Ian N. Olver

Investigating Prayer

Impact on Health and Quality of Life

Investigating Prayer

Ian N. Olver

Investigating Prayer

Impact on Health and Quality of Life

Ian N. Olver
Chief Executive Officer
Cancer Council Australia
NSW, Australia

ISBN 978-1-4614-4570-8 ISBN 978-1-4614-4571-5 (eBook)
DOI 10.1007/978-1-4614-4571-5
Springer New York Heidelberg Dordrecht London

Library of Congress Control Number: 2012948281

© Springer Science+Business Media New York 2013
This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed. Exempted from this legal reservation are brief excerpts in connection with reviews or scholarly analysis or material supplied specifically for the purpose of being entered and executed on a computer system, for exclusive use by the purchaser of the work. Duplication of this publication or parts thereof is permitted only under the provisions of the Copyright Law of the Publisher's location, in its current version, and permission for use must always be obtained from Springer. Permissions for use may be obtained through RightsLink at the Copyright Clearance Center. Violations are liable to prosecution under the respective Copyright Law.
The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.
While the advice and information in this book are believed to be true and accurate at the date of publication, neither the authors nor the editors nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

Preface

I have never accepted that science and religion cannot coexist. Indeed for centuries before the enlightenment, healthcare was within the domain of organized religion in the West. However in the seventeenth century they separated when Western medicine looked to science only to explain disease. Observation and experiment built a biological and physical model of disease. Slowly the impact of psychological well-being on heath became apparent. Now the importance of spiritual well-being is being explored.

All of us who have questioned the meaning of our lives are contemplating the spiritual. Some choose to express their spirituality through the framework of organized religion while others seek more individual expression.

Both science and spirituality share questions that are beyond human understanding. What existed prior to the singularity from which the Big Bang originated has the same mystery as what preceded “In the beginning God created…”. We cannot use science to explain metaphysical phenomena or to explain beliefs that religious people take as a matter of faith. We could however observe whether religious practices can be associated with measurable outcomes in our physical world. We seek to measure whether prayer was associated with a change in measurable aspects of our well-being, without being able to explain by science what the mechanism of the effect is. Many treatments in medicine have been adopted before their mechanisms of action have been determined.

Religion is highly personal and advocates of science can be quite dogmatic about the scope of their discipline. Yet, each must attempt to understand the other’s viewpoints to be able to investigate what both have to offer to our lives. This book describes a journey of exploring this interface by investigating the impact of prayer.

I am indebted to my father, Norman Olver, a scientist who sought to understand theology as a guide to living well. I am grateful to those people involved with the study who agreed to be interviewed: Annemarie Naylor, Hayley Whitford, Michael James, and Andrew Dutney. I am also grateful to Hayley Whitford and Jenny Olver for feedback on initial drafts.

Finally, my aim is to stimulate further contemplation of how science and spirituality can be both accommodated in the aim of improving health and well-being.

Ian N. Olver

Contents

1 What Is Prayer and Why Study It? 1
Introduction 1
Spirituality 2
Historical Perspective 2
The Role of Spirituality in Illness 3
Differences Between Countries 4
Types of Prayer 4
Preclinical Prayer Experiments 5
Other Distant Psychological Effects 5
Prayer and Non-locality 6
Religious Views of Prayer Differ 9
How Do Spirituality and Prayer Influence Health Outcomes? 11
Influence of the Prayer on Those Who Pray 13
The Impact of Intention of the Researcher 14
The Beliefs of the Researchers 15
Wesleyan Quadrilateral 16
Conclusions 16
References 17

2 Studies of Prayer as a Complementary Therapy 21
Introduction 21
Is Prayer a CAM? 22
Research on Prayer as a CAM 23
Studies of Intercessory Prayer 23
Byrd 24
Harris 24
The Cochrane Reviews 25
Results 26
Conclusions 28

Individual Intercessory Prayer Studies 28
Byrd and Harris 28
Aviles 29
Benson 31
Krucoff 33
Joyce 35
Collipp 37
Walker 38
Leibovici 40
Other Retrospective Prayer Studies 44
Further Comments 44
Leibovici's Reply 45
Studies Excluded from the Cochrane Review 45
Cha 46
Cochrane Authors Responses to Criticisms 47
Other Studies 48
O'Laoire 48
Rath 49
Palmer 50
Conclusions 50
References 51

