope with pain. Prayer is one of the most commonly used religious or spiritual coping strategies when a patient is struggling with chronic pain. When asked how their chronic pain condition affected their religious or spiritual beliefs, 40% of pain patients reported becoming more religious after the onset of their painful condition, while 4% reported becoming less religious or spiritual.

This active use of prayer among religious or spiritual individuals is important, as research has found that the protective



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effects of R/S on health stem more from health-based behaviors rather than only self-identified R/S status. Thus, it is more important to identify how people engage with their R/S beliefs rather than simply how they identify themselves as religious/not religious or spiritual/not spiritual.

R/S strategies are not the common initial response to pain. Instead, acute pain usually elicits a generally self-directed approach. For example, a patient with acute pain will seek out acetaminophen from the medicine cabinet in response to a tension headache. However, R/S practices do become the primary form of coping in response to chronic pain, to poorly controlled, intermittent pain, and when other coping strategies fail. However, it should be noted that for most chronic pain patients, there is a synchronicity to their use of coping mechanisms in that they will often use R/S coping strategies and secular coping strategies simultaneously.

## Religious Coping Strategies

Extensive studies have identified four distinct R/S coping strategies related to health, each with unique outcomes on health and pain. Early research studies were limited in their assessment of R/S and assume a simple unidimensional approach to R/S in relation to health (i.e., generally R/S = good or R/S = bad). Additionally, there was a misassumption that R/S coping is equivalent to a passive coping strategy, rather than an active method of addressing pain. Later research has clarified that there is a great deal more complexity to patients' use of R/S coping strategies in relation to health and that R/S coping is indeed an active coping strategy for patients with chronic pain.

There are four types of R/S coping strategies in relation to health.

- The first, *Deferential*, describes the approach where the patient gives all control of a problem over to their higher power. The patient takes little responsibility for his/her own health situation. An example of this form of coping strategy would be a patient saying, "It doesn't matter if I do my home PT exercises or not, if my pain is meant to go away, God will take it away in time." Individuals using this type of strategy generally have lower pain-related self-efficacy and poorer pain outcomes. The exception to this is when the patient actually has very little control over their situation, such as in hospice care. In those types of situations, it appears that reducing futile attempts at controlling health and pain outcomes by engaging in *Deferential* coping styles may conserve energy, reduce pain, and improve quality of life.
- The second type of R/S coping is the *Collaborative* approach. In this paradigm, a patient uses an active joint problem-solving perspective with their higher power to address their pain issue. In this approach, an individual might say, "My higher power will support me and help get me through this, but I have to do my part too." Individuals using this form of coping often have the best pain outcomes, because they actively engage with health professionals and adhere to treatment protocols as part of their responsibility to their higher power. They also feel that they have additional existential support for their efforts.
- The third type of R/S coping is the *Independent* approach. In this scenario, an individual does not engage or rely on a higher power because their belief system does not include a deity. There is no negative emotion associated with this belief, they simply have an atheistic approach to life. An example statement of someone with this viewpoint might be, "I will do it myself because I find the strength within me. I don't believe in God." Individuals using this form of coping generally have positive health outcomes if they adhere to treatment protocols and engage with their health professionals.
- The fourth and final type of R/S coping is the *Abandoned/Punished* approach. In this paradigm, individuals feel that they have been abandoned in their time of need or that their chronic pain is a punishment from their higher power due to a transgression. Their higher power does not provide existential support for these individuals, and there are often a number of powerfully negative emotions related to their relationship with their higher power, such as anger, guilt, and shame. An example statement of someone with the Abandoned/Punished approach might be, "I cheated on my wife so God is punishing me with my chronic pain." This type of R/S coping should be a significant red flag for any medical provider because individuals with this type of coping will generally have far worse functional outcomes, request more pain medications, have higher utilization of medical services, and not use self-directed pain management strategies.

