

L. Roberts, I. Ahmed, S. Hall  
C. Sargent, C. Adams

Cochrane Schizophrenia Group, Oxford, UK

## Intercessory Prayer for ill Health: A Systematic Review

### Key Words

Intercessory prayer · Systematic reviewing · Randomisation

### Summary

**Objectives:** To review the effectiveness of prayer as an additional intervention for those with health problems already receiving standard medical care. **Search Strategy:** Electronic Searches of Biological Abstracts, CINAHL, The Cochrane Controlled Trials Register, EMBASE, MEDLINE, PsycLIT, and Sociofile were undertaken. All references of articles selected were searched for further relevant trials. **Selection Criteria:** Randomised and quasi-randomised trials of personal, focused, committed and organised intercessory prayer on behalf of anyone with a health problem were considered. Outcomes such as achievement of desired goals, death, illness, quality of life and well-being for the recipients of prayer, those praying and the caregivers were sought. **Data Collection and Analysis:** Studies were reliably selected and assessed for methodological quality. Data were extracted by 4 reviewers working independently. Dichotomous data were analysed on an intention-to-treat basis, and continuous data with over 50% completion rate were presented. **Main Results:** There was no evidence that prayer affected the numbers of people dying from leukaemia or heart disease (OR 0.64, CI 0.32-1.27), or that it decreased coronary care complications (OR 1.05, CI 0.49-2.26) or the time participants stayed in hospital. There were significantly fewer 'intermediate/poor outcomes' for those with heart disease in the prayed-for group (OR 0.49, CI 0.30-0.80), and this finding was robust to some changes in definition. **Conclusions:** This review provides no guidance for those wishing to uphold or refute the effect of intercessory prayer on the outcomes studied in the available trials. Therefore, in the light of the best available data, there are no grounds to change current practices. There are very few completed trials of the value of intercessory prayer. The evidence presented so far is interesting enough to justify further study. If prayer is seen as a human endeavour it may or may not be beneficial, and further trials could uncover this. It could be the case that any effects are due to elements beyond present scientific understanding that will, in time, be understood. If any benefit derives from God's response to prayer it may be beyond any such trials to prove or disprove.

### Schlüsselwörter

Fürbitte · Systematische Reviews · Randomisierung

### Zusammenfassung

*Die Wirkung der Fürbitte für Kranke: Eine systematische Übersicht*  
**Ziel:** Einen Überblick zu geben über die Wirksamkeit von Fürbitten als Zusatzintervention bei Personen mit Gesundheitsproblemen, die bereits eine übliche medizinische Versorgung erhalten. **Suchstrategie:** Elektronische Suche in Biological Abstracts, CINAHL, The Cochrane Controlled Trials Register, EMBASE, MEDLINE, PsycLIT und Sociofile. Das Literaturverzeichnis der ausgewählten Arbeiten wurde auf weitere relevante Studien hin untersucht. **Auswahlkriterien:** Berücksichtigt wurden randomisierte und quasi-randomisierte Studien über persönliche, fokussierte, engagierte und organisierte Fürbitte für Personen mit einem Gesundheitsproblem. Es wurde nach Ergebnissen wie z. B. das Erreichen der gewünschten Ziele, Tod, Krankheit, Lebensqualität und Wohlbefinden – für die «Empfänger» der Gebete, die Betenden und die Betreuer – gesucht. **Sammeln und Analyse der Daten:** Die Studien wurden zuverlässig ausgewählt und ihre methodologische Qualität geprüft. Die Daten wurden von 4 Reviewern unabhängig voneinander gesammelt. Dichotome Daten wurden auf einer «Intention-to-treat»-Basis analysiert; es werden kontinuierliche Daten mit einer Vollständigkeitsrate von über 50% eingeschlossen. **Hauptergebnisse:** Es konnte weder bewiesen werden, dass Gebete die Anzahl der Personen, die an Leukämie oder an Herzkrankheiten sterben (OR 0,64; CI 0,32–1,27), beeinflussen, noch dass sie zu einer Verminderung der Komplikationen bei der Betreuung von herzkranken Patienten (OR 1,05; CI 0,49–2,26) oder der Krankenhaus-Aufenthaltsdauer führen. Bei herzkranken Patienten der «Fürbitte-Gruppe» gab es signifikant weniger «mittelmässige/schlechte Ergebnisse» (OR 0,49; CI 0,30–0,80). **Schlussfolgerungen:** Für diejenigen, die an einer Bestätigung oder Widerlegung der Wirkung einer Fürbitte auf die Ergebnisse der verfügbaren Studien interessiert sind, bietet dieser Übersichtsartikel keine Unterstützung. Die besten verfügbaren Daten legen nahe, die gegenwärtige Praxis beizubehalten. Es gibt nur sehr wenige vollständige Studien über die Bedeutung der Fürbitte. Die bisherigen Ergebnisse sind so interessant, dass sie weitere Studien rechtfertigen. Diese könnten eine Antwort darauf geben, ob Beten nützlich ist oder nicht. Möglicherweise handelt es sich um Effekte, die unserem heutigen wissenschaftlichen Verständnis nicht zugänglich sind. Es könnte sein, dass solche Studien einen möglichen Nutzen der Antwort Gottes auf das Gebet gar nicht beweisen können.

