Outcomes of Intercessory Prayer for Those Who Are Ill

Scientific and Pastoral Perspectives

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Abstract

Intercessory prayer for those who are ill is a common religious practice not only by individuals but also by communities of faith. Although such prayer has much religious meaning, is there scientific evidence that it brings about the outcomes for which it asks? The scientific literature investigating the efficacy of intercessory prayer for the ill and the difficulties in putting prayer to scientific scrutiny is explored in this article. Overall, studies have yielded mixed results and have been criticized (on a scientific basis) as having methodological flaws such as small sample size, varied end-points, varied definitions of prayer, and varied expertise of "intercessors." Such studies have also been critiqued on metaphysical and religious grounds, namely, that God's actions cannot (and should not be) subjected to scientific scrutiny.

It is asserted by some, that men possess the faculty of obtaining results over which they have little or no direct personal control, by means of devout and earnest prayer, while others doubt the truth of this assertion. The question regards a matter of fact, that has to be determined by observation and not by authority, and it is one that appears to be a very suitable topic for statistical inquiry.... Are prayers answered or are they not...? Do sick persons who pray or are prayed for, recover on the average more rapidly than others?

Francis Galton, 1883¹

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Introduction

When faced with illness, especially if devastating or terminal, most patients ask “Why? Why me?” A patient’s attempt to answer that question usually relies on his or her belief system. For example, a patient who is an atheist might say, “Why not me? The odds are one in 1000 that someone would get this malignancy, and that one is I.” A Hindu patient who believes in karma might say, “What I must endure is because of what I have done in a previous life (or existence). I have earned what I now have.” A Christian patient might say, “This is God’s will. Who am I to pray for healing?” Alternatively, he might say, “Jesus healed those who approached him, and I will pray that Jesus heals me, too.”

The classic understanding of prayer is that it is communication with God—with words or without words. As John Damascene noted, “Prayer is the raising of one’s mind and heart to God or the requesting of good things from God.”² Although there are many ways of praying, the most common prayer offered, especially when human beings are in trouble of some sort, is making a request of God for some favor. This is especially true at times of illness. In the case of the atheist, he of course offers no prayers. In the case of a Hindu person who believes in karma, she prays for the ability to endure the suffering with patience and equanimity. In the case of a Christian, he might pray for healing, or he might surrender to God’s will. Although these two perspectives need not be in opposition to each other, all too often they are, as some patients believe that if they pray for healing, they are trying to escape God’s will, or if they surrender to God’s will, they cannot also pray for healing.

This article will examine the scientific evidence for the efficacy of intercessory prayer for those who are ill. This article will not address in depth patients praying for themselves or family members or friends praying for loved ones’ healing. This is a major confounding factor for all of the studies cited herein.

Scientific Studies on the Efficacy of Intercessory Prayer for Those Who Are Ill

The area of religion and health is a vast one, with thousands of articles published in scientific, medical, psychological, and theological journals; there is an even greater number of online articles. These articles include opinions and commentaries, as well as experimental studies. The area of prayer and healing/health is but a subset of this larger field.

Scientific studies of the efficacy of prayer for those who are ill have yielded mixed results. To make the research a bit more comprehensible, it will be divided into stages: pre-1990, the 1990s, and the 2000s, convenient stages used by Wendy Cadge in her review article (see below).

Pre-1990

Although the efficacy of prayer was questioned as early as the seventeenth century, the “first serious scientific test of distant, intercessory prayer ... was proposed as a challenge to the British clergy by John Tyndall in 1872.”³ In her review article of medical studies of intercessory prayer, Cadge notes that studies on the efficacy of prayer date back at least to the nineteenth century.⁴ Mixed results occurred, but little attention was paid to them. In the twentieth century, “the first three clinical trials of intercessory prayer were conducted between 1965 and 1990 and were based on exclusively Christian, largely Protestant, intercessors and forms of prayer.”⁵ In one study, investigators found that prayer helped children with leukemia, but the study was criticized for having a small sample size ($n = 18$), failure to differentiate among the types of leukemia (some of which have better outcomes than others), and questions about the randomization process.⁶ In another study, investigators found that adults suffering from “chronic stationary or progressively deteriorating psychological or rheumatic disease” did not improve after being treated with intercessory prayer.⁷ Study design was again criticized for having too few patients and also for combining patients with psychological illness with those with rheumatologic illness.

