The Application of Alternative Medicine in Western Medical Science

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Someone is in an accident and wakes up in the emergency room. Without knowledge or consent, the doctors decide to hook them up to an IV opioid drip to treat the pain. The patient is grateful, of course, and perhaps the doctors did the right thing; however, the patient soon becomes reliant on the IV drip. Whenever the slightest tinge of abdominal pain is felt, or when the patient's back starts to ache, all it takes is the press of a button to induce that blissful state of relief. To be without this relief is unthinkable. It isn't long until the patient is ready to leave the hospital but is reluctant to leave--not without a prescription for Percocet, at least. Flash forward one year and they may have the occasional back ache, but without physical therapy, these aches will never go away. It is much easier (and for the addicted patient, far more enjoyable) to simply keep renewing the prescription.

Unfortunately, this is a scenario that happens on a near daily basis in the United States. Some claim that opioid addiction is merely one example of the many medical scenarios that could be avoided if alternative medicine such as physical therapy was more readily accepted. Alternative medicine--or more broadly put, the range of medical treatments that fall outside the bounds of mainstream western medicine--is an issue that divides the medical field and causes rifts between patients and doctors. Critics of alternative medicine are concerned with actuality and safety, and are quick to point out perceived comparisons between the peddlers of alternative medicine and the peddlers of psychic visions. Proponents, on the other hand, cite studies that suggest alternative medicine really works and emphasize the dangers equally present in

mainstream medicine. How effective is alternative medicine in comparison to mainstream medicine? Are alternative methods of medicinal healing perhaps better suited towards patient-centered healing? Can alternative medicine be trusted?

The medical field may be more open minded than other scientific fields (perhaps because doctors recognize their own limitations), but the majority of doctors still remain skeptical towards the "pseudoscience" of alternative treatments. In the United States, there is a tradition of flack between established medicine and alternative medicine that goes back to the beginning of the country. "From the beginning, doctors utilizing unconventional methods were dismissed by orthodox medicine as unscientific pretenders," writes Doctor James Whorton, Professor of Medical History at the University of Washington. "Establishment medicine has striven all along to suppress alternative practitioners by pressing legal authorities to arrest, fine, and jail them as threats to public safety for practicing medicine without a license" (1). The same way biologists seem to shun other biologists who don't believe in evolution, doctors shun other doctors that don't practice what they considered to be the tenements of "enlightened medicine" that have prevailed ever since the introduction of Penicillin.

Such efforts have been and still are constantly made to deter the efforts of alternative medicine practitioners, and with good reason, critics would say. Because alternative medicine falls outside the bounds of traditional medical approaches to medicine, it includes a wide range of treatments like naturopathy, tai chi, use of dietary supplements, electromagnetic therapy, and more, some of which have many potential dangers. There are indeed a few instances where the dangers of using alternative medicine appear to exceed the potential benefits. For instance, between 2006--2016, a homeopathic teething pill caused about 370 babies to have seizures and

become delirious, and in many cases, the results were fatal (Perry 2). What's even more disconcerting is that pills such as these slip through the FDA's fingers all the time and are widely available to consumers. Homeopathic treatments date back to 1796 and are based on the idea that substances that cause disease in healthy people must have the opposite effect on sick people, although homeopathy has largely been accepted as pseudoscience. This doesn't stop people from using homeopathic treatments, however; anything that appears to work, if only through the placebo effect, keeps people coming back.

The role of the placebo effect in medicine raises an interesting point. A placebo, simply put, is a treatment or substance that isn't real but seems real and has the same effects. The mere suggestion that something is a painkiller, even if it's just a sugar pill, is enough to "reduce pain by both opioid and non-opiod mechanisms" (Colloca and Benedetti 546). Although a treatment that has actual effects is obviously preferable to a treatment that does not, one may be forced to ask whether it even matters; as long as the treatment works, it may as well be of no concern. Placebo effects are not just accidental whims of the human body, as there is evidence which corroborates that placebo effects are real and incorporate the innerworkings of biochemistry and pharmacology; in fact, it isn't unheard of for doctors to give patients medicine full of serotonin that triggers the placebo-inducing chemicals in the patient's brain (Colloca and Benedetti 547).

A lot of what qualifies as alternative medicine is simply a placebo. Acupuncture is a popular method of physical therapy, despite there being no discernable difference between what qualifies as medical acupuncture and what qualifies as fake acupuncture (Perry 4). In other words, all acupuncture involves is the sticking of needles into the body. Professional acupuncturists may assert that the needles must be placed on certain pressure points for

maximum effectiveness, but if an acupuncturist decided to simply place the needles into random spots, the patient likely wouldn't be able to tell either way. The very process of the having needles stuck into one's back is convincing enough.