## Introduction

Prayer, the 'solemn request or thanksgiving to God or object of worship' [1], is an ancient and widely used intervention taking many different forms, including organised prayer to God based around an advanced belief system, individualised sporadic prayer, spiritual healing, meditation and thanksgiving. Prayers can be spoken by 'believers' (in a variety of faiths including Christianity, Islam, Judaism and so on) and 'non-believers' (particularly in times of catastrophe). This review focuses on intercessory prayer which, for the purposes of our study, involves a person or group setting time aside to communicate with God, though not necessarily within the Judeo-Christian discipline. This is organised, regular and committed prayer on behalf of another who is usually in some kind of need. Those who practise intercessory prayer will almost inevitably hold some committed belief that they are praying to God (regardless of specific theology).

Several points are to be taken into account when assessing the results of randomized trials of prayer. There are problems with trial methodology. An omnipotent God would make concealment of allocation impossible and may be noncompliant with the limitations of a randomized controlled trial [2]. The intervention raises the issue of 'contamination' of the control group within any randomized trial of prayer; everyone is the recipient of prayer as devout people pray generally for sick and suffering people. Measuring outcomes may also be problematic. If man's understanding of God is as limited as Holy Literature suggests [3 a, 3 b], the outcome of divine intervention may be considerably more subtle than could be measured in the crude outcomes of a trial. Other difficulties are less unique to this intervention.

Theology suggests that it is likely that any outcome would reflect a non-divine dimension to the intervention. The results of trials, whether positive, negative or equivocal, should not be interpreted as 'proof/disproof' of God's response to those praying. However, that there may be an effect of prayer not dependent on divine intervention, and that this may be quantifiable, makes this investigation both possible and important.

## Methods

### *Inclusion Criteria*

Randomised or quasi-randomised trials of personal, focused, committed and organised intercessory prayer on behalf of anyone with a health problem were sought. Data on outcomes such as achievement of desired goals, death, illness, quality of life and well-being for the recipients of prayer, those praying and the caregivers were of particular interest.

### *Identification of Relevant Trials*

Extensive, methodical, electronic searches of Biological Abstracts, CINAHL, The Cochrane Controlled Trials Register, the Internet, MEDLINE, PsycLIT, PSYINDEX and Sociofile were undertaken. Explicit details are available [4]. All references of articles selected were searched for further relevant trials.

### *Quality Rating*

Studies were selected by two reviewers (IA, LR) working independently and assessed for methodological quality according to the guidelines recommended in the Cochrane Collaboration Handbook [5].

### *Data Management*

Data were extracted by four reviewers (CA, SH, LR, CS) working independently. Outcomes were assessed using dichotomous, categorical or continuous measures. For dichotomous outcomes, where possible, a Peto 'Odds Ratio' (OR) with the 95% confidence interval (CI) was estimated. The reviewers undertook an intention-to-treat analysis assuming that those who dropped out – from whatever group – had an unfavourable outcome. For continuous data it was decided not to include any data from a rating scale unless (i) its properties had been published in a peer-reviewed journal; (ii) it had been completed by over 70% of those randomised; and (iii) the data were not skewed [6]. Heterogeneity was examined using a Chi<sup>2</sup> test.

## Results

### *The Search*

The electronic searches highlighted 196 citations, and the three included studies were identified from these, London 1964 [7], New York 1969 [8] and San Francisco 1988 [9]. A further four trials, identified by Internet search, either await assessment [10] or are, as far as the reviewers know, ongoing [11–13]. A last ongoing study [14] was identified by serendipity (for details see table 1). Several randomised studies were excluded because the interventions were not clearly intercessory prayer [15–19].

