The Need for Pluralism in Modern Healthcare

The Importance of Placebo Effects, the Environment, and Art in Facilitating Healing

PAUL DIEPPE

Introduction

All of us develop diseases and illnesses at times, and all societies develop strategies to help the sick amongst us. As medical anthropologists Arthur Kleinman (1980) and Cecil Helman (2001) have pointed out, there are three main approaches used to help alleviate health problems: 1) the popular sector: that includes self-treatment, advice from family and friends, help from other local people, and remedies based on religions; 2) the folk sector: which includes local healers, traditional medicine based in a particular culture or country, and the many forms of complementary and alternative medicine (CAM), such as homeopathy or kinesiology; 3) the professional sector, which comprises the legally sanctioned system in a country, and which, especially in Western and "Westernized" countries, is now exclusively based on biomedical science.

Over the last hundred years the biomedical sciences have enjoyed massive development, leading to a variety of new methods for diagnosing and treating diseases, particularly with drugs, devices and new surgical options; in addition to improved public health measures. These developments have been very successful, allowing us to treat many conditions effectively, and to completely cure some. For example, antibiotics can cure infections such as pneumonia, which previously killed many people, and cataract removal or hip replacement surgery can transform peoples' lives for the better. Therefore, it is not surprising that the medical profession now uses its scientific approaches exclusively, and tends to regard healers and CAM practitioners with suspicion and to undermine their work (Helman 2001; Jonas 2019). Similarly most "modern" patients seek state trained and legally sanctioned doctors, from whom they expect to receive "rational" insights on, and solutions to, their health problems.

However, other "unscientific" approaches to healthcare are still present in our "enlightened" societies. Popular remedies, such as wearing copper bracelets for arthritis, are widely used, and a huge variety of CAM and other healing practices are increasingly available and also widely utilised (Posadzki *et al.* 2013). Most biomedical practitioners dismiss such practices as "quackery," and in most "modern" hospitals it is unusual to encounter anything other than scientific biomedical practices.

Although a "Western" trained doctor myself, I now believe that we should be more pluralistic in our approach to health issues, and that we should consider the need to help people heal themselves, as well as trying to cure their diseases, and that we should not be dismissive of healers or CAM approaches. I am particularly concerned about those "modern" hospitals, which have become the cathedrals of biomedical science practice, dominated by complex machines driven by "the white-coated priests of biomedicine."

I believe the issue to be urgent and important, as chronic diseases are becoming increasingly prevalent in the West, in spite of its biomedicine. The World Health Organisation and others have lamented the problem they call the "silent global epidemic of chronic disease" (Meetoo 2008). In addition mental health problems are practically endemic in Western societies, with our doctors apparently powerless to help many of the people who suffer from them.

In this essay, I argue that we need to combine the healing arts with scientific medicine within our Western hospitals, and to be more pluralistic in our thinking about disease and illness. First

I provide definitions for my use of terms. Then I outline several different projects that colleagues and I have been involved in, which explore the power of the so-called "placebo effect" and its relationship to healing, and examine the potential role of space and art in changing the nature of hospitals and creating "healing spaces" within them.

Definitions/Semantics

Words and definitions are important, as usage and interpretations vary in different countries and cultures. Many of the words used here are potentially problematic, none more so than "healing," a word used as a noun, an adjective or a verb (Levin 2017). In this section I explain how I use some of the common words related to health problems. My usage is based on literature sources (Kleinman 1980; Helman 2001; Sontag 2003), but has also been moulded by my training and experience as a doctor. My medical training took place in London in the 1960s, and I practiced as a doctor in the UK from 1970 until 2010.

1) Disease, Illness and Sickness

Diseases are pathological processes or states within our bodies. Diseases are the province of scientists and health care practitioners: they are constructs within the science-based biomedical paradigm used to classify and describe things that "go wrong" with us. They are seen as essentially physical problems: abnormalities of the structure or function of the body or mind that can only be understood by reductionist, materialistic science, within which the whole person does not need to be considered, and the soul does not exist.

Illness is the experience of something abnormal going on within our body or mind. Illness is about symptoms, such as pain, that are often difficult to describe and a very personal issue for whoever has them (Sontag 2003). Illness is internal, experiential and the concern of the individual. Illness may or may not be caused by disease, and illness may or may not lead to sickness.