Outside of a formal assessment of these four strategies among their patients, a provider can assess for warning signs that a patient may be engaging in more negative forms of R/S coping techniques in order to refer to a mental health clinician who is familiar in working with R/S struggles (see Table 14.1). While positive R/S is used more frequently than negative R/S among people who have R/S coping strategies, when negative approaches are used, they have a powerful negative impact on mental and physical health outcomes. Individuals who have a personal R/S faith background have better outcomes when using positive R/S coping strategies than individuals who adopt these strategies as a "tool" or "last ditch effort" to control their pain. However, when patients with current faith or practices are encouraged to use positive R/S strategies in response to their chronic pain, there are significant positive mental and physical health outcomes.

## Mechanisms of Effects of R/S Coping on Pain

There are a number of psychophysiological mechanisms related to the observed outcome of R/S beliefs on pain (See Fig. 14.1). The hypothalamic-pituitary-adrenal (HPA) axis is stimulated by any physical or emotional distress. The end product of the HPA system is cortisol. Chronic pain affects cortisol levels in that they are high in early chronic pain but lower over years because the axis becomes suppressed. Over time, chronic pain becomes central in nature; the brain's neuroplasticity changes the experience of pain. This process is mediated partially by IL-6, a connection between the nervous and immune systems. The diagram above illustrates the links between spirituality, emotional processing, physiological changes, and the experience of pain.

Pain self-efficacy is an important component of understanding a patient's pain experience as it refers to an individual person's ability to cope and function with their chronic pain. When someone has a strong sense of spiritual distress, pain self-efficacy decreases. Personal resilience and one's confidence in the ability to do enjoyable activities despite pain is fundamental to pain self-efficacy. There may be a positive feedback loop in that those who have confidence that they can do their activities despite pain then receive the benefit of those activities, which in turn give purpose and meaning to their life.

Since spirituality is a construct of one's connectedness within the universe and the meaning that comes of that connectedness, it is helpful to consider what is occurring when this process is disrupted and the effect it may have on the patient's mood and pain experience. Patients do not become depressed from their pain alone. Through a series of longitudinal and cohort studies, Dezutter and Wachholtz have identified that it is those patients who have moderate to severe pain plus low levels of meaning making who actually develop major depression, which then further impedes actively coping with pain. When chronic pain patients experience a high level of meaning making, they show fewer depressive symptoms and greater life satisfaction regardless of the actual level of their pain. Therefore, it is important to screen for mood and anxiety disorders as well as spiritual coping and style of meaning making.

In clinical practice with chronic pain patients, mental health screening tools that include neurovegetative symptoms in their assessments (e.g., alterations in sleeping, eating, and energy) should be used cautiously. Patients with chronic pain may endorse the neurovegetative symptoms of depression or anxiety (e.g. sleep disruptions, low energy, weight gain), which are caused by the pain itself or iatrogenically due to the medications used to treat the

**Table 14.1** Empirically validated positive and negative forms of religious/spiritual coping

| Positive forms | Negative forms |
|---|---|
| Seek spiritual connection | Interpersonal religious discontent |
| Meditation | Punishing God reappraisal |
| Seek spiritual support | Demonic influence |
| Religious assistance to forgive others | Spiritual discontent |
| Asking forgiveness | Reappraisal of God's power |
| Benevolent religious reappraisal | |
| Religion as distraction | |
| Collaborative problem-solving with God | |