In 1988, the third study, published in the *Southern Medical Journal*, yielded strikingly positive results, at least in some measures of patient outcomes (although not overall). Dr. Randolph Byrd, a cardiologist, oversaw a double-blind study of intercessory prayer in which 393 coronary-care-unit (CCU) patients agreed to participate. “Born-again” intercessors were given a prayer script to guide prayers, and each intercessor was given an assigned patient’s first name, diagnosis, and general condition. Intercessors prayed for the quick recovery, prevention of complications and death, and any other areas that they felt might be useful to their assigned patients. “No one—not patients, staff, or Byrd—knew who was being prayed for and who wasn’t. Byrd found that patients who were the subjects of prayer ... needed fewer antibiotics, experienced a lower percentage of congestive heart failure, and were less likely to develop pneumonia. [After analyzing the data, Byrd] concluded that ‘intercessory prayer to the Judeo-Christian God has a beneficial therapeutic effect in patients admitted to the CCU.’”⁸

Although the early studies tried to utilize some scientific criteria (e.g., intervention-control groups, double-blind), they lacked the overall scientific rigor characteristic of more recent studies. The pioneers in this type of research were all devout Christian physicians. The question was raised: did their devotion (particularly that of Dr. Byrd) lead to a certain bias, especially with regard to intercessor selection, end-point selection, or reporting?

1990s

A watershed event in the area of intercessory prayer was the publication in 1993 of the best seller *Healing Words: The Power of Prayer and the Practice of Medicine*.⁹ The author was Larry Dossey, a physician who firmly believed in the efficacy of intercessory prayer. Although clergy and chaplains had been writing about prayer for a long time, this was the first time that a physician wrote a book for a popular audience that attempted to scientifically demonstrate prayer's efficacy for healing. Although some of Dossey's ideas were unusual—a full chapter devoted to prayer that hurts and a full chapter devoted to prayers that are answered before they are made—his book included an extensive bibliography and a chapter on a review of the research on prayer and healing. The research yielded mixed results, as some cited studies were not based on sound science, while others were.

Many of the studies conducted in the 1990s tried to minimize the selection bias of patients, prayers, intercessors, and end-points that had been noted as problematic in earlier studies. Intercessors who were not Christians were included in studies.¹⁰ Some studies tried to narrowly limit what kind of prayer could be offered (and at what time of day),¹¹ in an attempt to “quantify” prayer, much as a dose of medication or radiation under study could be quantified. As the decade progressed, there were a number of clinical trials of intercessory prayer. Using more rigorous criteria than previously employed, there were studies demonstrating no effect, but—to be fair—overall results were still mixed.

Two studies from the end of the decade merit mention here, because they are so often cited. Fred Sicher and colleagues investigated whether “distant healing” improved the condition of individuals with advanced AIDS.¹² In this small double-blind study of forty patients, randomized into twenty intervention and control pairs, the investigators found that those receiving distant healing had “fewer new AIDS-defining illnesses ... required significantly fewer doctor visits..., [and] fewer hospitalizations.... Treated subjects also showed significantly improved mood.”¹³ CD4 counts, however, were not affected. Unfortunately, baseline non-equivalence of groups, especially on minority status, might have accounted for the findings.¹⁴

William Harris and colleagues attempted to replicate Byrd's study by investigating 990 consecutive coronary care unit patients prayed for by intercessors over the course of twenty-eight days. Harris developed his own weighted score (in terms of severity) of various cardiac outcomes in an effort to improve on Byrd's method of outcome measurement. In addition, there was no informed consent (in contrast to Byrd's study), as the hospital's institutional review board felt that the study conferred minimal risk. Although Harris was unable to document an effect of prayer using Byrd's scoring method, his study did find that, using his own scoring system, there was a lower severity score for

patients who had been prayed for by the intercessors, compared to control patients, even though there were no significant differences between those receiving prayer and those not receiving prayer for any individual component of the score.¹⁵ The authors note that “we were most likely studying the effects of supplementary intercessory prayer.... There was an unknowable and uncontrollable (but presumed similar) level of ‘background’ prayer being offered for patients in both groups.”¹⁶