Sickness is the outward manifestation of a disease or illness. It is about an individual's interpretation of the meaning of their problem, and the behaviours that accompany that understanding (Kleinman 1980; Kaufman 1993). So if an individual is forced to reveal their disease or illness to others, or if they choose to behave in a way that indicates that they have health problems, sickness is apparent. Different people either try to hide their illness from others, or exaggerate it, leading to a huge variety of sickness behaviours in society that can be difficult to interpret. Very rarely sickness can occur in the absence of disease or illness (in other words an individual may choose to fabricate health problems for personal gain).

In general, biomedicine, with its conviction that we live in a purely materialistic reality which can be explained by science and science alone (Le Fanu 1999; Sheldrake 2012), is good at diagnosing and treating many diseases, less good at understanding or treating illness, and makes little or no attempt to deal with sickness, holism or the soul. In contrast, healing approaches the whole individual—mind, body and soul—and can potentially help with all dimensions of our health and wellbeing.

2) Treating, Comforting, Curing and Healing

Just as disease, illness and sickness have different meanings, so do comforting, treating, curing and healing.

Comforting others comes naturally to us. Humans are sympathetic, altruistic beings who want to help others who are in distress or not healthy. For the unskilled or uncertain person this will generally mean limiting their help to offering comfort to another. This is best achieved by providing a "gentle presence"—being there for the other person, listening, perhaps touching or hugging, and maybe sharing their problems, but above all else, just "being there" (Rogers 2003), and, as outlined below, ideally involving engendering a sense of safety.

Treating another person implies the use of a specific intervention designed to change the situation. A hug, as a part of the provision of comfort, might be seen as a treatment, but in general the word is used for more specific interventions aimed at a particular problem. It is an all-encompassing term that can be used for any sort of conventional or unconventional, professional or lay, approach to ill-health.

Curing is a term used to indicate the eradication of a disease or illness. It is what the modern

medical professional strives to achieve, and she sometimes succeeds: for example we can "cure" peptic ulcers and pneumonia by the use of antibiotics that rid the body of the agents that causes them. The grip of "scientism" (the blind belief in the power of science) (Sheldrake 2012) and of the makers of drugs and devices used in medicine is now so great that we have come to believe that with more research we can find cures for everything. But we cannot. Take the example of a hip replacement for an arthritic hip, rightly championed above as one of the successes of biomedicine. This is indeed a wonderful operation which results in lasting pain relief for many people and might be seen as a cure. But it is not; it relieves symptoms in some but not all who undergo it, and it removes some damaged tissues from the body, but it does not remove the underlying arthritis or its causes, which often go on to affect other joints. Joint replacement does not allow you to do all the things you could before you had hip disease, and the surgery can be dangerous, sometimes resulting in long term physical and psychological problems that doctors find difficult to "treat" and impossible to "cure."

Healing is the most difficult term of all, one that cannot easily be defined and perhaps should not be, as it is a dynamic, experiential issue for many of us, and not a "thing" (Scott *et al.* 2017). The current English word is derived from the word "haelan," used in older English in Saxon times, and meaning "to restore to good health." But the term is now used very differently by many people. It can describe a state (I have had healing, I am healed), a process (I am being healed), or a practice (I am healing another). In general it refers to a holistic notion of wholeness or integrity of mind, body and soul. It implies that there is more to life than a machine called the physical mind/body, and that we are continually changing, recovering, moving forward, and seeking integrity and wholeness. Healing is often more about allowing us to flourish in the face of illness and suffering, rather than curing a disease (Kaufman 1993; Greaves 2004). As already mentioned, biomedicine is largely about treating and curing, and not comforting or healing. We should remember the aphorism sometimes attributed to William Osler, (whilst others say it is a 15th century folk saying, cf. Shaw 2009). It says that the aims of medicine should be: *"To cure sometimes, to relieve often, to comfort always."*

