

H3-6 Prayer and Spirituality in Health: Ancient Practices, Modern Science

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People have used prayer and other spiritual practices for their own and others' health concerns for thousands of years. Scientific investigation of these practices has begun quite recently, however, to better understand whether they work; if so, how; and for what diseases/conditions and populations. The National Center for Complementary and Alternative Medicine (NCCAM) is supporting research in this arena.

Many Americans are using prayer and other spiritual practices. This was confirmed by findings from the largest and most comprehensive survey to date on Americans' use of complementary and alternative medicine (see Barnes PM et al. in "Sources"). This survey of more than 31,000 adults, released in May 2004 by the National Center for Health Statistics and NCCAM, found that 36% had used complementary and alternative medicine (CAM), when prayer was not included in the definition of CAM; when prayer was included in the definition of CAM, 62% had used CAM (all figures refer to use in the preceding 12 months). Among the respondents:

- 45% had used prayer for health reasons.
- 43% had prayed for their own health.
- Almost 25% had had others pray for them.
- Almost 10% had participated in a prayer group for their health.

Prayer was the therapy most commonly used among all the CAM therapies included in the survey. The report also addressed the use of other CAM approaches that can have a spiritual component, including meditation, yoga, tai chi, qi gong, and Reiki.¹

Stephen E. Straus, M.D., Director of NCCAM, said, "Prayer and spirituality for the benefit of health are relied upon by many Americans. NCCAM seeks to develop strategies to bring the most rigorous and detailed scientific approaches to studying these and other CAM practices so that we can understand the health impact that these practices might have."

Catherine Stoney, Ph.D., a Program Officer in NCCAM's Division of Extramural Research and Training, oversees many grants in NCCAM's mind-body portfolio. She noted: "There is already some preliminary evidence for a connection between prayer and related practices and health outcomes. For example, we've seen some evidence that religious affiliation and religious practices are associated with health and mortality—in other words, with better health and longer life. Such connections may involve immune function, cardiovascular function, and/or other physiological changes." However, she added, this is by no means proven: "For some individuals, religious practices are an effective way of coping with stress, and the beneficial health effects may come about by reducing stress. For others, religious practices may not result in reduced stress or be associated with health benefits. It can be challenging to separate out these effects because people have different ideas regarding the meaning of various practices. For this reason, we are particularly interested in understanding the impact of personal, positive meaning on health."

Other challenges in this very new field of research include:

- The fact that different researchers have defined prayer, spirituality, and related concepts in different ways
- A relative lack of standardized questionnaires (compared with many other fields of medicine)

The Science of Mind-Body Medicine

These practices form a small part of a large domain (area of knowledge) of CAM: mind-body medicine, which involves the interaction of mind, brain, other body systems, behavior, and, ultimately, health and disease. Some examples of other mind-body practices include relaxation techniques, hypnosis, various forms of meditation, yoga, and tai chi. Mind-body medicine is one of NCCAM's current research priorities. Through this research, the Center seeks to discover means for enhancing and accelerating the healing process beyond the effects of conventional medicine; preventing, treating, and slowing the progression of diseases and disorders; reducing the burden of stress-related chronic illnesses; and enhancing people's resilience and coping—all toward improving public health and well-being.

Many mind-body techniques date back to ancient times. In recent years, science has found evidence that patients faced with chronic and even terminal illnesses—particularly conditions like heart disease and cancer—can learn and utilize a variety of mind-body practices to achieve symptom relief, a better quality of life, and, in some cases, improvements in health outcomes. (To find out more, see NCCAM's backgrounder "Mind-Body Medicine: An Overview" in "Sources.") The clinical reports of these effects are supported by a growing body of basic and clinical

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research. These studies are aimed at better understanding the underlying mechanisms at work at genetic, molecular, and cellular levels. They look at markers and measures in the body and draw upon an array of high-technology tools and techniques, such as brain imaging.

“The growing body of physiological evidence about these approaches is helping to shatter a long-held cultural belief in the West that mind and body are separate,” noted Dr. Straus. “Indeed, the potential exists for safe and effective mind-body practices to add to the repertoire of conventional medicine. NCCAM is working to move study in this important field forward.”

Defining Terms

What does NCCAM mean by studies on prayer and spirituality? It is important to start by explaining what CAM is: a group of diverse medical and health care systems, therapies, and products that are not presently considered to be part of conventional medicine as practiced in the United States.² Within CAM, prayer is defined by NCCAM as an active process of appealing to a higher spiritual power, specifically for health reasons; it includes individual or group prayer on behalf of oneself or others. Spirituality is broader; it is defined by NCCAM as an individual’s sense of purpose and meaning to life, beyond material values. Spirituality may be practiced in many ways, including through religion.

Snapshots of NCCAM Research

NCCAM is funding several studies of prayer and other explicitly spiritual practices. Goals range from improving quality of life, to looking at the impact of these practices on the immune system and on serious chronic health conditions, to assisting people through the end of life.