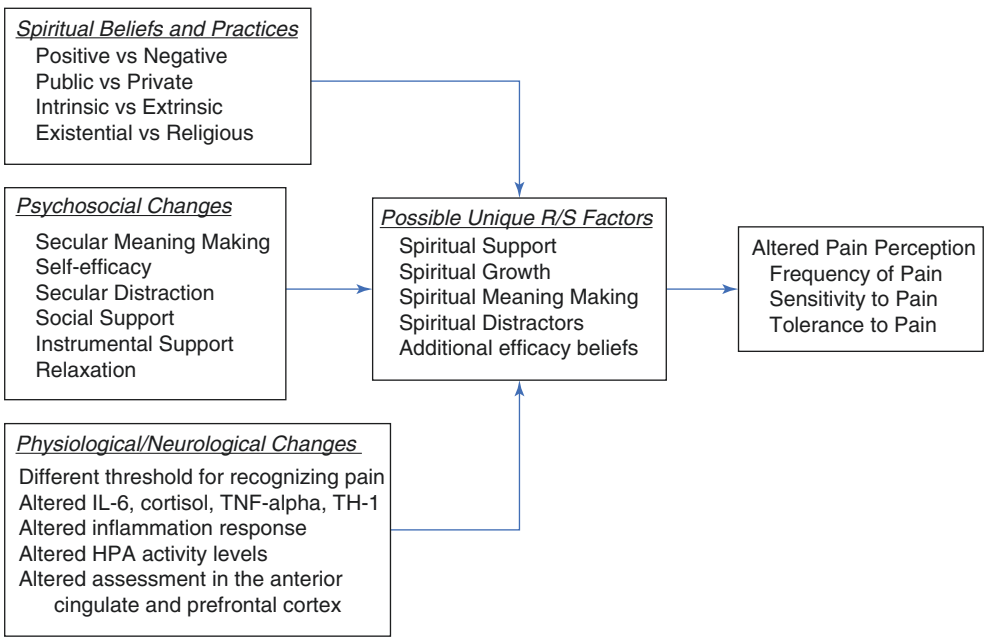


**Fig. 14.1** Pathways to altered pain experience

pain. This may artificially elevate depression or anxiety scores on assessments that do not account for the effects of a chronic pain comorbidity. Therefore, using screening tools that focus on emotional and cognitive symptoms of mental health disorders (e.g., Hospital Anxiety and Depression Scale by Zung) is critical when working with chronic pain.

The intent of this data is not to imply that medical caregivers should help patients to find religion in their lives or that those who have regular religious practices or communities will always do better clinically. The notable finding is that those who have a central system of meaning in their lives, despite higher levels of chronic pain, did not have a drop in their life satisfaction. Since the search for and presence of meaning for chronic pain patients seem to be stable over time, it has been postulated that this element may be an inner resource linked to personality and previous life experience that can be utilized for maintenance of well-being and adaptation; in other words, this is a factor of personal resilience that is stable. One could also hypothesize that those who have a personal sense of meaning in their lives deal better with chronic pain because they do not perceive this condition as destabilizing.

The use of opioid analgesia has been shown to dysregulate neural connections so that, via the dopamine system, there forms a desensitivity to rewarding life experiences. In this way, a chronic pain patient using opioids may have a biologically blunted sense of meaning. In a vicious cycle, those who escalate their use of opioids in an effort to treat their "total pain," that is, bio/psycho/social/spiritual/existential pain, may create psychological numbing which does not allow them to work through their existential distress in an effort to make meaning.

## Uses and Indications

### Importance of Assessment

Spirituality has been shown to be a crucial factor in mood, anxiety, quality of life, and the pain experience among a wide variety of medical patients who experience chronic pain. Spiritual distress was a greater contributor to satisfaction with life than a patient's physical disability in a group of patients in rehabilitation. Among patients with multiple sclerosis, spiritual well-being does not appear to affect pain intensity but does improve pain tolerance, as well as mood, and pain-coping self-efficacy. In a study of those with sickle cell disease, church attendance was linked with lower pain scores even after controlling for health status. Both cancer and spinal cord injury have a serious impact on spiritual well-being, which in turn can affect pain-related quality of life. Spinal cord injury is associated with a lower level of spiritual well-being compared to those without such an injury; in fact, spinal injury caused greater spiritual distress than a diagnosis of cancer. As in other populations, there was found a significant difference in pain intensity in someone with higher spiritual well-being compared to those with lower spiritual well-being – that is, there was on average lower pain in those with greater spiritual well-being. Similarly, if someone has a higher sense of spiritual well-being, that person is less likely to be depressed and more likely to be satisfied with life.

Spirituality in the context of pain management can be important for the clinician to factor in when it affects the way the patient views the provider. Though many spiritual people with a sense of a creator God believe that the Divine is the ultimate healer, there is a corresponding belief that God can use healthcare providers as instruments of healing and grace. It is sometimes challenging for medical providers to assess concretely for spiritual meaning making in the context of pain. However, in the sections below, it will be outlined about how it can be done succinctly, with empirical backing, and without attempting to engage a patient beyond a clinician's scope of practice.