The Placebo Effect

My academic journey into the world of healing began with research on the placebo effect and the placebo and nocebo responses (Dieppe *et al.* 2016; Dieppe & Rhatz 2017). The term "placebo" (from the Latin, meaning "I please") refers to the fact that people can get better from illnesses and diseases when given a treatment that should not have any effect. It is often thought of as "mind over matter" (Marchant 2016)—illustrating the Cartesian dualism inherent in our current narratives about our physical bodies and brains. Today, the term "placebo effect" is generally used to describe the improvement that can result from giving people "sham" or "dummy" treatments used in clinical trials (Finniss *et al.* 2011; Kirsch 2018). The randomised controlled clinical trial (RCT) is seen as the gold-standard technique for finding out if a medical intervention is effective or not; it involves comparing the "real" drug, operation or device, with a sham or dummy version, to find out the value of the "real" treatment. But when this is done, people given the sham treatment usually improve. Many of those who run such trials, as well as those who make the drugs and devices being tested, have seen this effect as a nuisance—an inexplicable phenomenon that dilutes the response to their active agent. Many attempts have been made to explain away the placebo response, it has been said, for example, that it is all about natural improvement, or artefacts resulting from the experimental nature of the RCT. However, as shown in the figure below, when trials have been done to compare the effects of a real treatment to a dummy treatment, or to no treatment at all, we still see that giving the dummy treatment produces much more improvement than doing nothing.[1]

It is apparent from data of the sort illustrated in the figure, that much of the beneficial effect of drugs used for common symptoms such as pain and depression, can be attributed to the placebo effect alone. For example, our own work suggests that about 70% of the pain reduction produced by drugs given to people with osteoarthritis can be explained by the placebo effect (Zhang *et al.* 2008; Dieppe *et al.* 2016). Furthermore, there are now a

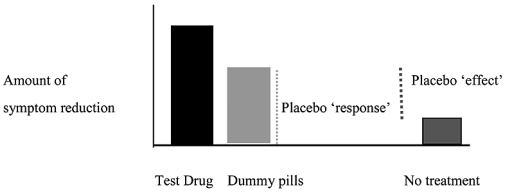

Fig. 1: This illustration is a rough generalisation of what happens when drugs for pain in osteoarthritis (Zhang *et al.* 2008), or for depression (Kirsch 2014) are tested in randomised controlled trials. Groups of consenting patients are allocated to take either the active drug, a dummy tablet that looks identical but contains no drug (the placebo treatment), or to take no tablets at all. Those people who take the active drug respond well, but those taking the dummy treatment improve nearly as much. That is called the placebo "response." If we then compare the amount of improvement in pain or depression in people not treated at all they improve much less. The difference between the amount of improvement with a dummy (placebo) treatment and no treatment at all, is called the placebo "effect."

number of studies to suggest that some surgical treatments are only effective because of the placebo effect. A well-known example is the use of arthroscopic surgery for osteoarthritis of the knee joint (looking inside the knee, washing it out and removing "debris"): people undergoing a sham surgical operation do as well or better than those who have the full procedure (Mosley *et al.* 2002). A further intriguing twist to the placebo story has been added by recent work showing that people respond to placebo drugs even if they are told that the pills are dummies (Carvalho *et al.* 2016).

How can this be? How can giving a pill without an active ingredient, or pretending to do an operation but not doing the full procedure (just cutting the skin to make it look real, for example) result in huge symptomatic benefit? We do not know all the answers to that question, in spite of intensive research by psychologists (Kirsch 2014, 2018) and neuroscientists (Benedetti 2013). Two theories dominate the thinking: that placebo effects are the result of expectation/suggestion, or that they depend on conditioning (Finniss *et al.* 2010). There is no doubt that such factors can contribute: if we expect something to happen (because it has been suggested to us) it is more likely to occur, and we can become conditioned to respond in certain ways to taking a drug. But I, like many others, do not think this is the whole story.

We (Kaptchuk 2002; Moerman 2011; Dieppe *et al.* 2016; Dieppe & Rhatz 2017) believe that is also about context and human interaction—that the placebo effect depends on the interactions between the person giving the "drug" and the person receiving it, and on the whole context in which such interactions take place, including the spaces in which clinical encounters occur, and the "rituals" that surround them. We all know that "giving" to another, comforting them and being there for them, can help; this we believe is an important part of the placebo effect, as well as being a part of what happens in a lot of healing encounters. So the placebo effect teaches us that the comfort and good intention that accompanies any attempt to treat someone can, of itself, be beneficial to disease and illness. My synthesis of the arguments outlined above is that giving another person "nothing" (a hug, or a dummy tablet with no active ingredient for example) helps their health and wellbeing a lot more than doing nothing – so it is about the '"giving" of something to another with good intention.