Although researchers in the 1990s tried to address many (but certainly not all) critiques of previous research, methodological questions persisted. Can prayer *really* be quantified like a dose of medication, as some researchers were attempting to do? What is the effect of having someone outside the research study pray for a person in the control (i.e., no prayer) group? How could one say that such a person was a control, receiving “no” prayer? Furthermore, is it ever ethical to assign a person to a “no prayer” group? Would the very possibility of being assigned to a control group make it unlikely that persons would agree to participate, especially if they believed in prayer?

Another worrisome issue centered on the lack of informed participant consent in some of the studies, despite the fact that state-of-the-art research studies include such consent out of respect for patient autonomy. Why would any study of the efficacy of intercessory prayer fail to insist upon an informed consent procedure? Would such failure be reflective of investigator bias? Why would patients not have the right to decline to be part of such a study? Certainly, if studies on the efficacy of intercessory prayer were to be considered scientific, they had to adhere to the scientific, ethical, and statistical research standards that other studies had to meet in order to be deemed credible and worthy of dissemination.

2000s

In this decade, there were a number of clinical trials of intercessory prayer, published in such journals as *Alternative Therapies in Health and Medicine*, *American Heart Journal*, *Australian Psychiatry*, *British Medical Journal*, *Journal of Alternative and Complementary Medicine*, *Journal of Reproductive Medicine*, *Lancet*, *Mayo Clinical Proceedings*, *Nursing Research*, and *Southern Medical Journal*.¹⁷ Some researchers continued with overtly Christian intercessors and intercessory prayers. Other researchers regarded prayer as just another alternative medical modality, like various Eastern practices or visualization.¹⁸ The premise was that if one truly *believes* in something, it is the belief that matters, not (so much) the thing believed in. In other words, belief is the common denominator. Medical practitioners were well aware of this idea from experience with the placebo effect. Still other researchers tried to include prayers that seemed generic, a kind of “one size fits all.”

A genteel American religious multiculturalism was evident in this construction of prayer, as prayers from many religious traditions

were mixed together following a melting pot approach in which differences, distinctions, or possible contradictions were not acknowledged. This approach reflects not only the assumption that all prayers can be combined but that prayers from different religious traditions should not be tested alongside each other in ways that could be viewed as competitive or that might allow prayers from one tradition to appear more successful than another.¹⁹

Several concerns seem clear. First, persons who are not Christian are healed today, and Jesus himself reached out to those outside his religion in his own healing ministry. Thus there is no reason to limit studies to Christian intercessors, physicians, nurses, and patients. Second, all religions are *not* the same. There are profound differences among them. People of all religions have died for their beliefs over the millennia, and homogenizing these beliefs fails to honor that which people held—and still hold—most dear. Third, if prayer is communication with *God*, it is not in the same league with alternative medicine modalities, such as herbs, homeopathy, and the like. Its inclusion with such modalities trivializes it.

Most of the studies that examined the effect of intercessory prayer investigated patients in the coronary care unit, following the lead of Byrd. Although their study was published in 2001, in the late 1990s Jennifer Aviles and colleagues altered the focus by having intercessors pray for cardiac patients *after* their discharge. Intercessory prayer had no significant effect on medical outcomes.²⁰ In an effort to move away from investigating cardiac patients, Kwang Cha and colleagues examined the effect of intercessory prayer on the success of in vitro fertilization; women over thirty years of age assigned to the intercessory prayer group had a higher pregnancy rate compared to controls,²¹ although questions about the conduct of the study were raised.²² These patients were not informed that they were part of a study. In an attempt to move away from investigating ill people, Raymond Palmer and colleagues investigated whether intercessory prayer for people with difficult life situations was associated with resolution of these situations; subjects were unaware that prayer was offered for them.

