

The Science and Controversy of Homeopathic Medicine

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Abstract: The Science and Controversy of Homeopathic Medicine, the authors creatively critique the science, history and current controversies regarding homeopathy as a form of alternative medicine. It delves into the principles of Homeopathy, which was founded in the late 18th century by Samuel Hahnemann with its main concepts being "like cures like" and the use of highly diluted substances. It assesses these concepts within the framework of the current scientific criteria, including those of pharmacology, chemistry and clinical research. One of the main themes in the work is the conflict between the empirical scientific data and anecdotal or patient-reported data that typically back homeopathic use. The author examines clinical trials, meta-analysis, and systematic reviews and finds that the majority of well-controlled trials do not show efficacy over and above a placebo. The book also recognizes how popular homeopathy is in many countries and cultures around the world and why it has maintained a strong foothold despite this popular opinion: not only patient satisfaction, holistic applications, but also skepticism towards conventional medicine. Debates on regulation, ethics and the role of the public health institutions endorsing or rejecting alternative therapies further add to the controversy. The paper provides a balanced view by incorporating the views of other advocates and detractors, while also focusing on the use of evidence-based medicine.

Keywords: *Homeopathy, Samuel Hahnemann, scientific evidence, placebo effect, clinical trials, controversy, evidence-based medicine.*

1. Introduction

Homeopathy is a form of alternative medicine that is used by many people and has a very specific philosophy and controversial science. This type of medicine was developed in the late 1800's, and was an alternative to the sometimes aggressive and invasive methods of conventional medicine of the time. The most important concept is homeopathy is that a substance which can cause symptoms in a healthy person can cure similar symptoms in a

diseased individual when given in very small or diluted proportions. In homeopathy, homeopathy is summed up by this idea: “like treats like.”

Homeopathy has since grown to become popular in many parts of the world, with a significant following in India, Germany, France and the United States. This is not just because of its comprehensive treatment plan, it's also because it focuses on treatment that is personalized, has minimal side effects when applied, and utilizes natural remedies from plant, mineral and animal sources. Homeopathic medicine has become incorporated into some countries' systems of medicine and is accepted by practitioners and patients alike, in many places. This continuous interest in alternative and complementary treatments has also ensured its ongoing significance in discussions around healthcare.

Though popular, homeopathy is at odds of much debate and controversy for science and medicine. Some critics claim that the agents in homeopathically prepared medicines are given a concentration that is far below that that would be measurable for the effect that they are supposed to have. This question puts into effect the principles of chemistry and pharmacology to the test. However, homeopathic advocates argue that homeopathy has other mechanisms of action beyond what is explained by traditional medicine, which encompass the “memory of water” concept, an energy-based interaction between the water and the homeopathy strengtheners, and more. This discrepancy between actual scientific evidence and patient experience has raised the question of its effectiveness and validity over time.

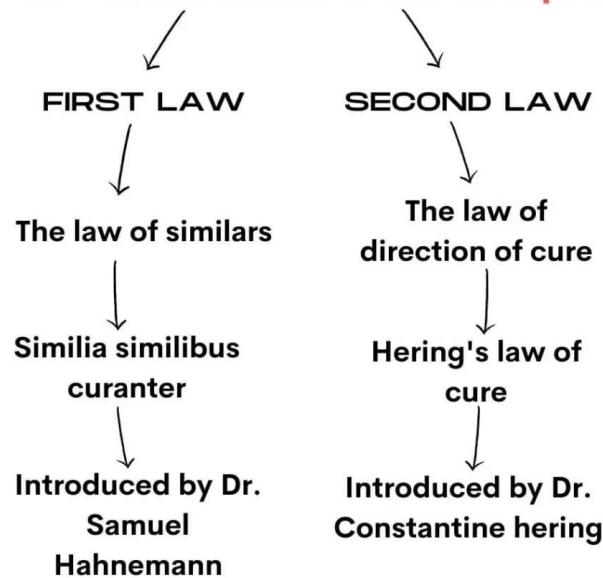
2. Historical Evolution and Fundamental Principles of Homeopathy