The Importance of Safety

Placebo effects have been difficult to research, in part because we have not had good theories to apply to aid our understanding (other than expectation and conditioning). But in the 2000s, Dr. Steven Porges (2009) developed his "polyvagal theory," and subsequently Dr. Maddy Greville-Harris and I explored its relevance to placebo effects (Greville-Harris & Dieppe 2015; Dieppe *et al.* 2016). The polyvagal theory, put simply, describes the two extreme states of the human autonomic nervous system—the "fight or flight" response at one end, and the "nurturing response" at the other. The fight or flight response—our innate, automatic response to threat—resulting in heightened anxiety, is something that most people have experienced, it is a part of life. Less is known about the nurturing response, which is the opposite—the relaxation we feel when, for example, we see a young baby smile. Porges (2009) explained the physiology of these responses (which involve the same parts of the nervous system, notably the vagal nerve—hence "polyvagal theory"),

and pointed out that they are linked to our ability to communicate with each other, with our hearing, our voice production, and our facial expressions. If we feel threatened and anxious we are not able to hear another person properly, or to communicate well, our face is expressionless and the voice becomes flat. In contrast, a feeling of safety results in improved ability to listen to and understand what another person is saying, as well as normal facial expressions and vocalisation. Greville-Harris and I showed that placebo effects are probably dependent on feeling safe (being in the nurturing state), whilst a state of anxiety (fight or flight) could activate the opposite—the nocebo effect—making symptoms worse in the absence of being given anything (other than words) that should affect us (Greville-Harris & Dieppe 2015).

Finding New Meaning

American anthropologist Dan Moerman (2011) describes the placebo effect as the "meaning response." He points out that the search for meaning is a key part of the human condition, and that ill health disrupts our normal narratives. The interaction of the ill person with a compassionate practitioner, and the provision of some intervention that might help (even if there is no active ingredient in it) can facilitate the reframing of the problem.

What then is the relationship between placebo effects and healing? We have postulated that the placebo effect is an important component of healing, activated largely by kindness, a comforting presence, and by making others feel safe through the power of human interaction. But we also believe that there is more to healing and the work of healers than just inducing a placebo effect (Dieppe & Rahtz 2017). Our qualitative research with healers (Rahtz *et al.* 2017, 2019 a/b) suggests that healers can activate remarkable changes within their clients through focussed attention with good intention. However, the mechanisms behind such effects are not understood. Healers often talk of "energy," a concept conceived of as "prana" in ancient Indian medical practice, and "chi" in Traditional Chinese Medicine (Kaptchuk & Croucher 1986). Most "modern" scientists dismiss the idea that there is some form of universal energy that can affect human health, but new findings from Parapsychology and Quantum mechanics suggests that such "energy" may be a fundamental part of the universe (Sheldrake 2012; Currivan 2017). And, as Ted Katpchuk (2002) puts it, ritual and the environment matter and help us develop new meanings, and heal. Recognising that most hospital and clinic environments are not likely to make you feel safe, to activate a placebo effect, help you find new meaning, or to heal, I have also turned my attention to the environments in our hospitals.

The Environment and Art in Hospitals

Until relatively recently little attention was paid to the appearance and "feel" of the spaces in which people are treated in hospitals or clinics. Hospitals have been seen as very functional places in which operations can be undertaken, wounds can be dressed, and people can be provided with a chance to recover, or to die. Many hospital spaces were austere and unfriendly, and no attention was paid to creating a sense of safety. Indeed hospitals and their staff have been excellent at creating fear and anxiety rather than relaxation.

Roger Ulrich (1991) undertook a study on the effect of a good view from a hospital bed on recovery rates and complications after surgery. He and his colleagues showed that patients in a ward with a good view recovered better from surgery, with less post-operative complications than those recovering in a ward with no view. Since then many primary research studies have shown that hospital design and hospital art make a big positive difference to patient outcomes and well-being, as reviewed by Lankston *et al.* (2010) and Anaker *et al.* (2017). As a result hospital design has changed, and the use of art and other ways of "softening" the appearance of clinics and waiting rooms have blossomed. In addition, other research has shown that being in natural environments, such as woodlands, can facilitate healing (Irvine & Warber 2002). All this work has helped us realise that we need to pay attention to the environments in which we try to treat people in hospitals.

