Homeopathic Research Matters

by CHRISTOPHER JOHNSON, ND

Welcome to the inaugural edition of "Homeopathic Research Matters." This column will focus on homeopathic research—new studies, reviews of older studies, profiles of homeopathic researchers, and more. I will try to put across the findings in a way that is exciting, scientifically-minded, and accessible.

So why does homeopathic research matter?

• **First**, research teaches us about homeopathy. For example, it can elucidate which methods of homeopathy work best in different circumstances.

In the last issue, I wrote about a recent trial that used a standardized homeopathic protocol for treatment of certain cancers.[1] Some homeopaths might be less than thrilled about this formulaic approach—after all, isn't homeopathy supposed to be individualized? However, the results of the study clearly showed the effectiveness of this method in treating certain cancers. In fact, this approach produced far greater results than any treatment yet rigorously assessed and published in the medical literature.

Could individualized homeopathy achieve even stronger outcomes with these cancers? We don't know for certain until it is tested. As Hahnemann's father taught him—"Prove all things. Hold fast to what is good."

• **Second**, research is a valuable tool for advancing the acceptance and wider use of homeopathy in mainstream medicine and society.

Many may not know this, but one of the primary elements at play in the rejection of homeopathy by the mainstream medical community in the 19th century wasn't simply their difficulty with accepting ultra-diluted medicines. Also of great significance was the French Academie of Medicine's assessment in 1835 that research evidence did not support the effectiveness of homeopathy. This finding was seen as conclusive and widely accepted by the medical community.

Of course, the conclusion was based on faulty research, but that did not prevent the orthodox medical community from shutting the door on homeopathy. So, it is of vital importance in this now-emerging second great wave of homeopathic popularity that we control the research agenda and disseminate the information directly to the public and the medical community.

According to public relations and marketing experts, personal stories of success may be the most effective way to persuade others. However, scientific evidence is also a crucial piece of the puzzle—especially in this age of "evidence based medicine." Anyone who wishes to promote homeopathy will benefit from knowing some basic research facts.

Here is a broad outline of the current state of homeopathic research:

Randomized, controlled trials (RCTs)

In these trials, one group receives homeopathic medicine and the other group receives placebo or treatment X or no treatment. There is a process of randomization in allocating who receives which treatment(s). This type of study design is generally considered the gold-standard of evidence in the scientific world, though there is some debate regarding the overemphasis of these trials to the exclusion of other types of evidence.

Between 1950 and 2009 there were 142 RCTs of homeopathy, broken down as follows[2]:

- 63 with positive results
- 11 with negative results
- 68 with inconclusive results

"Inconclusive" simply means that the data of the trial was not sufficient to draw a conclusion one way or the other. This indicates a deficiency of the study design or the manner in which it was carried out. It means absolutely nothing about homeopathy itself (i.e., whether remedies "work"). For example, a trial can have results favoring homeopathy and yet be classified as "inconclusive" due to inadequate numbers of participants

It is important for the public to know that ***these results, though not definitive, certainly favor homeopathic remedies having true medical or biological effects.*** Roughly six times as many trials were positive compared to negative.

The large number of inconclusive trials reflects primarily a lack of financial and academic resources to design and carry out robust homeopathic research. This aspect is unfortunate, but irrelevant to any conclusions to be drawn from the data—despite how it is often portrayed by homeopathic critics and the mainstream press who spin this to make it seem that "inconclusive" or "lack of evidence" equates to negative findings.

Additionally, ***4 out of 5 comprehensive reviews of randomized, controlled homeopathic trials have found homeopathy superior to control/placebo.***

Observational trials

These are studies that investigate homeopathy being practiced in a real-world setting (e.g., a private practice, clinic, or hospital). So, of course, participants are not randomized and there is no control group. These studies do not evaluate the specific effects of homeopathic remedies, but rather the whole package of care. Researchers simply measure certain health markers at baseline and then again after the end of treatment or at various intervals.

Nearly all observational trials demonstrate significantly positive results for homeopathic treatment.

This is, pleasantly, an area where there is little controversy in the scientific world. The evidence is so overwhelmingly positive that almost no one denies homeopathy's effectiveness, though many still assert, contrary to the weight of the evidence, that the effect is not from the actual medicine.

Basic research

This refers primarily to studies assessing the effects of homeopathic remedies in the laboratory setting—in either cellular (*in vitro*) or animal (*in vivo*) models.

For example, there are several teams of researchers who have studied the effects of remedies on isolated cancer cells as well as in mice having cancer. Nearly every one of these studies has shown homeopathic remedies to exert anti-cancer effects.

- Different potencies of the same homeopathic remedy have differing properties.

Homeopathy versus conventional medicine

The vast majority of studies comparing homeopathic to conventional medical treatment have found homeopathy either equivalent or superior[4]. Some of these trials have been randomized, some not.

Quality of studies

While there are more low quality homeopathic studies than we would like, it is important to note that there are also many very high quality trials. The trend is toward increasingly higher quality trials as the homeopathic research community has become more mature and acquired more (though still modest) resources.

Homeopathic research has been conducted in the US by faculty of universities such as Harvard, Yale, Tufts, Duke, Georgetown, UCLA, Universities of Arizona, Washington, and Texas (MD Anderson Cancer Center), Pennsylvania State University, and more.

Many robust observational studies with very large numbers of participants (in the thousands) have been conducted in hospitals and academic medical centers in the United Kingdom, Germany, and Italy.

Researchers include members of the US National Academy of Sciences, members of the British Royal Society, Director of the National Cancer Institute (India), Co-director of Children's Hospital (University of Berne, Switzerland), and others with distinguished credentials.

Take away message

There is good though not conclusive evidence at this time that homeopathic remedies 1) have biological effects as measured in the laboratory setting and 2) are more efficacious than placebo in the controlled clinical trial setting as a whole.

There is robust evidence that homeopathy as practiced in the real world is, broadly speaking, effective—as demonstrated by a large body of almost universally positive observational data.

When these three types of data are considered together, the case for homeopathy from a research perspective becomes very strong. Unfortunately, media reports and scientific discussions invariably fail to acknowledge the basic research and sometimes even neglect to consider the observational studies.

The only area of homeopathic research with a significant lack of evidence is "mechanism of action"—that is, *how* homeopathic remedies are able to influence humans, animals, plants, etc. There are several theories and some well-conducted investigations, but nothing yet that is considered convincing.

It is important for the public to know that these results, though not definitive, certainly favor homeopathic remedies having true medical or biological effects.

A 2007 systematic review of *in vitro* evidence of homeopathic remedies looked at 75 published studies[3]. 73% of them were positive (i.e., demonstrated biological effects of remedies on isolated cells). 33% of these were independent replications (meaning, the same experiment was re-conducted by independent researchers). 73% of replications were positive.

Also included in basic research is what are called "physical" and "physio-chemical" studies. These are investigations that utilize various types of technology (such as Nuclear Magnetic Resonance and Ultra Violet Visible Spectroscopy) to measure the physical and chemical properties of remedies.

Numerous such studies, many conducted by researchers of the highest skill, have demonstrated that:

- Homeopathic remedies have properties differing from succussed water
- Specific homeopathic remedies have properties differing from other remedies

References

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ABOUT THE AUTHOR

Christopher Johnson, ND, is Vice President of the Virginia Association of Naturopathic Physicians and a graduate of Southwest College of Naturopathic Medicine. He practices in Alexandria, Virginia. www.thrivenaturopathic.com or 703-836-3678