Spirituality in the Context of Chronic Illness Joel Tsevat, M.D., Director of Outcomes Research in the Department of Internal Medicine at the University of Cincinnati, is completing a study of the will to live in patients with HIV/AIDS. His team is using several standardized tools that measure different aspects of spirituality, such as a sense of meaning and peace and faith, religious coping measures, and involvement in organized and nonorganized religious activity. They are also looking at measures of health status, health concerns, depression, self-esteem, and social support. The study involves interviews with 350 individuals with HIV/AIDS in Cincinnati and Washington, D.C.

Dr. Tsevat became interested in studying spirituality during earlier research with patients with HIV/AIDS. “Patients were telling us that they had discovered new meaning and purpose in their lives since being diagnosed with HIV,” Dr. Tsevat said. “The spirituality theme emerged when we asked patients whether they would choose their health as it is or take a gamble between death and perfect health.” People who were spiritual tended to be happier with their current health status and less likely to take the described risk.

“We tend to focus just on what medical professionals can address—physical functioning and mental health,” said Dr. Tsevat. “In the scheme of things, I think spiritual well-being is also an important component of someone’s quality of life.”

Spirituality, Immunity, and Emotional Well-Being Several NCCAM-supported researchers in New York City are exploring the impact of spirituality on the immune system and its role in emotional well-being among cancer patients.

Barry Rosenfeld, Ph.D., and graduate student Colleen McClain, M.A., of Fordham University, and William Breitbart, M.D., of Memorial Sloan-Kettering Cancer Center, published results in 2003 of an NCCAM-funded study on the effect of spiritual well-being on end-of-life despair in terminally ill cancer patients. They concluded that spiritual well-being offers some protection—a buffer effect—against end-of-life despair in patients for whom death is imminent. These researchers are now studying spirituality-based interventions to establish methods that can help engender a sense of peace and meaning.

“When people despair, they feel nothing they’ve done has had any meaning. We help them remember things they’ve forgotten during the throes of their illness so they can realistically place themselves in the world,” Dr. Rosenfeld said. The approach is spiritually based, he said, but “we have tried to not have it linked to any particular religious framework, keeping it open to as many individuals who are interested.”

To determine whether immune function is a link between spirituality and emotional well-being, the three researchers are also now collaborating, under another NCCAM grant, to measure spirituality and interleukin-6 (IL-6) levels in the blood among terminally ill cancer patients. “There is a small, but growing, body of literature linking immune function to mood, and IL-6 is the immune marker most highly correlated with mood states,” Dr. Rosenfeld said. IL-6 is a protein that acts on other cells to regulate immune system function. It is one of several markers of inflammation, an important process in a variety of diseases like heart disease, diabetes, and stroke, and is associated with increased stress and depression.

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Earlier Studies Since its founding in 1999, NCCAM has supported a small number of research grants on prayer and spirituality. Examples of published research results include:

- Kathi Kemper, M.D., et al., of Wake Forest University School of Medicine, researched how to make clinical practice in pediatrics most effective in light of the spiritual diversity within this population.
- Whitney Dessio, et al., of Stony Brook School of Medicine, studied the prevalence and patterns of the use of religion and spirituality for health reasons among African American women, as part of a larger study of CAM use among women. Among their findings were that 43% of participants had used religion/spirituality for health reasons in the past year; that they most often used these practices for serious conditions such as cancer, heart disease, and depression; and that compared with the other study participants, they were more likely to have used CAM and to have seen a medical doctor during the previous year.
- Anne M. McCaffrey, M.D., et al., of Harvard Medical School, analyzed data on the use of prayer from a survey published in 1998 (also done at Harvard) of the use of CAM. Among their findings were that out of 2,055 participants, 35% used prayer for health concerns; among them, 75% prayed for wellness and 22% prayed for specific medical conditions.

Future Directions

Looking toward the future, Margaret A. Chesney, Ph.D., NCCAM's Deputy Director and Director of the Division of Extramural Research and Training, said, "We at NCCAM look forward to finding out more from studies that examine ways that positive psychological states (including those that may occur in prayer) may be associated with positive health outcomes. We are also interested in finding out more about the health-enhancing effects that occur for persons who are able to experience serenity, positive meaning, and personal growth when confronted with challenge—such as daily stress or serious or chronic illness." She added, "The advantage of focusing our research on positive psychological states, such as positive meaning, is that people can be trained to increase these states, and the subsequent effects on well-being and health can be directly measured. By advancing the focus of research from prayer and spirituality to positive meaning and personal growth, NCCAM will be in a far better position to apply scientific rigor to this domain and to make discoveries that will be applicable to the widest range of people."

Sources

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Notes

1. For definitions or other information on these or any other CAM therapies, contact the NCCAM Clearinghouse.
2. Conventional medicine is a whole medical system practiced by holders of M.D. (medical doctor) or D.O. (doctor of osteopathy) degrees and by their allied health professionals, such as physical therapists, psychologists, and registered nurses. Other terms for conventional medicine include allopathy; Western, mainstream, and orthodox medicine; and biomedicine. In CAM, complementary medicine is used along with conventional medicine, and alternative medicine is used instead of conventional medicine. Some practitioners of conventional medicine are also practitioners of CAM.