Lots of hospitals now have an artist on the staff—someone whose role it is to make sure that there are artworks for people to see and respond

to, such as pictures on the walls, sculptures, good colour schemes in wards, and nice garden spaces for patients and visitors. The aim is to improve the experience of being in or visiting a hospital, for staff, patients, relatives and visitors, and it clearly achieves this.

Clinic Design as Placebo

A few years ago Ewa Roos[2] and I decided to test the "placebo effect" of being treated in a nice space in a hospital. Working in collaboration with Roger Ulrich,[3] we designed a trial to test out the hypothesis that physiotherapy treatment for knee pain would work better if it was done in a "nice" room than in a "nasty" space. We found two spaces which seemed to us to be appropriate—an old gymnasium room in the basement of the hospital, with no windows, a bad smell and bad acoustics, and a lovely first floor modern space looking out over the surrounding countryside, and with soft, pleasant furnishings and colours, and good acoustics. The trial "worked," we found a difference. However, the difference favoured the basement "nasty" room! Fortunately, Louise Sandal (*et al.* 2018), who was in charge of the study, had undertaken some nested qualitative research with participants, so was able to explore why they might have experienced more improvement when treated in what we thought was the "nasty" space. Most of the subjects were older adults with longstanding knee arthritis, and many of them told the trials team that the problem with what we thought of as the "nice" room was that it felt like an exercise room/gymnasium for young people and not for the likes of them, and that the view was distracting. In contrast, they felt "at home" in the basement room—this was the sort of space they expected to be treated in at the hospital; it felt "right" and they felt safe in it. So space does make a difference, but we need to understand the needs and contexts of the individuals we are trying to help in order to be able to design spaces that help people heal.

Rehn & Schuster (2017) from Germany have reported the results of a large survey on the effect of the environment on the perception of patients as to whether they were likely to get better or not in hospital. They found that the overall look of the spaces had a huge effect and titled their paper "Clinic Design as Placebo." More studies are needed to examine the power of architecture, design and hospital art on clinical outcomes.

Using Art and Design to create Healing Spaces in Hospitals

I have had the privilege of working with a small team of academics interested in the nature of healing and the work of healers. We are funded, in part, by *The Institute for Integrative Health in Baltimore.*[4] We have been trying to understand what health care professionals and the public think about healing (Rahtz *et al.* 2017, 2019a/b). As people often find that hard to describe using words alone, we use a variety of other techniques, including asking people to draw pictures in response to the phrase "what does the word healing mean to you?"

We use these materials to try to open up conversations about healing within the medical profession. One approach we have taken is to set up exhibitions about healing in hospitals, using some of the pictures that people have drawn in response to our question, as well as quotations about the nature of healing, objects and stories. We have exhibited in several places, using large panels designed by artist Deborah Weinreb working in collaboration with the whole team. Examples of the sorts of panels used in our hospital exhibitions are shown below.

We have sought feedback about the responses of people viewing these exhibitions in hospital spaces. Generalisations are difficult, but based on observational work, interviews and workshops held around the exhibits we think that patients and visitors are more likely to take note of it,

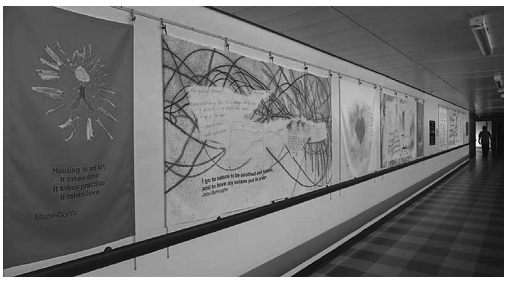

Fig. 2: A photograph of a part of the hospital exhibition along the wall of a corridor

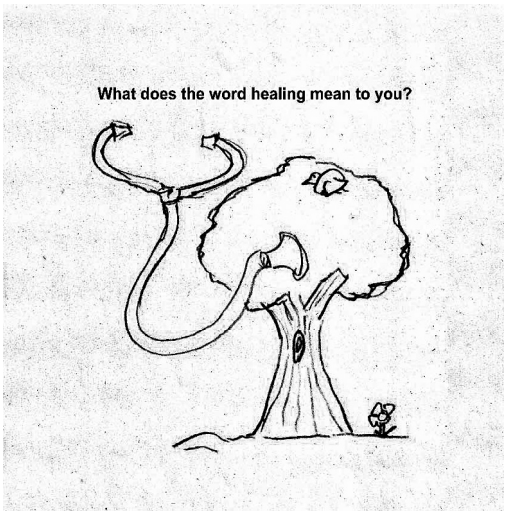

Fig. 3: An example of a panel shown in the exhibition showing an art-work done by a member of the public in response to the question 'what does the word healing mean to you?