There was not a significant overall direct effect of prayer intervention on problem resolution or concern, prayer did significantly affect problem concern depending on whether or not his or her problem could be resolved.... The results of this current study underscore the role of belief and the subsequent efficacy of intercessory prayer.²³

The study which was designed to provide the decisive answer with regard to the efficacy of intercessory prayer was a multi-year, multi-site (i.e., six-hospital) study, funded by the Templeton Foundation for nearly 2.5 million dollars. The clinical trial was under the direction of Harvard's Herbert Benson, a cardiologist who, thirty years ago, noted the efficacy of prayer in achieving the "relaxation response," a physical phenomenon that ameliorates the adverse symptoms of the "fight-or-flight"

response. The investigation was called “Study of the Therapeutic Effects of Intercessory Prayer (STEP) in Cardiac Bypass Patients: A Multicenter Randomized Trial of Uncertainty and Certainty of Receiving Intercessory Prayer,” or STEP for short. It was meant to address a question that had arisen in previous critiques of intercessory prayer studies: was it prayer itself or *knowing* that one was receiving prayer that made the difference in whether one did well? The study enrolled 1,802 patients (from six participating hospitals), all admitted for coronary artery bypass graft surgery. The patients were randomized into three groups: two groups were told that they *might or might not* receive intercessory prayer, and participants in the third group were told that they *would* receive intercessory prayer. The intercessory prayer was provided, over the course of fourteen days, by devout Christians who had experience with praying for the sick. The primary end-point was any complication occurring thirty days after surgery.

Of the enrolled patients, 604 received intercessory prayer after being told that they might not, 597 did not receive intercessory prayer after being told that they might not, and 601 received intercessory prayer after being told that they would. From the abstract of the article:

In the 2 groups uncertain about receiving intercessory prayer, complications occurred in 52 percent (315/604) of those who received intercessory prayer versus 51 percent (304/597) of those who did not.... Complications occurred in 59 percent (352/601) of patients certain of receiving intercessory prayer compared with 52 percent (315/604) of those uncertain of receiving intercessory prayer [but who did].... Major events and thirty-day mortality were similar across the 3 groups. CONCLUSIONS: Intercessory prayer itself had no effect on complication-free recovery from CABG [coronary artery bypass graft] but certainty of receiving intercessory prayer was associated with a higher incidence of complications.²⁴

In the discussion section of the published manuscript, the authors noted:

Although postoperative atrial fibrillation/flutter was responsible for much of the excess of complications in the group 3 patients [i.e., the patients who knew they were receiving prayers], this outcome is only one of the complications that contributed to the composite outcome, and the excess may be a chance finding. Although there was a borderline excess of major complications (secondary outcome) in patients in group 1 [i.e., patients who were unsure whether they would receive intercessory prayer but did so], this excess may also be well because of chance.²⁵

Startled by the “chance” comment, Mitchell Krucoff and colleagues wrote in their commentary:

While presenting the results clearly and noting them in discussion, the investigators take an almost casual approach to any explanation, stating only that it “may have been a chance finding.” It is rather

unusual to attribute a statistically significant result in the primary end of a prospective, multicenter randomized trial to “chance.” ... If the results had shown benefit ..., would we have read the investigators’ conclusion that this effect “may have been a chance finding,” with absolutely no other comments, insight, or even speculation?

Rigorous thinking is not an indictment of prayer or prayer’s potential healing power.²⁶

It should again be mentioned here that there were basic methodological flaws in the STEP study, as in all studies of intercessory prayer, in that it was not possible to exclude the confounding factor of “background prayer.” According to the Gallup poll in 1999, nine out of ten people in the United States pray.²⁷ A recent study of the effect of ethnicity on prayer specifically for health reasons in over 22,000 adults indicated that approximately 47 percent of the respondents prayed for health reasons, and this proportion increased with decreasing health status from 39 percent of those who were in good or excellent health to 67 percent of those who were in fair or poor health.²⁸ Such confounding factors make interpretation of studies on intercessory prayer quite difficult. This is acknowledged by the authors of the STEP study when they state:

