

THE BRITISH HOMEOPATHIC ASSOCIATION

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Data from randomised controlled trials of individualised homeopathy, reported by Shang et al in 2005

Preface

In their forest plot, an odds ratio (OR) of less than 1 indicates an effect favouring homeopathy; an OR greater than 1 indicates an effect favouring placebo. OR=1 is the 'line of no effect'. When the 95% confidence interval (CI) of the OR does not straddle the line of no effect, there is a statistically significant effect in favour of either homeopathy or placebo as appropriate.

Peer-reviewed trials of individualised homeopathy

We focus solely on those trials, within the 110 included by Shang et al., which we have categorised as 'peer-reviewed' (Mathie et al. 2013) and which Shang and colleagues labelled as 'individual treatment'. For each of the 13 trials in this category, we derived the original OR and 95% values from the University of Berne's published forest plot data and replicated them in our own forest plot (**Figure 1**).¹

- The pooled effects estimate shows a statistically significant effect of homeopathy:
 - OR = 0.58 (95% CI, 0.41 to 0.84); $P = 0.003$.
- 10 of the 13 have a treatment effect favouring homeopathy;
 - 3 of these 10 are statistically significant.
- 2 of the 13 have a treatment effect favouring placebo;
 - Neither of these 2 is statistically significant.
- 1 of the 13 favours neither homeopathy nor placebo (i.e. OR=1).

Higher-quality peer-reviewed trials of individualised homeopathy (sensitivity analysis)

In interpreting meta-analysis findings, it is important to reflect high-quality trials over those of low quality: this approach is termed 'sensitivity analysis'. Shang and colleagues categorised 5 of the above 13 trials as 'higher methodological quality', and so we included OR data for just those 5 and present them as a forest plot (**Figure 2**).

- The pooled effects estimate shows no statistically significant effect:
 - OR = 0.69 (95% CI, 0.38 to 1.26); $P = 0.23$.
- 3 of the 5 have a treatment effect favouring homeopathy;
 - 2 of these 3 are statistically significant:
 - 046 (A021). Jacobs et al (2000);
 - 049 (A019). Jacobs et al (1994).
- 1 of the 5 has a treatment effect favouring placebo;
 - It is not statistically significant.
- 1 of the 5 favours neither homeopathy nor placebo (OR=1).

Commentary

The 13 peer-reviewed trials of individualised homeopathy that were included in Shang's forest plot indicate a statistically significant treatment effect of homeopathy that is not robust to sensitivity analysis. This finding, together with the fact that 3 of these trials individually have a statistically significant effect

¹ We are grateful to Dr Jürgen Clausen, Karl und Veronica Carstens-Stiftung, Essen, Germany, for kindly sharing preliminary odds ratio data previously extracted by Dr Rainer Lütke from the forest plot published by Shang et al (2005b).

favouring homeopathy, supports Shang's comment that there was 'weak evidence for a specific effect of homeopathic remedies' (Shang et al 2005a).

Examining the details of the RCT evidence, Shang et al. (2005b) illustrated 2 of 5 higher-quality trials of individualised homeopathy that were statistically in favour of homeopathy compared with placebo. This fact is interesting to consider in view of Shang's ultimate conclusion that 'the clinical effects of homeopathy are placebo effects' (Shang et al 2005a). And it refutes the notion that no peer-reviewed and high-quality RCT of homeopathy – including any with individualised treatment – has ever obtained a positive result.

Addendum: Comparison with meta-analysis reported by the British Homeopathic Association

A more recent systematic review and meta-analysis, reported by the British Homeopathic Association with others, identified a total of 32 RCTs of individualised homeopathic treatment (Mathie et al. 2014). Of the 22 RCTs with analysable data, 8 had previously been reported by Shang et al (2005a,b), as above. In sub-group meta-analysis of those 8 trials, Mathie et al (2014) observed a statistically significant pooled OR that favoured homeopathy: 1.67 (95% CI, 1.22 to 2.28).

Figure 3 shows our replication of the forest plot data presented by Shang et al for these same 8 trials; their log(OR) values have been transposed to reflect an OR greater than 1 as an effect favouring homeopathy. The pooled OR of Shang's transposed data (1.67 [95% CI, 1.19 to 2.35]) is almost identical to that reported in the sub-group meta-analysis by Mathie et al (2014). The quality ratings attributed to these 8 trials by each team of researchers were congruent (Mathie et al. 2014).

References

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Mathie RT, Lloyd SM, Legg LA, et al (2014). Randomised placebo-controlled trials of individualised homeopathic treatment: systematic review and meta-analysis. *Submitted for publication*.