### Putting Research into Practice

Case 1: RJ is a 37-year-old man with history of spinal cord injury from an MVA 20 years ago. His brother was driving RJ and two other friends home from a high school soccer game when they were hit by a driver running a red light. One of the friends died, one did not have lasting injuries, and RJ's brother has been wheelchair-bound since the accident but has married. RJ himself has had a spinal cord injury that has made him a quadriplegic.

- What meaning does RJ make of this life event? RJ and his family are Mormons, and they believe that RJ and his brother were spared for a spiritual reason.
- How does this change in his function affect his sense of personhood? That is, is there existential distress? RJ feels loved and valued by his church family despite his disability. He is able to have some level of independence with a motorized wheelchair. He is able to speak and express his emotions.

What has his experience been with chronic pain? Though most quadriplegic patients experience numbness rather than pain, RJ has had pain in his low back for the past 3 years that sometimes becomes severe. He recognizes that this is unusual for someone with quadriplegia, and some caregivers have doubted that this is physiologic but perhaps more an experience of "total pain." This mismatch between expectation and his reality has led to intermittent bouts of depression, where he has socially isolated himself. The pain flares feed into this experience of psychologic suffering in that he is not able to sit in his mechanical wheelchair when he is in pain, so he loses considerable function and ability to connect

with others. But his spiritual community and his personal practice of prayer give RJ the hope that he will get through his pain flare.

## Assessment Tools

Clinicians report barriers to assessing spirituality in their patients; the most prevalent concern being time constraints. Lack of experience in making the assessment, feeling that such an assessment is not the clinician's responsibility, and concern regarding crossing boundaries where trust will be breached between the provider and patient are additional reasons that prevent spiritual assessments from being regularly conducted. This reticence to inquire about spirituality is interesting considering the evidence discussed above that patients feel it is an important part of their personhood but also because, like the general US population, physicians overall have active spirituality. Approximately 80% of family physicians identify themselves as very or somewhat strong in their beliefs and extremely close to God.

The intent of a spiritual assessment is five-fold:

1. Support patients with empathy and nonjudgmental listening.
2. Document spiritual preferences for the patient's care going forward.
3. Identify potential barriers to well-being in terms of negative spiritual coping so that proper referrals can be made.
4. Ensure the honoring of the patient's faith traditions in the treatment plan.
5. Foster overall wellness by encouraging a patient to access the resources of their community and faith tradition.

There are several commonly used assessment tools in the clinical setting for spiritual assessment. We will discuss the three most prevalent qualitative tools briefly below: "HOPE Questions for Spiritual Assessment," "The FICA Spiritual History Tool," and "OASIS inquiry."

**Table 14.2** HOPE questions for spiritual assessment

| | |
|---|---|
| H: sources of hope | Where do you gain your strength? What are your sources of comfort and peace? |
| O: organized religion | Are you part of a religious or spiritual community? How does it help you? |
| P: personal spirituality and practices | Do you have personal spiritual beliefs? What aspects of your spirituality do you find helpful? |
| E: effects on medical care and end-of-life issues | Is your ability to practice spiritually impaired by your illness? How can I help you access the resources that normally help you? Are there specific practices or restrictions I should know about in that they effect the provision of your medical care? |

### HOPE

The HOPE screen is an acronym to guide a brief spiritual interview (see Table 14.2). Though the questions are vague, the language is favored by some clinicians in that it does not assume a religious belief system but allows for recording of what a patient finds most important and helpful spiritually.

#### HOPE Example for a Formal Spiritual Assessment in a Medical Interview

Using the previous case of our 37-year-old patient with spinal cord injury, the HOPE screen might look like this:

- H = RJ finds hope in the belief that his pain will end in this world and that he will not experience suffering in the next life.
- O = His organized religion is the Mormon church, namely, his local ward. He is visited often by Brothers from his ward and prayed over by them as well as his family members.
- P = He prays daily and goes to church and men's Bible study on Sundays. When he is in particularly bad pain, he cries out to God trusting that his suffering will be heard.
- E = RJ feels that his life is a gift from God and he was spared death to bring God's word to others. So, he values his life as it is despite his disability because he is able to witness to his faith. Therefore, he wants life-prolonging treatment including life support.