Around 236 years ago a German Doctor discovered a new way of treatment for human body and gave a name to this new discovery as homeopathy, and claimed that a substance which can make a person sick can treat the same, if the same substance is given in small quantity in a diluted form. This logic is still used since the discovery. Dr. Hahnemann, founder of the Homeopathy, read text of medical treatments in the late 1700s and discovered homeopathy in his late 40s in 1790. Founder of homeopathy practiced, taught, and wrote books about his discoveries and practices until his death in 1843 at the age of 88 years. (2)

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This practice is most popular in France, Germany, Greece, India, Pakistan, Brazil, Argentina, Mexico and South Africa. Homeopathy is also practiced in the United States of America and people use homeopathic remedies a lot. According to the studies and surveys conducted by British Medical Journal (June 7, 1986) approximately 37.5% people use homeopathy remedies and averages of 37.5% medical doctors prescribe homeopathy medicine in their practice.

Two known laws in Homoeopathy



Source: Dr. CONSTANTINE HERING - DR. C HERING (1800-1880) | *Organon Of Medicine & Philosophy*

Figure 1: Laws in Homoeopathy

According to the name, homeopathy means the same disease as per medical terminology books (home/home/o/ = same, and pathy = disease) {p-364, & 367} [7]. The term homeopathic stands for similar suffering, and in Greek “Homoios” means similar and “Pathos” means suffering or disease. In Homeopathy all kinds of diseases are cured by a small quantity of diluted form of medicines. The medicine given for the well being of a human body is the same medicine, which can cause illness in a human body. Whoever believes in homeopathy urges that the factor; which causes the disease, can cure the

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disease; this means the cause of the disease can be cured by the same, which can cause the disease. (Ullman, Dana,1)

3. Preparation Methods and Therapeutic Practices

Homeopathy medicine is in liquid form, and it is a complete form of alcohol. To produce/derive this alcohol, Doctor Samuel used duck liver, sulfur, snake venom, squid ink (a sea animal), female dog's milk, mercury, arsenic, belladonna (a European poisonous herb of potato family), crude oil, women milk and many other herbs. He also used many other substances to pull out vapors; these derived vapors are known as homeopathic medicine or alcohol. Many of these herbs and substances were identified by Dr. Hahnemann. Manufacturers of homeopathic medicines also use bovine's testicles to derive medicine (3, 4, Course book).

In homeopathy, physicians use tiny pills of sulphur (a form of sugar) and dilute liquids into those tiny pills. The mixed liquid medicine is a form of alcohol. For different problems, different kinds of medicine or alcohol or substances are used to cure the problem of human body and is also used in very little quantity, like one or two drops in a bottle of 1000 tiny pills of sulphur/sugar. Homeopathic practitioners also dilute drops of homeopathic medicine in water for quick cure/treatment and this kind of dose is called high potency dose. (5, homeopathic practitioner Sing, Narinder)

As Dr. Hahnemann described the homeopathic treatments, today's practitioners still believe in his discoveries and practice those remedies worldwide. These alternative medicines were discovered by a German Doctor Samuel Hahnemann, who discovered homeopathy seeking some kind of gentler or alternative way to treat his patients instead of treating them in a brutal or traditional way at that time. This doctor argued that "any substance that produces a symptom in a healthy person can cure that symptom in a sick person." (3)

Dr. Hahnemann believed that even minute doses could cure and diluted his preparations multiple times before giving them to patients. Modern homeopathic mixtures can be diluted a millionfold or more--- often so many times that no active ingredients are left. (3)

The believers of homeopathic medicine believe that it can cure the ailment, which can not be cured by any kind of medicine in the world; even more the believers believe that the homeopathy can cure Cancer, AIDS, and all kinds of other diseases found in human bodies. The practitioners also believe that the same kind of medicine and the form of treatment can cure other creatures (animals) upon finding the symptoms of ailments and veterans are using homeopathy remedies on pets to cure their ailments.