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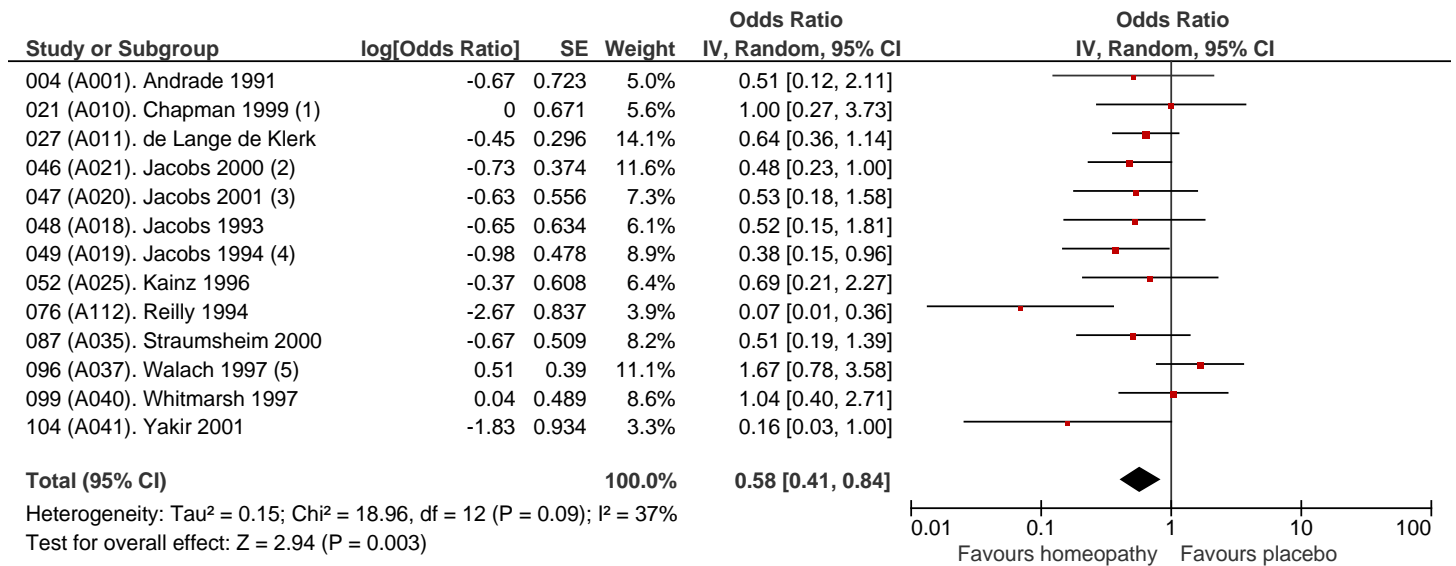
<http://www.ispm.ch/index.php?id=lancet/>

http://www.ispm.ch/fileadmin/doc_download/1433.Study_characteristics_of_homeopathy_studies_corrected.pdf

FIGURE 1:

Our meta-analysis of odds ratios for 13 peer-reviewed RCTs of **individualised homeopathy** that were reported by Shang et al. (2005b). We used the generic inverse variance (IV) method and the random effects model. Each RCT is numbered according both to Shang et al. (2005b) and Mathie et al. (2013, 2014).

Key: log[Odds Ratio]: natural log of Odds Ratio. SE: natural log of Standard Error. 95% CI: 95% confidence interval. df: degrees of freedom. I²: heterogeneity statistic.