### FICA

The FICA screen is similar to the HOPE survey in that it is also an acronym that gives some framework to spiritual history taking (see Table 14.3).

### OASIS

Finally, the Oncologist Assisted Spiritual Intervention Study (OASIS) Patient-Centered Spirituality Inquiry is the only validated screen in both patients and clinicians. The OASIS spiritual assessment is a semi-structured 5–7-minute conversation between physician and patient to understand spiritual concerns as they relate to coping with cancer. Both the interviewers and interviewees found this tool to be helpful and comfortable and allow for timely assessment

**Table 14.3** FICA spiritual assessment tool

| | | |
|---|---|---|
| F | Faith and belief | Do you have spiritual beliefs that help in coping with stress or illness? What gives your life meaning? |
| I | Importance | Is this belief important to you? Does it influence how you think about health and illness or make decisions for yourself? |
| C | Community | Do you belong to a spiritual community or would like support in seeking? |
| A | Address in care | What action or changes do you want? Would it be helpful to see a spiritual counselor? |

**Table 14.4** OASIS interview

| | |
|---|---|
| I. Introduce issue in neutral inquiring manner | *When dealing with a serious illness, many people draw on religious or spiritual beliefs to help cope. It would be helpful to me to know how you feel about this.* |
| II. Inquire further, adjusting inquiry to patient's initial response | (a) **Positive-active faith response**: *What have you found most helpful about your beliefs since your illness?*<br>(b) **Neutral-receptive response**: *How might you draw on your faith or spiritual beliefs to help you?*<br>(c) **Spiritually distressed response** (e.g., anger or guilt): *Many people feel that way . . . what might help you come to terms with this?*<br>(d) **Defensive/rejecting response**: *It sounds like you're uncomfortable I brought this up. What I'm really interested in is how you are coping . . . can you tell me about that?* |
| III. Continue to explore further as indicated | *I see. Can you tell me more (about . . .)?* |
| IV. Inquire about ways of finding meaning & peace | *Is there some way in which you are able to find a sense of meaning or peace in the midst of this?* |
| V. Inquire about resources | *Whom do you have to talk to about this/ these concerns?* |
| VI. Offer assistance as appropriate and available | *We can arrange for you to talk to someone . . .; there's a support group.* |
| VII. Bring inquiry to a close | *I appreciate you discussing these issues with me. May I ask about it again?* |

(see Table 14.4). This is the only validated assessment tool in that quality of life, spiritual well-being, depression, communication, and acceptability ratings were studied for both the patient and clinician. The OASIS Spiritual Inquiry overall improved the perception of quality care as well as positively impacted the well-being of the patient.

## Evidence for Efficacy

In the past 20 years, a number of high-quality spiritually integrated interventions have targeted pain management. Consistently, the outcomes show that for individuals who are interested in accessing spiritual resources to cope with their pain, spiritually integrated interventions can have powerfully positive effects on pain management. The greatest improvements appear to be in the area of pain tolerance rather than pain sensitivity. In other words, it is not about the level of pain a patient is experiencing; it is what that patient can do despite the level of pain and how much medication is required to make them feel they can continue their activities of daily living.

Bormann has completed a series of studies examining the potential role of spiritually based mantram (meaningful word or phrase) repetition among veterans. In a large, multi-site study, she examined how 273 veterans responded to this spiritually based intervention. After 20 minutes a day of focused repetition on the spiritual mantram they chose, after the 8-week study, participants from all sites had multiple positive benefits, including a significant decrease in pain and somatization of emotional experiences.

After following HIV+ patients for 4 years, research found that positive spiritual coping is inversely related to viral load and positively associated with CD4+ counts among individuals with HIV. Individuals using negative spiritual coping were 4 times more likely to have a detectible viral load and CD4 count declined 2.25 times faster compared to those using positive spiritual coping. Lower viral load and higher CD4 counts protect from painful HIV/AIDS opportunistic infections.