3 A Theological Reflection on Prayer 55
Introduction 55
Andrew Dutney 56
Further Commentary 62
Moss 63
Chibnall 64
Masters, Spielmans, and Goodson 67
Dusek 68
Halperin 69
Masters 70
References 74

4 The Relationship Between Spiritual Well-being and Quality of Life 77
Introduction 77
Scales for Measurement 78
The Religious Orientation Scale 78
The Spiritual Well-Being Scale 78
The Index of Core Spiritual Experiences 79
The Systems of Belief Inventory 79
The Brief RCOPE 79
The Spiritual Involvement and Beliefs Scale 79
Mytko and Knight 79
Brady 80
Sawatzky 81

FACIT-Sp-12 81
Psychological Adjustment 82
Whitford 83
Canada and the Three Factor FACIT-Sp-12 84
Murphy 85
The Australian Study of the Three Factor Model 86
Methodology 86
Results 86
Discussion of the Study 88
QOL and Spiritual Well-Being 91
References 92

5 A Randomized Blinded Study of Intercessory Prayer in Patients with Cancer 95
Introduction 95
Should We Do the Study? 96
Choosing the Intercessors 97
The Randomized Study 99
Patient Recruitment and Data Collection 100
Statistical Considerations 101
What Did We Find? 102
Data Screening 102
Primary Results 103
Limitations of the Study 104
Conclusion 105
References 105

6 The Impact of the Study on the Trials Team 107
Introduction 107
Ethics Committee Chair 108
The Data Coordinator 112
A Principal Investigator 114
Conclusion 119
References 119

7 Response to Our Study of Prayer 121
Introduction 121
Ethics 122
Blinding and Deception 122
Clinical Relevance 125
BMJ 127
Archives 127
Supportive Care 128
Alternative Medicine 129
Second Guessing God 131
References 132

8 What Next? ... 135
Introduction ... 135
The Team of Investigators ... 136
What to Measure ... 136
Intercessors' Endpoints ... 138
Study Design ... 138
Blinding ... 138
The Intervention ... 139
Summary ... 140
Other Prayer Studies ... 141
Other Studies of Spirituality ... 142
The Next Step ... 143
References ... 143

Index ... 145

Chapter 1
What Is Prayer and Why Study It?

Abstract Spirituality is a search for meaning in our lives which some seek through organized religions. Spirituality and medicine were closely linked until the enlightenment when scientific explanations for illness dominated. There are many types of prayer but this enquiry is about intercessory prayer (prayer for others) which is often conducted remotely. That prayers are answered by God is a matter of faith but other nonlocal explanations include nonlocal interconnected consciousness. Nonlocal phenomena are accepted by science in other fields like quantum physics. Religious use of prayer differs but it should not been seen as a list of requests to God but part of the relationship that people of faith have with God. Prayer can influence health through psychological or physical mechanisms through relaxation or impact on the immune system. Some religions promote good heath through healthy lifestyles. Those who pray for others also benefit. The intention and beliefs of the researchers may influence the outcome and should be considered. Belief systems can be analyzed using the Wesleyan Quadrilateral. Can the impact of prayer be studied without knowing the mechanism?

Introduction

The understanding of prayer will grow across the chapters of this book, rather than being captured by a precise definition in the opening sentences. The term “prayer” is from the Latin “precari,” literally meaning “to entreat.” Commonly prayer is viewed as a religious practice involving communication between a person or a group of people and one or more divine beings [21]. Alternative views are that prayer is hearing the self as it speaks, or that it can be a preconscious state not mediated by an external deity, but I will proceed with the common religious concept of prayer being communication with a god [8, 66].

I.N. Olver, *Investigating Prayer: Impact on Health and Quality of Life*,
DOI 10.1007/978-1-4614-4571-5_1, © Springer Science+Business Media New York 2013

Spirituality

I want to introduce one further definition at this stage, and that concerns spirituality. We are all spiritual beings. We all, at some time, question the meaning and purpose or value of our lives, often in the context of illness or impending death. Although there are many definitions of spirituality, they all encompass some concept of meaning, and some incorporate a state of peace [6, 28, 41]. The definitions often include exploring the personal relationship with a transcendental dimension, or a higher power [16, 61].