We did not request that subjects alter any plans for family, friends, and/or members of their religious institutions to pray for them, because to do so would have been unethical and impractical. At enrollment, most subjects did expect to receive prayers from others regardless of their participation in the study. We also recognize that subjects may have prayed for themselves. Thus, our study subjects may have been exposed to a large amount of non-study prayer, and this could have made it more difficult to detect the effects of prayer provided by the intercessors.²⁹

Pastoral Perspectives on Intercessory Prayers for Those Who Are Ill

Gregory of Nazianzus (329/30–389/90) remarked, “Do not admire every form of health, and do not condemn every illness.” Sickness may be placed in a deep spiritual context that we can use to grow in our knowledge of our human condition before God.... Nonetheless, we are not to seek illnesses for the sake of spiritual growth.³⁰

Although Peter Hobbins critiqued studies of intercessory prayer on ethical grounds, especially the lack of informed consent for many studies,³¹ others have criticized such studies on religious or metaphysical grounds. For example, John Chibnall and colleagues criticized the studies on the basis of the faith factor: “Prayer that tests for a response from God in the way the intercessor requires would not be considered prayer at all because it requires no faith, leaves God no options, and is presumptuous regarding God’s wisdom and plan. Where is faith if science can validate the power of prayer?”³²

If God is, God must be ultimately beyond human understanding. Otherwise, God would not be God but would be subject to us and our wants, thereby watering down divinity. If God is beyond human understanding, and free to make His own decisions, then why should we expect that God would respond in a knee-jerk fashion to every request people make? Long ago, the prophet Isaiah learned: “For my thoughts are not your thoughts, nor are your ways my ways, says the Lord. As high as the heavens are above the earth, so high are my ways above your ways and my thoughts above your thoughts.”³³ Some human requests are selfish or trivial, while other human requests are altruistic or profound. We will never understand why some prayers are answered in the way the petitioner requests, while others are not. That is the human condition, and it does not necessarily mean there is no God but, rather, that we are not God.

As Kevin Masters notes: “I invite the reader to develop a theory to explain why God would respond more favorably to the prayers made on behalf of a group of people who were *chosen at random* to be in the prayed for group.... What kind of God would this be?”³⁴ “Is not God’s very nature such that universal probabilities and estimates of chance do not apply?”³⁵

It is my contention, however, that a major source of confusion in intercessory prayer studies is the result of applying the wrong method to the question of the efficacy of intercessory prayer.... The basic premise of science is the functioning of a mechanistic and predictable world, but the basic premise of the Biblical deity is that God acts according to God’s own purposes and is not constrained by physical limits. Natural processes are the proper domain of science but supernatural processes are the domain of theology.... There is no theological principle to suggest that God’s ability to heal can ever be tested by controlled, scientific methods. In fact, quite the opposite seems to be the case.³⁶

Referring to chapter 17 in the Book of Exodus, where Moses struck the rock which yielded water for the grumbling Israelites, Chibnall and colleagues recall that Moses named the place “Massah,” the Hebrew word for trial, because it was there that the Israelites tested God.

The lesson of Massah is that God cannot be controlled by our research designs, statistics, and hypotheses to answer our demand, “Is the Lord among us or not?” Massah makes it clear that our intercessions must be a matter of faith and trust in God, of putting our hope in God, ... As a metaphor for the testing of distant prayer through the scientific method, Massah tells us not only that God should not be tested but, more important, that God cannot be tested.³⁷

Yet, people want some assurance that God is present and responds to their needs. Philosophers and theologians have long asked: if God is love and can do all things, why wouldn’t God answer “worthy” prayers, especially those requesting a cure or a better outcome? Clearly some

“worthy” prayers are not answered in the ways hoped for; with regard to the intercessory prayer studies, it means that prayer does not “work.”

But, the argument is not easier if worthy prayers are answered (even those which are part of research studies to prove God answers prayers). Why are some prayers for healing answered, but others are not? Was it prayer technique? That is trying to make prayer a procedure that needs to be followed to procure a result. This concept is inimical to the Catholic concept of prayer as “a surge of the heart; it is a simple look turned toward heaven, it is a cry of recognition and of love, embracing both trial and joy.”³⁸

Perhaps the response to intercessory prayer depends on the disposition of the intercessor or the ill person praying for him- or herself? Perhaps, but who can judge the disposition of the intercessor? Although Scripture tells us that Christ repeatedly said to those who received a cure or healing, “Your faith has made you well/whole,” who can say which person has greater faith? The true disposition is known only to God and cannot be measured scientifically.