Unsurprisingly, the critics of alternative medicine would be quick point to the obvious dangers of acupuncture, and granted, sticking needles into the body perhaps isn't the safest or most practical activity, regardless of its medical purposes. One study, a survey, correlated 715 adverse effects to acupuncture, including reports of trauma, injury to the central nervous system, severe infection, seizures, drowsiness that caused traffic incidents, and 12 cases of death (White 126). The concern over safety and the studies that justify this concern appears to be a primary aspect of the critics' argument, and one they come back to again and again by citing different studies. There are also concerns raised over the potentially negative effects of placebos themselves, not just the process one goes through to achieve them. When people believe they are on certain drugs--antidepressants especially--side effects such as depression and sleep disorders are not uncommon. Negative associations with the effects of antidepressants are enough to convince people they are experiencing them.

Regarding the dangers of alternative treatments such as homeopathy and acupuncture, the proponents of alternative medicine are quick to point out that dangers are equally present in mainstream medicine, if not more so. Medical malpractice causes at 250,000 deaths each year in the United States, and those are just the deaths that can be directly attributed to medical malpractice (Sternberg 1). Opioid addiction is another common problem, with 33,091 deaths attributed to opioid overdoses in 2015, accounting for 63.1% of the drug overdoses that year (Rudd 1446). An overwhelming majority of prescriptions that caused these opioid overdoses

were written by doctors. The number of deaths that can be directly attributed to alternative medicine don't even begin to compare to the statistics provided by mainstream medicine.

But the dissuaders of the placebo effect's practical application in alternative medicine cite another concern besides possible dangers--reliability. Surely it isn't plausible to imagine that a mere belief in something allows the body to heal itself, for if it is, then *all* medicine could effectively be based on the placebo effect. (The placebo effect has even been shown to work when the patient is aware it is happening.) Being able to transcend the laws of science, using faith, is a concept simply too good to be true. There's a clear logical discrepancy in coming to the conclusion that there's no need for a cancer patient to go through chemotherapy, if the patient can simply be given a pill and told it's a magical cure. Indeed, placebos are not actually fail-safe methods to curing someone. The American Cancer Society says that "The placebo effect can make some treatments seem like they help certain symptoms, when in fact they do nothing to directly cause a change in the disease. Other factors that are sometimes lumped in with the placebo effect can also make a treatment appear to help even when it does nothing for the illness" (2). Placebos simply help with certain symptoms of a disease, like response to pain, and improving a person's optimism, which may go a long way towards helping the patient be cured through actual medicine but doesn't accomplish the actual curing.

Placebos are an example of "mind over matter." In the context of medical science, mind over matter is the idea that the mind is as equally important to health as the body, to the point that sheer willpower allows the body to overcome expected limitations. If one aspect of the patient (the mind or the body) becomes damaged, it consequently affects the other aspect. Doctor Jay Moynihan, director of the University of Rochester's Center for Mind-Body Research, puts it

this way: "...there really is no distinction between the mind and body. They're completely connected to each other, and that connection is very intimate" (Flanigan 1). The whole mind over matter subject comes dangerously close to falling within the definition of parapsychology, but regardless of one's attitude towards the concept, there is genuine evidence to suggest it is scientific. The Mayo Clinic reports that replacing stressful thoughts and negative self-talk with a happy memory--and similar positive thinking exercises--improves general mood, coping skills, and overall health (Flanigan 1-2). Instead of these positive-thinking exercises, one might meditate for similar results. Mediation is particularly popular in Eastern society as a means to enhance the body-mind relationship.

It appears that people in the "Western" world are turned off by the idea that alternative medicine can actually cure people when a lot of avenues of alternative medicine, such as aforementioned homeopathy and acupuncture, are based on the placebo effect, and the placebo effect only helps treat a disease, not cure it. This discrepancy between curing and treating throws skeptics of alternative medicine off altogether. But perhaps there is a way to rectify the situation. Eastern society (ie., Asia) is more open to the idea of mind over matter, perhaps because Eastern society is full of spiritual traditions and a sense of spiritual awareness that dates back to the beginning of its conception. Eastern medicine is able to combine both medical and theoretical approaches equally, without any sense of contradiction, to create a patient-centered approach rather than a base science-centered approach that Western medicine could do a lot of good to learn from.

The current trend in medicine is a sense of skepticism regarding alternative medicine that will probably never go away completely, especially regarding the practical applications of the

placebo effect. Because of this skepticism, alternative medicine doesn't play a huge role in most hospitals, although a trend is appearing wherein more and more doctors (gynecologists especially) are encouraging their patients to seek outside, scientifically proven forms of alternative treatment. Therapy is a recognized far and wide to be beneficial towards people struggling with medical issues but is still considered to be a form of alternative treatment. The role of the placebo effect in alternative medicine is a tricky question, but critics have a hard time attacking other forms of alternative treatment, like therapy, that are inherently less risky. Alternative treatments that are not based on the placebo effect or Freudian psychology are even more attractive. Massage, for example, is a form of alternative treatment shown to enhance both the physical and mental state of a patient through the principles of exercise science (see "Is Thai Massage Really Good For You?").