This effect has also been found cross-culturally. In Japan, a study taught spirituality based mindfulness therapy to patients and asked them to practice independently every day for 2 weeks. The intervention decreased pain, depression, and anxiety among advanced cancer patients. In a study of Iranian women with breast cancer, a 6-week spiritual therapy intervention had positive effects on pain, spiritual well-being, and quality of life.

Carson and colleagues used the method of Loving-Kindness meditation, a Buddhist spiritual practice. This meditation technique was taught to meditation-naïve participants with low back pain. Carson found that not only were there long-term changes in pre-post assessment of low back pain compared to the usual care group, there was also a short-term pattern that Loving-Kindness practice on any given day resulted in lower pain and anger ratings the following day.

Wachholtz and Pargament completed a series of studies examining spiritual versus non-spiritual forms of meditation and the effect on acute and chronic pain sensitivity and tolerance. In 2005, they compared acute pain response using a cold pressor task [a form of noxious stimuli] among healthy meditation-naive individuals who had been randomly assigned to practice a spiritual meditation, secular meditation, or progressive muscle relaxation for 2 weeks. After 20 minutes/day for 2 weeks of practicing their assigned task, individuals in the spiritual meditation group showed significantly greater pain tolerance than those in the other two groups. In 2008, the same researchers randomly assigned meditation-naïve, frequent migraineurs to one of four meditation tasks: spiritual, secular positive self-statements, secular external neutral-positive statements, and progressive muscle relaxation. Participants practiced 20 minutes/day for 4 weeks. After 4 weeks, participants in the spiritual group had fewer migraine headaches, less severe migraine headaches, greater pain tolerance to acute pain, and less negative affect com-

pared to the other three groups. In 2016, Wachholtz, Malone, and Pargament published a study with frequent migraineurs and found that after 4 weeks of meditation practice, those in the spiritual meditation group used less migraine analgesic or abortive medication than the other groups, even after controlling for migraine frequency and severity.

Wiech and colleagues used fMRI to study the key areas in the brain for modulating pain intensity with 12 Catholics and 12 nonreligious, non-spiritual subjects. They were shown pictures of two women in a similar pose: (1) the Virgin Mary and (2) an unknown woman painted in a similar genre to the Virgin Mary picture. While shown the pictures, they received repetitive mild-moderate electrical shocks. Prior to seeing the pictures, both groups were equally sensitive to the pain. After viewing the pictures, the religious group reported less pain while looking at the picture of the Virgin Mary, whereas the nonreligious group reported the same amount of pain. The fMRI findings found that the right ventrolateral prefrontal cortex (rVLPFC) cluster in the brain was uniquely activated in the religious sample when looking at the Virgin Mary picture. Post-scan self-reports indicated that the Catholic sample used a strategy known as self-focused reappraisal that allowed them to subconsciously downregulate the perceived intensity of the pain when presented with a religious image.

## Conclusions

In the care of patients who suffer from chronic pain, spiritual assessment and attention is important to rendering the best care possible. Optimal spiritual support aims to improve feelings of self-efficacy, connectedness, purpose, and personal meaning even in the midst of personal suffering. Studies of small groups of specific populations of people who suffer with chronic pain have contributed to our understanding of spiritual care and pain management. There is certainly sufficient data to spur further research to understand more completely the physiologic effects and neurologic changes of spiritual beliefs and practices on those experiencing pain.

## Pearls and Pitfalls

- Spirituality can have a powerful effect on pain, either positive or negative.
- Assessing spiritual health is an important component in a health assessment and subsequent treatment plan.
- It is important to asses for *type* of spiritual coping strategy, not just "yes/no" questions on spiritual beliefs and practices.
- Do not attempt spiritual counseling if you are not adequately trained to do so, but collaborate with professional licensed mental health resources or health-specific chaplains in your local area. Note that most clergy receive minimal training in mental health counseling and no training on health conditions, so strongly encourage referrals to licensed mental health professionals who have training in religious and spiritual forms of psychotherapy or chaplains with training in health chaplaincy.

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