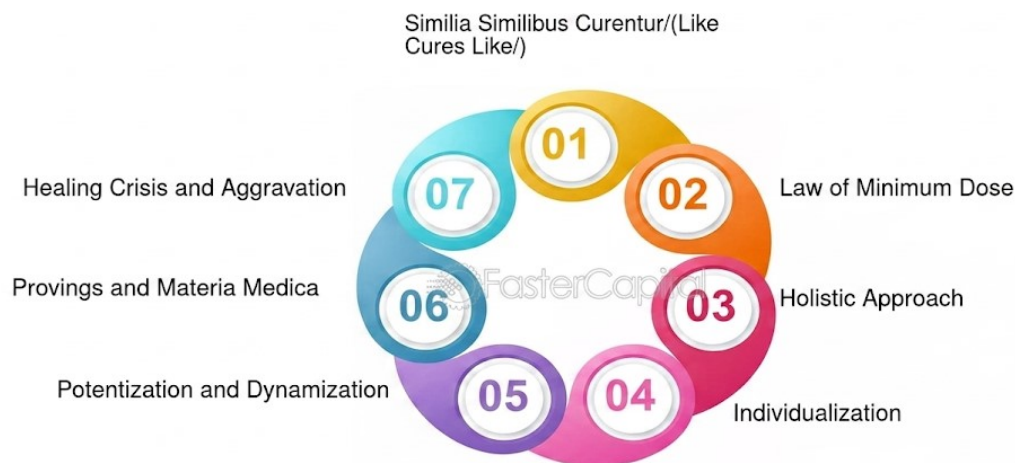


Figure 2: Understanding the Principles of Homeopathy

According to the book Homeopathic Domestic Physician, “Classical Homeopathy, by contrast, prescribes remedies on a constitutional basis, treating the entire individual, their symptoms and modalities. To arrive at the correctly chosen remedy for a chronic disorder, the detailed case of all aspects of the individual must be taken. The true classical homeopathy delves into the broad collection of symptoms and peculiarities of the individual, their entire mental, emotional and physical make up. This requires an in-depth sense of the patient, a keen sensitivity to them which is able to grasp their gestalt, that totality of the person and the matching remedies which transcends the mere sum of their parts. This is the art of finding the homeopathic constitutional remedy for the most effective and last cure.” This book has more than 400 remedies and mixing prescriptions to cure human ailments. The author of this book Dr. Constantine Hering, M.D. says that all the ailments can be cured by homeopathy in all circumstances.

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Book Homeopathic Domestic Physician also talk about that the classical approach obviously requires an appropriate amount of time for each individual, frequently involving patient visits in excess of an hour and a number of hours of work afterward for the homeopath to deeply study all the aspects of the case. “It is impossible to practice classical homeopathy on the assembly line basis that is so characteristic of today’s “health industry. It is not a harmony with the demands of today’s kind of economy, and so it can be difficult to find a real classical homeopathy practitioner.”

According to two homeopathic practitioners of Fresno, Mr. Khan (who lives on Fresno and C Street, in Fresno) and Mr. Joshi (who lives on Ashlan and Willow Ave., in Fresno) claim that any kind of ailment can be treated with homeopathy remedies.

Mr. Khan claims having a Masters Degree in Engineering and PhD. in homeopathy. The University from which he got his masters and PhD. Was not revealed, but he seemed very well educated. Mr. Khan claimed that people come to him with many kinds of ailments after not getting well with traditional medicines and want to try other alternatives. Mr. Khan also has a huge collection of homeopathic medicines at his place, where he sees his patients and treats them. Mr. Khan also said that any kind of ailment can be treated by homeopathy remedies. Mr. Khan has lot of patients in the area who know him personally and come to see him for their ailments. Mr. Khan says that homeopathy cures an ailment very slowly and it is not like traditional medicine, which does not relieve a person from his ailments as fast as allopathic medicine does. Mr. Khan stated that many people who did not get well with other diagnoses were cured by homeopathy, hence homeopathy does not need any kind of evidence for its authenticity, in return, homeopathy is a proven treatment.

According to Mr. Khan, if it does not work, then people should not come back to me or should not refer others to me, which means it works. When people get well, they come to see me just to say thanks meaning homeopathy medicine works {9}.

Mr. K. N. Joshi, a retired Veteran of the Defense Department of India, who lives in Fresno, has a law Degree from India, but never practiced his Degree, but practiced homeopathy. Mr. Joshi also taught homeopathy courses all over the world through

correspondence courses. He taught homeopathy through his homeopathy school of correspondence courses from New Delhi, India for more than 30 years. Mr. Joshi is a well known Homeopath for his practice and courses. According to Mr. Joshi, homeopathy has all kinds of cures for all ailments. But a homeopath needs to have great knowledge in mixing medicine and knowledge of the quantity for the mixtures along with the potency of medicine for each ailment. If the wrong medicine is practiced, it does not harm a person; however, the practitioner needs to neutralize the patients' body from the medicine given. Dr. Joshi also claims that all the ailments of a human body can be cured by Homeopathy and Ayurveda, and these are the only ways to cure an ailment completely. If an ailment is cured using these old methods of treatments, the cured ailments do not make a person sick again {10}.