### *Death*

For the outcome of 'death' data from two studies [8, 9] gave an equivocal result (OR 0.64 CI 0.32–1.27) (fig. 1).

### *Complications*

San Francisco 1988 specifically requested those praying to ask for a decrease in complications. They then presented a series of 'complications' and statistical analysis was bound to highlight some as 'significant'. The reviewers asked a blinded colleague (Dr. Evandro Coutinho) to choose a generic complication. He chose 'Readmission to Coronary Care Unit' and prayer did not decrease the odds of this (OR 1.05, CI 0.49–2.26).

### *Intermediate/Poor Outcome*

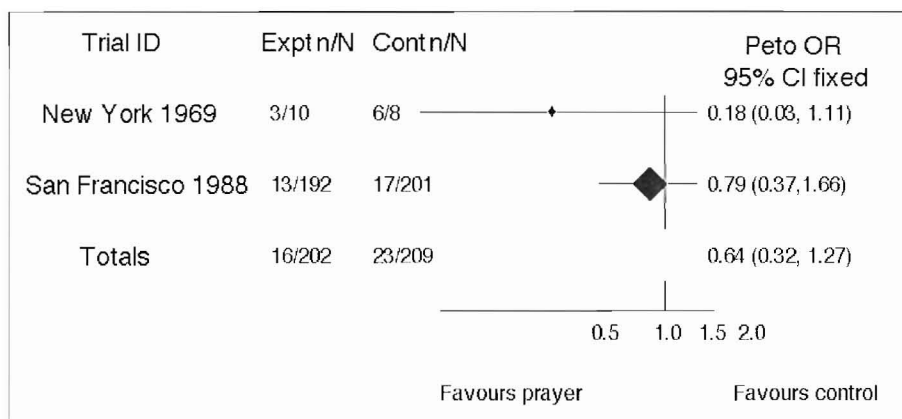
Both London 1964 and San Francisco 1988 presented data on intermediate/poor outcome, and the homogeneous results were in favour of the prayed-for group (OR 0.45, CI 0.28–0.71) (fig. 2). The reviewers then tested the sensitivity of this finding by regrouping the intermediate outcome with 'good' instead of 'poor'. The OR resulting from this was not substantially different.

### *Time to Recovery*

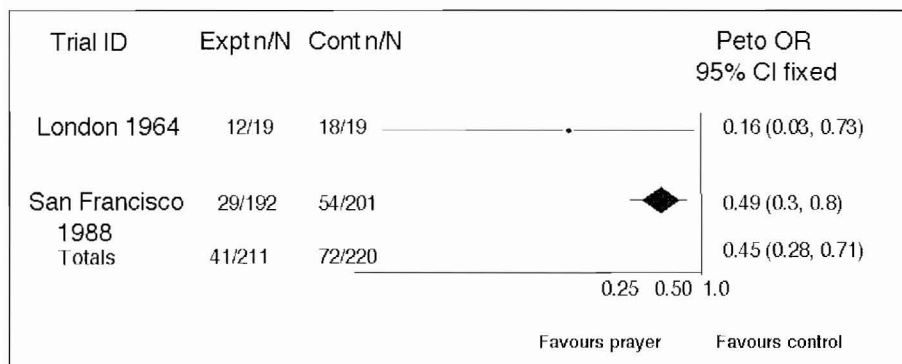
Only San Francisco 1988 specifically requested those praying to ask for 'swift recovery'. Data from the proxy measure – days in hospital – was similar for both groups (mean 7.6 days).