However, spirituality should not be only equated with religiosity, as it sometimes is. Religiosity relates to sharing in the beliefs of particular organized religions and participating in their traditional rituals and practices [13]. As such it is only one way of expressing spirituality and could be viewed as a subset of spirituality, which is a far broader concept. Individuals can express their spirituality and seek spiritual well-being without subscribing to organized religions.

Historical Perspective

A close relationship between medicine and spirituality existed prior to the Reformation and evidence of that close relationship persists. The snake entwined staff of Aesculapius remains a symbol of medicine today [63]. Aesculapius was a Greek God of healing and the serpent may represent the potential ambiguity between healing and harming that characterizes medical treatments, or perhaps the recognition of the role of the physician in both life and death [56]. It was the Greeks also who recognized a link between the mind and the body as recorded in the Hippocratic writings [8].

The connection between religion and medicine has been strong. In the West it was the church that built the first public hospitals in the fourth century and it was religious orders that trained and registered doctors, right up until the Reformation [32]. From the time of the enlightenment of the seventeenth century almost a complete separation between religion and medicine occurred when Western culture looked to science and technology for explanations of disease and for its healing [58]. There was a major focus on the physical management of disease and anything spiritual or psychological was considered alternative or at best, complementary medicine. However, this was to gradually change over time.

Larry Dossey characterizes the changes in medicine after the seventeenth century as belonging to three eras [8]. In the late nineteenth century his first era was when physical medicine dominated in both theories of causation of disease and the corresponding therapies of surgery, radiation, and drugs. Great advances in medicine occurred at this time. In the mid-twentieth century his next era was a return to mind–body medicine. Observations such as those of soldiers with shell shock in the First World War highlighted the role of the mind in physical well-being and brought about this change in emphasis [35]. Research began in areas such as biofeedback

and modulating physical responses. The third era suggests that mind is not confined to the brain locally and not confined to a specific time. Consciousness is therefore non-local. Research into prayer at a distance would fall into this category. If we examine current Western culture, the dominant model of healthcare has been the biomedical model.

The Role of Spirituality in Illness

Studies have shown that people often use their spiritual beliefs or religious behaviors to assist them in coping with chronic illness [15, 26]. Miller reported that amongst people with chronic illness, using prayer to enhance spirituality was the second most common coping strategy [39]. A further example was reported by Fehring et al. who showed in elderly subjects with cancer that both intrinsic religiosity and spiritual well-being correlated with positive mood and hope and they were inversely correlated with depression [15]. Intrinsic religiosity is the situation where people have embraced religion as part of their everyday lives. They postulated that religiosity and spiritual well-being improved coping by providing a source of perspective to life. For example, it could provide a meaning to suffering or a concept of an afterlife. It may also provide a sense of wholeness. Even extrinsically religious people, who find religious practices important predominantly for sociability and security, demonstrated a positive relationship between these and hope, probably because of the support of friends, family, and clergy.

Nelson and colleagues in investigating depression in the terminally ill patients with AIDS (Acquired Immunodeficiency Syndrome) or cancer found that there was a strong negative correlation between the FACIT-Sp-12 (Functional Assessment of Chronic Illness Therapy—Spiritual Well-being: The 12 Item Spiritual Well-being Scale) and depression as measured by the Hamilton Depression Rating Scale [24, 42]. A similar correlation was not found for religiosity which went the other way. Using the FACIT-Sp-12 scale the benefit of spirituality from this study was more due to the existential aspects such as Peace and Meaning rather than Faith, suggesting that the beneficial aspects of religion in this setting are more to do with other aspects of spiritual well-being than religious practices. Why there should be a positive correlation between religious practices and depression as opposed to spirituality may simply reflect anger at a God or a crisis of faith in not being able to find a deeper spiritual strength that their religion had previously provided.

In a further study, Nelson's group examined the role of spirituality in the relationship between religiosity and depression in 367 patients with prostate cancer [43]. Again there was only a small relationship between religiosity and depression but a strong relationship between spirituality and depression. The authors determined that the Meaning/Peace subscale mediated this relationship between intrinsic religiosity and depression. This means that interventions that enhance the patients' senses of meaning would be valuable which is not exclusive to a formal religious involvement.