According to <http://altmedicine.about.com/library/weekly/aa080101a.htm>, a World Wide Web site, all kinds of prescriptions are offered on the web now. On this web site, lots of people visit daily and enter their ailments according to the questions asked. Upon entering your ailment symptoms, this site prescribes you a homeopathy treatment.

This site of ABC Homeopathy of England claims that homeopathy can cure all kinds of ailments and ABC Homeopathy also sells you homeopathic medicine on line. Some users of homeopathic medicine never claimed that they got well using these kinds of remedies. They were going to see practitioners for treatments for years and years, but never worked resulting in spending too much money on treatments. (Personal experience and research)

4. Scientific Evidence, Clinical Trials, and Placebo Debate

Today homeopathy has grown and flourished into a multimillion dollar industry and a very significant increase has occurred in both domestic and overseas markets. Even after such a great achievement, there are two schools of thought on the authenticity and validity of this branch of medicine. Scientists, who believe in the homeopathic theory explain its' powers due to the highly diluted natural substances that are used for curing ailments. Recent developments in quantum physics suggest that there might be some electromagnetic energy or charges that somehow come into interaction of the recipient and leave a favorable effect. These Scientists also purpose the theory of "Memory of

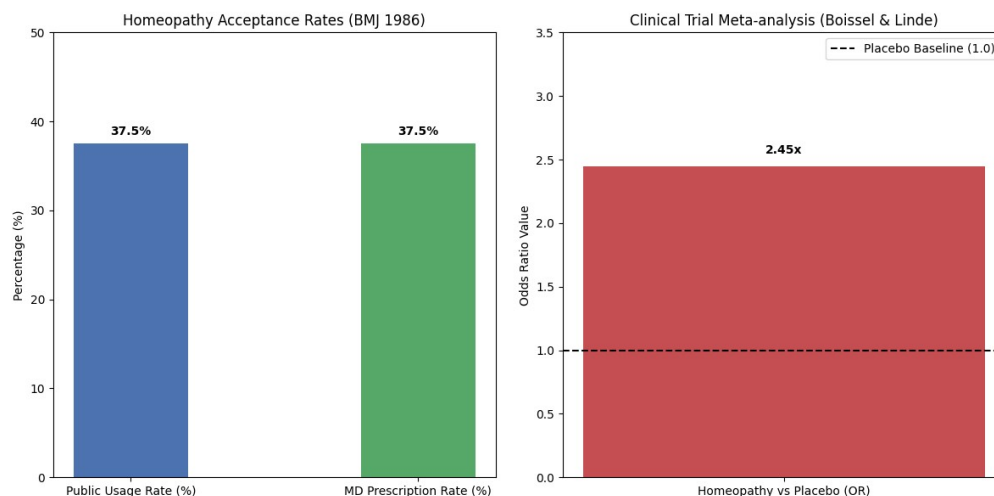
water”. This theory suggests that medicine, when mixed with the water or alcohol solution, totally changes the main structure, yet retains all its properties even after no actual substance is present in it.

These claims are supported by the Scientists on the basis of recent clinical trials that have had very positive effects, when experimented by using more usual meta-analytical technique of determining the odds ratio for each trial and then combining them. The combined OR (odds ratio) for studies was 2.45 in favor of homeopathy, which means that homeopathy was 2.45 times better than other placebo methods {(study conducted by Boissel, and Linde in 1996-97) {8}}.