The *Catechism of the Catholic Church* indicates that prayer itself is a gift from God within a covenantal relationship between God and human beings in Christ and that prayer represents communion with Christ.³⁹ Within this dimension of prayer as covenant and communion, the free will of both parties is completely respected. Thus, while intercessions may be made to God, His response cannot be assumed. It is noteworthy that Christ came to heal the whole person, soul and body, and that His many healings pointed to a more profound healing, “the victory over sin and death through his Passover.”⁴⁰ It cannot be assumed that a physical healing will necessarily result in the spiritual healing of the soul that God also desires for an individual. In many ways, the prayer itself, by strengthening and renewing the covenant relationship with God, may be the more important outcome.

In a recent article in this journal, Donald DeMarco wrote about love and healing. His words seem apropos to prayer.

How is it possible for love, which is essentially spiritual, to have a transforming effect on the human body, which is corporeal and the natural object of scientific intervention? ... Love, therefore, is an *affirmation* of the other, regarding the other in his wholeness. This affirmation rests on the recognition that a person’s wholeness constitutes his original state, the state in which he is most himself.... Consequently, the second phase of love is *restoration*. Here, love operates as the desire to help others return, as much as is possible, to that original state of wholeness.⁴¹

Healing is rooted in love insofar as love desires the other to be restored to wholeness, and this restoration process presupposes the primary and primal significance of wholeness. Disease, depression, sin, and alienation are all impediments that compromise wholeness. Healing involves the removal of these impediments.⁴²

When it is an act of love (first of God and then of the other), prayer is a supremely noble act, one that will never be quantified. Its nobility means that, as physicians, we may be called to embrace it not only for our families and loved ones but also for our patients. Its effects may or may not be evident in this life.

Notes

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² *Catechism of the Catholic Church* (Mahwah, NJ: Paulist Press, 1994), n. 2559.

³ Peter Hobbins, "Compromised Ethical Principles in Randomised Clinical Trials of Distant, Intercessory Prayer," *Journal of Bioethical Inquiry* 2 (2005): 143.

⁴ Wendy Cadge, "Saying Your Prayers, Constructing Your Religions: Medical Studies of Intercessory Prayer," *The Journal of Religion* 89 (July 2009): 299–327.

⁵ *Ibid.*, 304.

⁶ F. Collipp, "The Efficacy of Prayer," *Medical Times* 97 (1969): 201–204.

⁷ Joyce and Welldon, "The Objective Efficacy of Prayer," 368.

⁸ Cynthia Cohen et al., "Prayer as Therapy," *Hastings Center Report* 30.3 (May–June 2000): 40–47.

⁹ Larry Dossey, *Healing Words: The Power of Prayer and the Practice of Medicine* (New York: HarperCollins, 1993).

¹⁰ Sean O'Laoire, "An Experimental Study of the Effects of Distant, Intercessory Prayer on Self-Esteem, Anxiety, and Depression," *Alternative Therapies in Health and Medicine* 3 (1997): 38–53. Scott Walker et al., "Intercessory Prayers in the Treatment of Alcohol Abuse and Dependence: A Pilot Investigation," *Alternative Therapies in Health and Medicine* 3 (1997): 79–86.

¹¹ O'Laoire, "An Experimental Study."

¹² Fred Sicher et al., "A Randomized Double-Blind Study of the Effect of Distant Healing in a Population with Advanced AIDS," *Western Journal of Medicine* 169 (1998): 356–363.

¹³ *Ibid.*, 356.

¹⁴ Lynda Powell, Leila Shahabi, and Carl Thoresen, "Religion and Spirituality: Linkages to Physical Health," *American Psychologist* 58 (2003): 36–52.