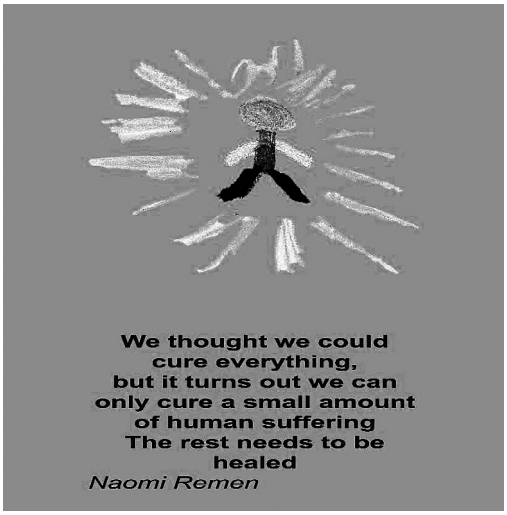

Fig. 4: A panel combining a drawing from a member of the public with a quotation about healing

and respond, than healthcare professionals. That said, many nurses have responded positively to the work, noting for example that "it is wonderful to see something about healing in the hospital" (arguably a strange thing to say, but indicative of the fact that "healing" is a subject largely ignored by medicine today). Doctors rarely took the time to look at the work, perhaps because they have no time, but perhaps because it is too challenging? What we have been most encouraged by is the number of patients and visitors who have used it as some sort of a "healing space" for them to go to whilst in the hospital; several people told us that they kept returning to the space the exhibition was in to help them find peace.

We provided people with the opportunity to comment anonymously on the exhibition by writing on feedback cards. The following quotes taken from these cards, completed by hospital patients or visitors provide us with some evidence for the possible value of this approach (we asked for age and sex but no other identification, age and sex are shown in brackets after each quote).

Some people particularly liked the quotation banners (there were 7 in all):

- "Some quotes will stay with me for a long time" (33 F)
- "Reading the quotes on healing helped me understand my own emotions" (47 M)

Others commented on the artwork:

- "Art is so healing, especially in a hospital" (58 F)
- "Lovely bright art works. The banners are great, a lovely idea" (46 M)
- "I am finding art very healing" (61 F)

Many commented on specific value of the exhibition to them in a time of need:

- "I am a broken man who cannot be fixed. I sit here crying, and hoping for some healing. [...] This exhibition has given me hope. [...] Maybe I will heal one day." (61 M)
- "Your exhibition lifted my spirits today, and it is the little lifts that help me to keep going" (40 F)
- "This exhibition has had a profound effect on me .... it has been a comfort often as I walked through. It is bringing tears to my eyes and touching a level deeper that I can easily share with those I know at present. Thank you." (60 F)
- "Having an elderly relative very ill in hospital, it has given me much to think about. I walk past the exhibition every day when visiting and stop to read every day." (62 F)
- "Wonderful, inspirational. I am finding healing in this hospital." (56 F)
- "I saw it first when I had just received a cancer diagnosis and it gave me hope and confi-

dence to see such a holistic approach being expressed." (47 F)

Outside of the hospital environment we were able to exhibit some of the panels in the Institute for Integrative Health in Baltimore.[5] Feedback from each of these events was very positive. In Rovaniemi we supplemented visual material with sound: there was atmospheric sound in the room, and people were able to listen to stories of healing on headphones. In addition, lighting was used to optimise the atmosphere we were trying to create, that of a healing environment. We do not know what long term impact exhibitions of this sort, and creating healing spaces in hospitals and elsewhere might have, but hope that these will be subjects of our research in the future.