**Table 1.** Characteristics of relevant studies

Study	Methods	Participants	Interventions	Outcomes
<i>Studies included</i>				
London 1964	<i>Randomised:</i> spin of a coin, matched for sex, age and primary diagnosis – no further details <i>Blindness:</i> doctors blinded; participants unaware of trial <i>Duration:</i> 6 months	<i>Diagnosis:</i> rheumatoid arthritis (17), ankylosing spondylitis (5), osteoarthritis (2), scleroderma (1), personality problems (5), depression (1), obsessional neurosis (1), anxiety neurosis (1), learning disability (2), schizophrenia (1), unknown (2) <i>History:</i> chronic stationary or progressively deteriorating illnesses	1. <i>Intercessory prayer:</i> 15 min/day (approx, 15 h during trial) and standard medical care n = 19. 2. <i>Standard medical care.</i> n = 19.	Clinical State (Clinical State Scale) Attitude (Attitude Scale)
New York 1969	<i>Randomised:</i> 'names randomly selected' – no further details <i>Blindness:</i> triple-blind – doctors/participants not told of intervention, those praying unaware of their participation in study <i>Duration:</i> 15 months	<i>Diagnosis:</i> 'leukemic children' – prayer group lymphatic (n = 10), control lymphatic (n = 6), myelogenous (n = 2) n = 18. <i>Age at diagnosis:</i> prayer group – mean 6.6, range 1–19 <i>Sex:</i> prayer group – 4 male, 6 female; control – 6 male, 2 female	1. <i>Intercessory prayer:</i> one Protestant family praying daily; weekly reminder; frequent discussions; standard medication n = 10 2. <i>Standard medical care:</i> n = 8	Death Illness status (monthly questionnaire) – better/unchanged/worse Adjustment of child and family (monthly questionnaire)
San Francisco 1988	<i>Randomised:</i> assigned 'using a computer generated list' – no further information <i>Blindness:</i> double-blind; doctors, author and participants unaware of grouping <i>Duration:</i> 'for the remainder of admission (in hospital)'	<i>Diagnosis:</i> (examples) congestive heart failure (n = 129), cardiomegaly (n = 126), acute myocardial infarct (n = 109) <i>History:</i> just admitted to CCU n = 393. <i>Consented</i> <i>Age:</i> average, prayer group 58 (SD 15), control 60 (SD 15) <i>Sex:</i> prayer group – male 127, female 65; control – male 138, female 63	1. <i>Intercessory prayer:</i> by 'born again multidenomintional Christians' outside hospital: daily, by 3–7 intercessors, until discharge and standard medical care; n = 192 2. <i>Standard medical care:</i> n = 201	Death Rapid recovery Prevention of complications
<i>Studies awaiting assessment (very limited details available)</i>				
Targ 1993	Randomised: no further details	Diagnosis: people with AIDS n = 20 <i>Setting:</i> California Pacific Medical Center, San Francisco	1. <i>Intercessory prayer:</i> n = 10 2. <i>Standard care:</i> n = 10	<i>The results were so encouraging that the study is being expanded [10].</i>
<i>Studies ongoing (very limited details available)</i>				
Benson 1997 [9]	<i>Randomised: no further details</i>	Diagnosis: those awaiting heart surgery n = 1,800 <i>Setting:</i> 3 North American hospitals <i>Duration:</i> 2 years	1. Intercessory prayer (blinded to trial); n = 600 2. Intercessory prayer (unblinded to trial); n = 600 3. Standard care (blinded to trial); n = 600	
Choi 1997	<i>Randomised: no further details</i>	Diagnosis: multiple sclerosis [8] <i>Setting:</i> University of Minnesota Medical School	1. Distant intercessory prayer 2. Standard care	
Larson and Matthews 1997	<i>Randomised: no further details</i>	Diagnosis: people with rheumatoid arthritis <i>Setting:</i> National Institute of Healthcare Research, Rockville, Maryland	1. Distant intercessory prayer 2. Standard care	
Targ 1997	<i>See Targ 1993</i>			



**Fig. 1.** Intercessory prayer for ill-health: data for the outcome of 'death'. Expt = Experimental; Cont = Control; n/N = number of events/total number in group.



**Fig. 2.** Intercessory prayer for ill-health: data on poor outcome. For abbreviations see legend to figure 1.

## Discussion

There are remarkably few trials relating to this widely used health care intervention, and all included trials were undertaken from within a Judaeo-Christian framework. How generalisable these results are to other belief systems is unclear. London 1964 is different from the other trials in that the two investigators stated that they approached the question from the perspective of a 'believer' and 'non-believer'. San Francisco 1988 and New York 1969 were clearly undertaken by people who believed in the power of prayer. How this may have influenced the production and reporting of results is also debatable.

Trial data do not suggest that prayer postpones death. The smaller study (New York 1969) was more suggestive of a 'positive' effect than San Francisco 1988. If publication bias is operating – which is likely [20] – it should be expected that small, difficult to identify 'negative' studies may exist, further shifting the result towards the null.

Reporting bias has resulted in the spurious 'significant' results relating to complications being quoted as an indication of the efficacy of prayer [21]. Prayer had no discernible effect on the single complication (Readmission to a Coronary Care Unit) chosen by a person blinded to trial results.