¹⁵ William Harris et al., "A Randomized Controlled Trial of the Effects of Remote, Intercessory Prayer on Outcomes in Patients Admitted to the Coronary Care Unit," *Archives of Internal Medicine* 159 (1999): 2273–2278.

¹⁶ *Ibid.*

¹⁷ Cadge, "Saying Your Prayers," 317.

¹⁸ John Astin, Elaine Harkness, and Edward Ernst, "The Efficacy of 'Distant Healing': A Systematic Review of Randomized Trials," *Annals of Internal Medicine* 132 (2000): 903–910.

¹⁹ Cadge, "Saying Your Prayers," 319.

²⁰ Jennifer Aviles et al., "Intercessory Prayer and Cardiovascular Disease Progression in a Coronary Care Unit Population: A Randomized Controlled Trial," *Mayo Clinic Proceedings* 76 (2001): 1192–1198.

²¹ Kwang Cha, Daniel Wirth, and Rogerio Lobo, "Does Prayer Influence the Success of In-Vitro Fertilization-Embryo Transfer," *Journal of Reproductive Medicine* 46 (2001): 781–787.

²² Kevin Masters, Glen Spielmans, and Jason Goodson, "Are There Demonstrable Effects of Distant Intercessory Prayer? A Meta-Analytic Review," *Annals of Behavioral Medicine* 32 (2006): 24.

²³ Raymond Palmer, David Katerndahl, and Jayne Morgan-Kidd, "A Randomized Trial of the Effects of Remote Intercessory Prayer: Interactions with Personal Beliefs on Problem-Specific Outcomes and Functional Status," *The Journal of Alternative and Complementary Medicine* 10 (2004): 443.

²⁴ Herbert Benson, Jeffrey Dusek, Jane Sherwood, et al., "Study of the Therapeutic Effects of Intercessory Prayer (STEP) in Cardiac Bypass Patients: A Multi-center Randomized Trial of Uncertainty and Certainty of Receiving Intercessory Prayer," *American Heart Journal* 151 (2006): 934–942.

²⁵ *Ibid.*, 940.

²⁶ Mitchell Krucoff, Suzanne Crater, and Kerry Lee, "From Efficacy to Safety Concerns: A STEP Forward or a Step Back for Clinical Research and Intercessory Prayer? The Study of Therapeutic Effects of Intercessory Prayer (STEP)," *American Heart Journal* 151 (2006): 762–764.

²⁷ G. Gallup Jr. and D.M. Lindsay, *Surveying the Religious Landscape: Trends in U.S. Beliefs* (Harrisburg, PA: Morehouse, 1999).

²⁸ Frank Gillum and Derek M. Griffith, "Prayer and Spiritual Practices for Health Reasons among American Adults: The Role of Race and Ethnicity," *Journal of Religion and Health* 49 (2010): 283–295.

²⁹ Benson et al., "Study of the Therapeutic Effects," 942.

³⁰ Philip LeMasters, "The Practice of Medicine as *Theosis*," *Theology Today* 61 (2004): 176.

³¹ Hobbins, "Compromised Ethical Principles."

³² John Chibnall, Joseph Jeral, and Michael Cerullo, "Experiments on Distant Intercessory Prayer: God, Science, and the Lesson of Massah," *Archives of Internal Medicine* 161 (2001): 2529–2536.

³³ Isaiah 55: 8–9 NAB.

³⁴ Kevin Masters, "Research on the Healing Power of Distant Intercessory Prayer: Disconnect between Science and Faith," *Journal of Psychology and Theology* 33 (2005): 272.

³⁵ *Ibid.*, 273.

³⁶ *Ibid.*, 274.

³⁷ Chibnall, "Experiments on Distant Intercessory Prayer."

³⁸ St. Thérèse of Lisieux, *Manuscrits autobiographiques*, C 25r, as quoted in *Catechism of the Catholic Church*, nn. 2558–2559.

³⁹ *Catechism of the Catholic Church*, nn. 2558–2565.

⁴⁰ *Ibid.*, n. 1505.

⁴¹ Donald DeMarco, “Love and Healing,” *Linacre Quarterly* 77 (2010): 44.

⁴² *Ibid.*, 45.