Conclusions

The development of scientific medicine over the last hundred years, combined with its success in dealing with many diseases, has led to a culture of exclusivity in health care provision within "the West" in which the approach of medical science is seen as the only legitimate one for people to pursue and believe in. Other healing practices and forms of Complementary and Alternative medicine (CAM) are ridiculed by the so called "modern" medical profession. However, scientific medicine does not have all the answers. Chronic illness and mental health problems are rising in prevalence, and are often resistant to biomedical treatment. There are other ways of helping people with these problems.

In this review I outline the extraordinary power of "placebo" in the relief of symptoms such as pain and depression. I show why feelings of safety and positive human interactions are key facilitators of a placebo response. The placebo response is a major element of healing, but does not fully explain the healing often achieved by CAM practitioners and healing rituals.

I then discuss context, and in particular the importance of environmental factors. Evidence for the ability of different spaces to facilitate healing is presented. Finally I outline the work of my colleagues and I on the development of artworks that strive to create healing environments in hospitals. The exclusivity of medical science needs to be challenged, and healers and other CAM practitioners should be given the opportunity to work alongside doctors and nurses in our clinics and hospitals.

Acknowledgements

I would like to thank all my collaborators for their help, particularly Professor Sara Warber, Dr. Sarah Goldingay and Dr. Emmylou Rahtz. I would also like to thank the Institute for Integrative Health in Baltimore (TIIH.org) for generous help and financial support.

Notes

1 Trials of this sort are difficult to do for ethical and logistic reasons, and can involve deception, but an approach that has often been used is to randomise people to start treatment immediately, or after a few weeks. Then you can compare the outcomes at the end of the period in which those randomised to a late start were having no treatment.
2 Professor of physiotherapy in Aarhus, Denmark
3 Professor of architecture at the Center for Healthcare Building Research at Chalmers University of Technology in Sweden
4 (TIIH.org). The multidisciplinary core team includes Sarah Goldingay (a humanities scholar), Sara Warber (a doctor who has also trained in Native American Healing) and Emmylou Rhatz (who has degrees in both English literature and psychology) as well as myself.
5 Our funders for this work (TIIH.org), at a meeting of the International Congress on Integrative Medicine and Health in Baltimore (USA), and in the University of Lapland in Rovaniemi, thanks to a collaboration I have with Professor Jaana Erkilla-Hill.

References

Anaker A. *et al.* 2017. Design Quality in the Context of Healthcare Environments: A Scoping Review. *Health Environments Research and Design Journal* 10: 136–140.

Benedetti F. 2013. Placebo and the New Physiology of Doctor-Patient Relationship. *Physiological Reviews* 93: 1207–1246.

Carvalho C. *et al.* 2016. Open-label Placebo Treatment in Chronic Low Back Pain: A Randomized Controlled Trial. *Pain* 157: 2766–2772.

Currivan J. 2017. *The Cosmic Hologram: In-formation at the Centre of Creation*. Rochester: Inner Traditions.

Dieppe P., S. Goldingay & M. Greville-Harris 2016. The Power and Value of Placebo and Nocebo in Painful Osteoarthritis. *Osteoarthritis & Cartilage* 24: 1850–1857.

Dieppe P. & E. Rhatz 2017. Placebos, CAM and Healing: P + X + Y. *Complementary & Alternative Medicine* 4, 2: 1–3.

Ferrucci P. 2006. *The Power of Kindness*. New York: Penguin Random House.