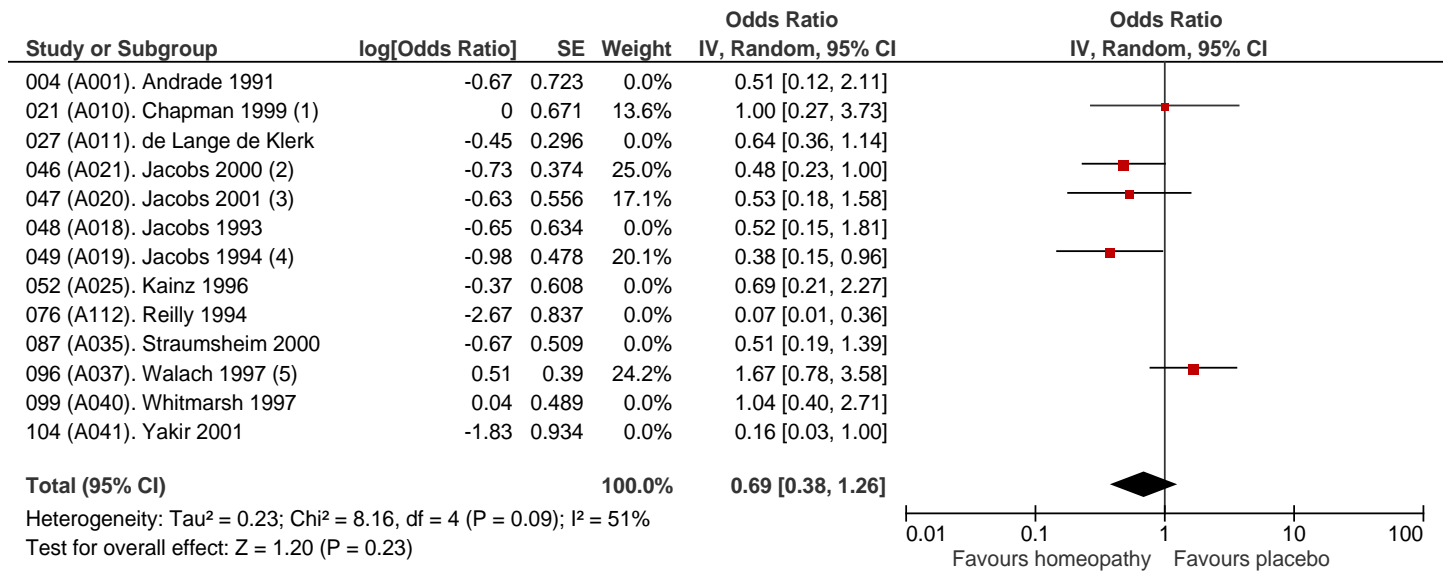
Footnotes

- (1) Shang 'Higher quality'
- (2) Shang 'Higher quality'
- (3) Shang 'Higher quality'
- (4) Shang 'Higher quality'
- (5) Shang 'Higher quality'

FIGURE 2:

Our meta-analysis of odds ratios for 5 peer-reviewed RCTs of **individualised homeopathy**, and of 'higher methodological quality', that were reported by Shang et al. (2005b). Each RCT is numbered according both to Shang et al. (2005b) and Mathie et al. (2013, 2014).

Key: log[Odds Ratio]: natural log of Odds Ratio. SE: natural log of Standard Error. 95% CI: 95% confidence interval. df: degrees of freedom. I²: heterogeneity statistic.



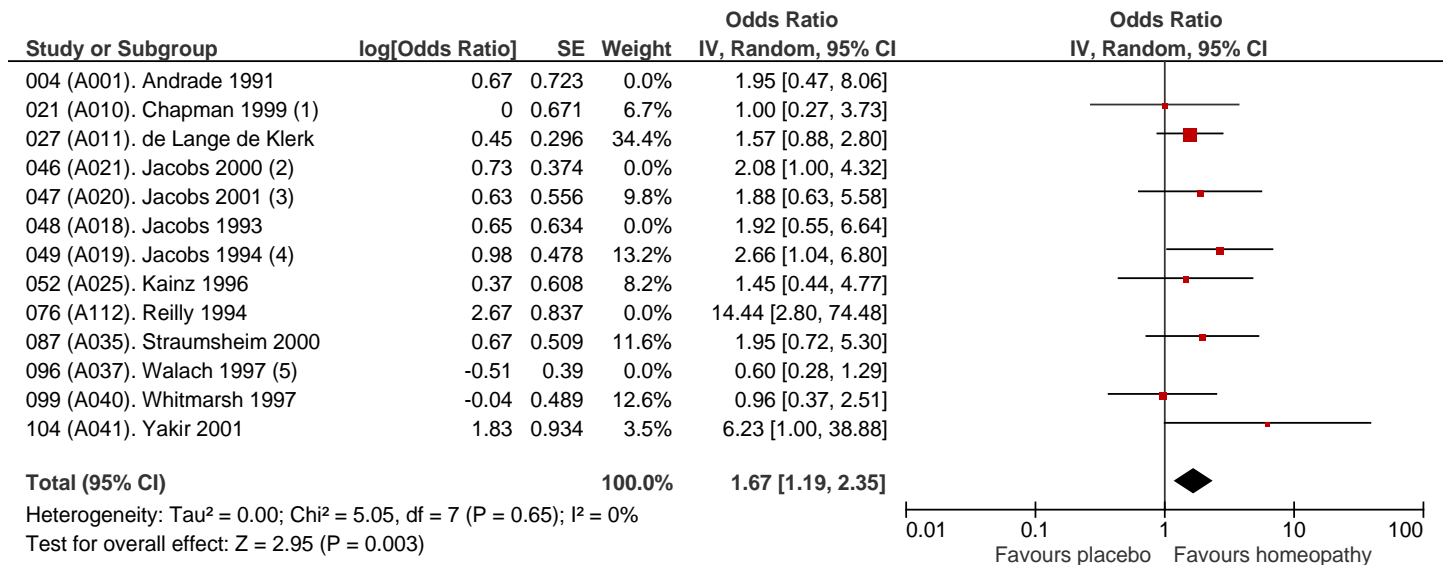
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- (5) Shang 'Higher quality'

FIGURE 3:

Our meta-analysis of odds ratios for 8 peer-reviewed RCTs of **individualised homeopathy** that were reported by Shang et al. (2005b) and were also included in sub-group analysis by Mathie et al (2014). Each RCT is numbered according both to Shang et al. (2005b) and Mathie et al. (2013, 2014).

Key: log[Odds Ratio]: natural log of Odds Ratio – transposed to reflect an Odds Ratio greater than 1 as an effect favouring homeopathy. SE: natural log of Standard Error. 95% CI: 95% confidence interval. df: degrees of freedom. I²: heterogeneity statistic.



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