People who were prayed for had less 'Intermediate or poor outcomes'. However, it was not stipulated whether definitions of 'good', 'intermediate' and 'poor' were decided before or after seeing the data and whether those doing the analysis were blind to

group allocation. Authors are being contacted in order to clarify this and other points. London 1964 provided data on this outcome as derived from the Clinical State Scale. The protocol for this review stated that only published scales were to be reported in an attempt to avoid presenting invalid data. This scale is not referenced, and it is unclear if it is a valid measure of health or can be used with any degree of reliability.

## Implications

This review does not uphold or refute the effect of intercessory prayer, and in the light of these data there are no grounds to change current practices. More, well-conducted trials are needed in order to evaluate the effects of this most widely used intervention.

## Methodological Issues

There are general issues relating to methodology and presentation that are not specific to trials of intercessory prayer. The process of randomisation should be clearly defined. Objectives should be explicit from the outset and data presented with clarity and without bias [20].

Other issues relate specifically to trials of intercessory prayer. Prayers are offered worldwide for those in need. This may result in those in the control group being affected by these prayers, meaning that there cannot be a 'pure' control group. If there is a beneficial effect of prayer in general, this may reduce the chances of it

being detected in a trial. Also, if God, as some believe, is omnipresent and omnipotent, He cannot be prevented from intervening in any patient or group. If prayer is seen as a human endeavour it may or may not be beneficial and further trials could uncover this. It could be that any effects of prayer are due to elements beyond present scientific understanding that will, in time, be understood. If any benefit derives from God's response to prayer it may be beyond any such trials to prove or disprove.

There remain great questions for people of any or no faith regarding illness and prayer, not least why a loving God would heal some but not others.

## Acknowledgements

The reviewers would like to thank Iain Chalmers and Sarah Lewington for advice during the production of this review, Karen Bailie for her help with information relating to the treatment of children with leukaemia and Evandro da Silva Friere Coutinho for choosing a relevant 'complication' in the San Francisco 1988 study.

---

## References

- 1 Oxford English Dictionary. Oxford, Clarendon Press, 1997.
- 2 Deuteronomy Chapter 6, verse 16. The Holy Bible. New International Version. International Bible Society, 1986.
- 3 (a): 1 Corinthians Chapter 13, verse 12. The Holy Bible. New International Version. International Bible Society, 1986.  
(b): Chapter XXI, verse 23. The meaning of the Glorious Koran. Translation by Marmaduke Pickthall. Birkenhead, Great Britain: Willmer Brothers Co. Ltd., 1952.
- 4 Schizophrenia Group module; in The Cochrane Library. Issue 3, 1998. Oxford, Update Software.
- 5 Mulrow CD, Oxman AD (eds): Cochrane Collaboration Handbook (updated March 1, 1997); in: The Cochrane Library, Issue 3, 1998. Oxford, Update Software.
- 6 Altman DG, Bland JM: Detecting skewness from summary information. *BMJ* 1996;313:1200.
- 7 Joyce CRB, Welldon RMC: The objective efficacy of prayer. *J Chronic Disord* 1965;18:367-377.
- 8 Collipp PJ: The efficacy of prayer. *Med Times* 1969;97:201-204.
- 9 Byrd RC: Positive therapeutic effects of intercessory prayer in a coronary care unit. *South Med J* 1988;81:826-829.
- 10 Targ 1993. Hippocrates (<http://www.medscape.com/time/hippocrates/1997/v11.n05/h1105.3.fleming.html>)
- 11 Targ 1997. See Reference 10.
- 12 Larson 1997. See Reference 10.
- 13 Choi 1997. See Reference 10.
- 14 Brace M: Could this be the answer to everyone's prayers? *The Independent*, April 11, 1997.
- 15 Greyson B: Distance healing of patients with major depression. *J Sci Explor* 10:447.
- 16 Lilliston L, Brown PM: Perceived effectiveness of religious solutions to personal problems. *J Clin Psychol* 1981;37:118-122.
- 17 Lilliston L, Brown PM, Schliebe HP: Perceptions of religious solutions to personal problems of women. *J Clin Psychol* 1982;38:546-549.
- 18 Wirth DP, Barrett MJ: Complementary healing therapies. *Int J Psychosom* 1994;41:61-67.
- 19 Wirth DP, Cram JR: The psychophysiology of nontraditional prayer. *Int J Psychosom* 1994;41:68-75.
- 20 Egger M, Smith GD: Misleading meta-analysis. *BMJ* 1995;310:752-754.
- 21 AIDS Daily Summary (<http://cdnac.org:72/0/2/dec95/ads0621>).