Finniss D. *et al.* 2010. Placebo Effects: Biological, Clinical and Ethical Advances. *Lancet* 375: 686–695.
Greaves D. 2004. *The Healing Tradition*. Abingdon: Radcliffe.
Greville-Harris M. & P. Dieppe 2015. Bad is more Powerful than Good: The Nocebo Response in Medical Consultations. *American Journal of Medicine* 128: 126–129.
Helman C. G. 2001. *Culture Health and Illness*. 4th Edition. London: Arnold.
Irvine K. & S. Warber 2002. Greening Healthcare: Practicing as if the Natural Environment Really Mattered. *Alternative Therapies in Health & Medicine* 8: 76–83.
Jonas W. B. 2019. The Myth of the Placebo Response. *Frontiers in Psychiatry* 10, 577: 1–6.
Kaufman S. R. 1993. *The Healers Tale*. Madison: University of Wisconsin Press.
Kirsch I. 2014. Antidepressants and the Placebo Effect. *Zeitschrift für Psychologie* 222, 3: 128–134.
Kirsch I. 2018. The Clinical Significance of Drug-Placebo Differences. *Epidemiology & Psychiatric Sciences* 27: 240–241.
Kaptchuk T. 2002. The Placebo Effect in Alternative Medicine: Can the Performance of a Healing Ritual have Clinical Significance? *Annals of Internal Medicine* 136: 817–825.
Kaptchuk T. & M. Croucher 1986. *The Healing Arts: A Journey through the Faces of Medicine*. London: BBC Publications.
Kleinman A. 1980. Patients and Healers in the Context of Culture. London: University of California Press.
Lankston L. *et al.* 2010. Visual Art in Hospitals: Case Studies and Review of the Evidence. *Journal of the Royal Society of Medicine* 103: 490–499.
Le Fanu J. 1999. *The Rise and Fall of Modern Medicine*. London: Little Brown.
Levin J. 2017. What is Healing? Reflections on Diagnostic Criteria, Nosology and Etiology. *Explore* 13: 244–256.
Marchant J. 2016. *Cure: A Journey into the Science of Mind over Body*. London: Canongate.
Meetoo D. 2008. Chronic Disease: The Silent Global Epidemic. *British Journal of Nursing* 17: 1320–1325.
Moerman D. 2011. *Meaning, Medicine and the Placebo Effect*. Cambridge: Cambridge University Press.
Mosely J. *et al.* 2002. A Controlled Trial of Arthroscopic Surgery for Osteoarthritis of the Knee. *New England Journal of Medicine* 347: 81–88.
Porges S. W. 2009. The Polyvagal Theory: New Insights into Adaptive Reactions of the Autonomic Nervous System. *Cleveland Clinic Journal of Medicine* 76: 86–90.
Posadzki P. *et al.* 2013. Prevalence of Use of Complementary and Alternative Medicine (CAM) by Patients/Consumers in the UK: Systematic Review of Surveys. *Clinical Medicine* 13: 126–131.
Rahtz E. *et al.* 2017. Transformational Changes in Health Status: A Qualitative Exploration of Healing Moments. *Explore* 13: 298-305.
Rahtz E. *et al.* 2019a. Understanding Public Perceptions of Healing: An Arts-based Qualitative Study. *Complementary Therapies in Medicine* 45: 25–32
––––– *et al.* 2019b. Clients of UK Healers: A Mixed methods Survey of their Demography, Health Problems and Experiences of Healing. *Complementary Therapies in Clinical Practice* 35: 72–77.
Rehn J. & K. Schuster 2017. Clinic Design as Placebo: Using Design to Promote Healing and Support Treatments. *Behavioural Sciences* 7, 4: 77–84.
Rogers C. R. 2003. *Client Centred Therapy*. London: Little Brown Publishing Group.
Sandal L. F. *et al.* 2019. Room for Improvement: A Randomised Controlled Trial with Nested Qualitative Interviews on Space, Place and Treatment Delivery. *British Journal of Sports Medicine* 53: 359–367.
Scott J. G. 2017. Healing Journey: A Qualitative Analysis of the Healing Experiences of Americans suffering from Trauma and Illness. *BMJ Open* 7, 8: e016771.
Shaw Q. 2009. On Aphorisms. *British Journal of General Practice* 59: 954–955.
Sheldrake R. 2012. *The Science Delusion*. London: Hodder & Staughton.
Sontag S. 2003. Regarding the Pain of Others. London: Penguin Books.
Ulrich R. S. 1991. Effects of Interior Design on Wellness: Theory and Recent Scientific Research. *International Journal of Healthcare Management* 3: 97–109.
Zhang W. *et al.* 2008. The Placebo Effect and its Determinants in Osteoarthritis: Meta-Analysis of Randomised Controlled Trials. *Annals of the Rheumatic Diseases* 67, 12:1716–1723.

PAUL DIEPPE qualified as a doctor in London in 1970. He went to Bristol University in 1978, where he first became Professor of Rheumatology (1986) and then Dean of the Faculty of Medicine (1995). He was then served as Director of the Medical Research Council's Health Services Research Collaboration (1998-2008) before moving to Exeter in 2010 to become Professor of Health and Wellbeing and start his research on healing.

76 Hill View, Henleaze,
Bristol, BS94PU, UK
e-mail: p.dieppe@exeter.ac.uk