Table 1: Clinical, Survey, and Operational Metrics

<i>Metric</i>	<i>Numerical Value</i>	<i>Unit</i>	<i>Context & Significance</i>
Public Usage Rate	37.50	%	Percentage of the general population using homeopathic remedies (BMJ, 1986).
MD Prescription Rate	37.50	%	Average percentage of medical doctors prescribing homeopathy (BMJ, 1986).
Clinical Trial Odds Ratio	2.45	Ratio	Combined Odds Ratio (\$OR\$) showing homeopathy performed \$2.45\times\$ better than the placebo benchmark of \$1.0\$ (Boissel & Linde Meta-analysis).
Clinical Trial Sample Size	51.00	Patients	Number of allergic rhinitis patients evaluated under controlled circumstances (Glasgow Homeopathic Hospital).
Minimum Consultation	60.00	Minutes	Time required per individual patient in classical constitutional homeopathy.

Time



Graph 1: Comparative Analysis of Homeopathy Acceptance Rates (BMJ 1986) and Clinical Trial Meta-Analysis Odds Ratio (Boissel & Linde 1996-97)

3 Researchers at University of Glasgow have conducted several studies into the effect of serially agitated high dilution of an allogen on patients with allergic rhinitis. The conclusion of this test dictated that either homeopathic medicines work very well or controlled clinical trials do not. [British Medical Journal, 2000; 321:471-6 {p 2 of 4} (8)]

On the other hand, the other school of thought on homeopathy dismisses it as utter nonsense. The claims made on this base are very interesting and raise some basic fundamental scientific questions. Recently, it came to light that these extreme dilutions; which, have been compressed or diluted so many times that the final product has no real ingredient in it.

An eminent Psychiatrist and operator of very well known website known as Quack Watch, Stephen Barrett, M.D. has gone to the extreme limit of deeming homeopathy as quackery and in his own words he says, “Homeopathy is ultimate nonsense, if you use a homeopathic product and it seems to help you, you have been mentally damaged, if you believe that.” {Reviewed by Dr. Dominique S. Walton, p#1 of 4 (3)}

Dr. Barrett also says, “Unless the laws of chemistry have gone awry, most homeopathic remedies are too diluted to have any physiological effect....” This quote was published in the consumer report consensus in the year 1987.

1 Few kinds of alternative medicines arouse such passionate and clashing reactions. For instance, the Government of Israel has even banned the practice of homeopathy in their country. {3}

1 Skeptics even tried to find flaws and faults in classic examples, where homeopathy has worked wonders. For instance, on December 11, 2000, a patient, Miss. Judy Waters began sniffing and sneezing around her cat. She was prescribed hydrocortisone nasal spray.

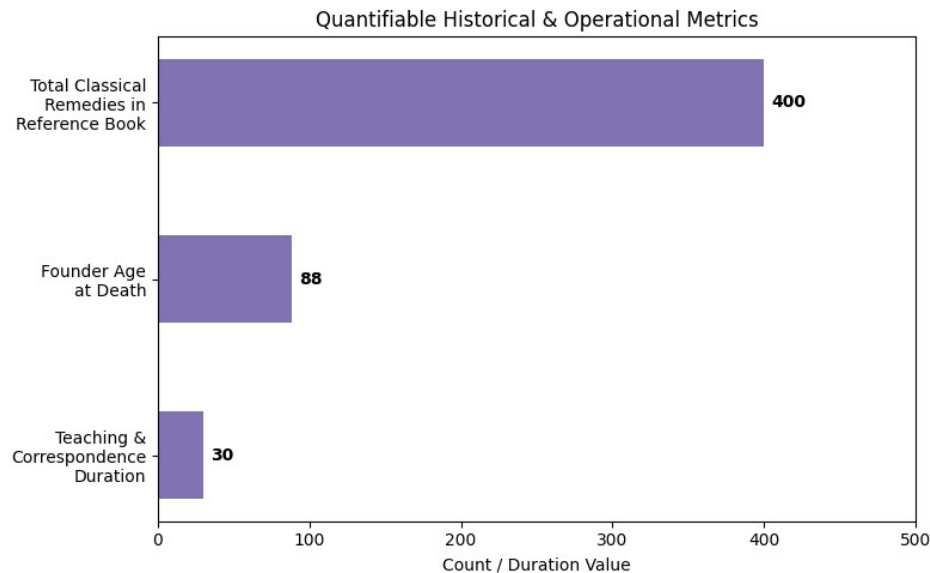
Waters paid a visit to Japan, where she had a reaction to the prescription and she fell ill, and as a result she was unable to digest food and was constantly exhausted. She sought refuge in homeopathy and was given *Allium Sepa*, which is an extract of red onions. After her first dose she started feeling much better in the first 20 minutes than she had in months. This fallacy is known as appeal to personal experience. A personal experience may seem compelling, but it can not explain or even identify all the possible variables. There are many variables, which could have effected the outcome of treatment in each case.