Differences Between Countries

The connection between the science of physical medicine and spirituality is certainly receiving more discussion both in the lay press and medical journals where the number of research articles reported on the relationship between spirituality and religion is rapidly increasing [7]. However there are differences between countries. In writing for the Medical Journal of Australia, Headley Peach observed that religion has less of a role in the lives of Australians as compared to Americans, so the links observed between religion and health may not be as relevant in Australia where this may result in different research priorities [49]. This may be just a part of the different use of complementary therapies between countries.

Types of Prayer

There are four types of prayer that Paloma and Gallup described after observing American prayer practices [50]. There is the conversational prayer of talking to God as you would to a friend, the reciting of established ritual prayers, both written and memorized, meditation, where the communication is nonverbal, and prayers of petition which either ask for something for yourself or others [50]. It is this last type, intercessory prayer, that is, prayer for others that is the subject of this enquiry. Prayers for others can be either with or without the knowledge of the person to whom they are directed, and can be prayed with the person present, even while physically making contact with that person, or prayers can be offered at a distance.

Prayer can be directed to a specific outcome such as praying that a disease be cured, or nondirected, for example, “Thy will be done” [1]. The latter is open ended and not directive towards a precise outcome. Larry Dossey, while emphasizing that both methods of prayer have been documented as working, quotes studies by the Spindrift organization (an organization which promotes research and education into prayer, consciousness, and spiritual healing) which suggest that nondirected prayer quantitatively can be twice as effective as directed prayer. They performed experiments focussing on prayer to influence the growth of molds or seeds. For those who may wonder how you would know that nondirected prayer was answered, they suggest from their experiments that the organism studied moves towards the outcome that is healthiest for it in any specific situation, even if the experimenter does not know what that is, and so is not able to directly request the specific outcome [8, 47, 65].

The definitions above suggest that prayer is purposeful and originates in the conscious mind, but this fails to consider the unconscious mind and studies of healing related to dreams. Richard Foster believes that individuals could continue to pray during sleep and cites St Francis of Assisi as one who seemed so consumed with prayer [18]. Moreover there are many accounts, both ancient and modern, of people dreaming that an illness of theirs has been healed, only to wake up and discover that the symptoms had actually disappeared [30]!

There have also been experiments to determine whether a distant researcher focussing on an object can transmit thoughts to a subject while that subject is dreaming, to see whether that object was being dreamed about by the target [66]. Reports of some successes at least open the possibility of transmission of prayer by the unconscious mind subsequently interacting with the conscious.

Preclinical Prayer Experiments

In past decades there have been many experiments testing the ability of prayer, or directed thought from a distance, to influence living systems, usually the growth of bacteria, or fungi, or plants, or animals. Benor reviewed 131 such studies and reported that nearly 59% of them were statistically significantly positive when comparing the experimental group to a control group where no influence was attempted. In these models the recipient of the prayer cannot know it is being prayed for and there can be no placebo or expectation effect. Also it is less likely that the control group would receive prayer outside of the experiment as occurs in clinical studies with patients [4].

Examples of these experiments are where people have prayed to try to inhibit the growth of bacteria or fungi. Many have been successful, suggesting that this may be useful in praying for healing, but it must be noted that in some the growth of bacteria occurred, which could be a harmful effect. In a fascinating experiment volunteers tried to influence the result of whether the bacteria E. Coli, in a series of test tubes, mutated (or changed) from being unable to metabolize the sugar lactose to being able to use it. Of nine tests tubes they wanted three to have more mutations than expected, three less as compared to three tubes which they tried not to influence and which would serve as the control test tubes. The result was that the mutation rate was influenced in the way the experimenters sought. Many diseases are due to mutations in genes, so this type of demonstration has profound consequences on the possibilities for healing.

Similarly in a series of such experiments with prayer, the changing of the adherence of cancer cells to the wall of the flask in which they were contained, the growth of plants, or the speed of wound healing in mice have been shown to occur far more often than is likely by chance alone.

Other Distant Psychological Effects

Psychologists or the so-called parapsychologists have also explored distant effects over many years. They test extrasensory perception in experiments known as ganzfield experiments where sensory deprivation is conducive to inwardly produce images. For example, in a typical test of telepathy one person tries to send images to another person who is sealed in a sensory deprivation chamber. Over a series of experiments the success rate over that expected by chance is assessed. A meta-analysis