The future of alternative medicine, however, appears to be less concerned in "mind over matter" and exercise science than in the legal question of psychedelic drug use for medical purposes. Awareness of the medical applications of psychedelic drugs--namely marijuana, LSD, and psilocybin--was bolstered during the counterculture movements of the 1960's and 70's, and has given rise to a society of liberal thinkers that question the government's role in determining what is good and bad for its citizens. It is a struggle that continues now, albeit with less steam, but will continue to stretch into the future. Cannabis has taken the foreground of this debate, with fair results--as of October 2017, 29 states in the U.S. have legalized the use of medical marijuana. Marijuana is proven to help with pain, anxiety, decrease the severity of seizures, deter the spread of cancer, and much more (Welsh and Loira 3-4). Some detractors are concerned with marijuana because of its narcotic status and the conception that it is a gateway drug, but such

detractors are often ignored for reasons of logic--if opioids are known to cause addiction and overdoses, yet are legal and prescribed by medical doctors every day, there is no sense in outlawing medical marijuana, which has a lower rate of dependency and has never caused a single death from overdose.

Most people have accepted that legalized medical marijuana is effective and rational, but the question of heavier psychedelic drug use for medical purposes remains. LSD is a psychedelic drug shown to help cure addiction; one study done at the Norwegian University of Science found that 21 percent more alcoholics decreased their alcohol consumption after being treated with LSD, and were 15 percent more likely to stay sober (Chant 2). In the medical community, the common view that has persisted since the dawn of alcohol is that alcoholism (and other such addictions) cannot be treated medically, and an addict's only hope is Alcoholics Anonymous or rehab. If recent studies indicating the effectiveness of LSD in treating addiction are to believed, then it is a scientific breakthrough. However, potential dangers present in the use of LSD remain a concern.

The safety, effectiveness, and reliability of alternative medicine are matters that will continue to be debated in and outside of the medical field. There may come a time where technological progress in the medical field comes to a grinding halt and doctors have no other choice but to turn to alternative solutions. Perhaps it is one of those subjects that only resolves itself when enough evidence has been put forward; if so, the world will have to wait and see.

Works Cited

The American Cancer Society Medical and Editorial Content Team. "Placebo Effect." *American Cancer Society*, 10 Apr. 2015, www.cancer.org/treatment/treatments-and-side-effects/clinical-trials/placebo-effect.html#written_by. Accessed 27 Oct. 2017.

Chant, Ian. "LSD May Cure Some Addicts." *Scientific American*, 1 July 2012, www.scientificamerican.com/article/lsd-may-cure-some-addicts/. Accessed 2 Nov. 2017.

Colloca, Luana, and Fabrizio Benedetti. "Placebos and Painkillers: Is Mind as Real as Matter?" *Nature Reviews. Neuroscience*, vol. 6, no.7, July 2005, pp. 545-552. *Nature*, doi: 10.1038/nrn1705. Accessed 26 Oct. 2017.

Flanigan, Robin L. "Get Your Mind-Body Exercise: Thinking Differently Can Improve Health and Even Reduce Pain." *Rochester Democrat and Chronicle*, 9 Apr. 2017, pp. L.5, SIRS Issues Researcher, sks-sirs-com.byui.idm.oclc.org. Accessed 9 Oct. 2017.

"Is Thai Massage Really Good For You? Exploring the Claims Vs. the Science." *The Thailand Life*, 16 May 2016, www.thethailandlife.com/is-thai-massage-really-good-for-you. Accessed 2 Nov. 2017.

Perry, Susan. "Potential Dangers and Dubious History of Alternative Medicine Are Often Unknown to Its Consumers." MinnPost.com, 27 Feb. 2017, SIRS Issues Researcher, sks-sirs-com.byui.idm.oclc.org. Accessed 9 Oct. 2017.

Rudd, Rose A. et al. “Increases in Drug and Opioid-Involved Overdose Deaths — United States, 2010–2015.” *MMWR Morb Mortal Wkly Rep*, 30 Dec. 2016, vol. 65, no. 50-51, pp. 1445–1452. *Centers for Disease Control and Prevention,* doi: http://dx.doi.org/10.15585/mmwr.mm655051e1. Accessed 31 Oct. 2017.

Sternberg, Steve. “Medical Errors Are Third Leading Cause of Death in the U.S.” *U.S.News*, 3 May 2016, www.usnews.com/news/articles/2016-05-03/medical-errors-are-third-leading-cause-of-death-in-the-us. Accessed 30 Oct. 2017.

Welsh, Jennifer, and Kevin Loria. “23 Health Benefits of Marijuana.” *Business Insider*, 20 Apr. 2014, www.businessinsider.com/health-benefits-of-medical-marijuana-2014-4/#it-can-be-used-to-treat-glaucoma-1. Accessed 2 Nov. 2017.

White, Adrian. "A Cumulative Review of the Range and Incidence of Significant Adverse Events Associated with Acupuncture." *Acupuncture in Medicine*, vol. 22, no. 3, Sept. 2004, pp. 122-133. EBSCO*host*, search.ebscohost.com/login.aspx?direct=true&db=awh&AN=15594959&site=ehost-live. Accessed 24 Oct. 2017.

Whorton, James. “Countercultural Healing: A Brief History of Alternative Medicine in America.” *Frontline,* 4 Nov. 2003, www.pbs.org/wgbh/pages/ frontline/shows/altmed/clash/history.html. Accessed 10 Oct. 2017.