1 Skeptics have dismissed any improvements from this treatment due to placebo effect. They believe that there are no active ingredients in the extracts and dilutions to actually cure anything. Skeptics also dismiss homeopathy as it does not have anything in common with the principals of biochemistry, which state that some element must be present in any solution to actually leave any kind of effect on the recipient. {3}

1 According to a researcher at the Royal London Homeopathic Hospital in England, Dr. Andrew Vickers, D.Phil. considers himself an open minded skeptic. He believes that the weight of the evidence that supports the notion, that homeopathy works more than a placebo, but there is not enough solid data to draw a final conclusion. Most of the research so far consists of small isolated trials that have not been repeated.

Table 2: Historical Milestones and Quantitative Itemized Counts

<i>Historical / Operational Item</i>	<i>Numerical Value</i>	<i>Unit</i>	<i>Context & Significance</i>
<i>Year of Homeopathy Discovery</i>	1790	Calendar Year	Discovered by German physician Dr. Samuel Hahnemann.
<i>Year of Founder's Death</i>	1843	Calendar Year	Marks the end of Dr. Hahnemann's direct practice and publications.
<i>Founder Age at Death</i>	88	Years	Lifespan of Dr. Hahnemann (\$1755 - 1843\$).
<i>Total Classical Remedies</i>	400	Count	Volume of mixing prescriptions contained in the <i>Homeopathic Domestic Physician</i> reference book by Dr. Constantine Hering.
<i>Correspondence Teaching Duration</i>	30	Years	Length of time Mr. K.N. Joshi taught correspondence courses from New Delhi, India.



Graph 2: Quantifiable Historical Milestones and Operational Metrics in Classical Homeopathy

Glasgow Homeopathic Hospital in Scotland conducted a research under the leadership of Dr. David Reilly, where they studied and determined 51 patients and what substance caused allergies on these patients. Then, they had a supplier create pills with substances diluted to extreme levels. As a result, it was concluded that the patients, who were treated with these medications had less nasal allergies than those who were not given this medication. This study holds good against the study on allergies of hey fever. {3}

But all this work does not provide enough evidence that homeopathy works because all the experiments are conducted under controlled circumstances and only a placebo effect of these studies can be established. Hence we can say that these experiments have not been subjected to clinical trials, so their complete authenticity can not be established.

5. Discussion and Future Perspectives

In my opinion, homeopathy might be a very successful branch of medicine and it might claim to eradicate the ailment completely from its roots, but it also has numerous conflicts regarding its validity. I am a firm believer in cure rather than the ailment. Any kind of clinically true, authentic and validated solid proof that proves the powers of

homeopathy comes into existence, will make me its firm believer. From the research that I have put in this paper and after reading all the pro's and con's of homeopathy, it becomes very hard for educated people like us, who believe in Science supported by facts and figures to actually believe in homeopathy.

I have myself, used homeopathy medicine along with traditional allopathic medication and got rid of my ailment. At this moment, it is a little hard for me to say what kind of medication (homeopathic or allopathic) cured me. Maybe I was cured by the placebo effect of alternate medication or maybe the traditional ways of medication had more power over these dilutions and concentrations.

Let us conclude by saying that homeopathy is anything, but simple. It uses too many assumptions from the very beginning or from its very own roots of existence (principle of similars). For every radical claim there has to be something that proves its existence and authenticity; it's only in the case of homeopathy where one can not be sure of anything. On the other hand, people claim to have derived better health and eradication of the diseases that they were suffering from.

One very interesting fact about homeopathy is that it defies the basic law of Aristotle, where presence of a molecule or an element is very necessary to have any kind of reaction on the recipient. Homeopathic elements concentrated and diluted so many times that they loose any kind of active ingredient, so how do they cure an ailment? Clinical researches on one hand prove homeopathy to be effective and on the other hand defies all the laws of physics and biochemistry. In such a case or scenario, a thorough conclusion is a very difficult job. Let's wait a few more years for a few more researches that can either prove homeopathy to be right or wrong.

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