THE ROLE OF LAUGHTER IN TRADITIONAL MEDICINE AND ITS RELEVANCE TO THE CLINICAL SETTING: HEALING WITH HA!

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Humor, it seems, is a quality that is closely interwoven through the fabric of traditional culture. Situations that might not seem funny to us, as outside observers, provoke laughter, smiles, and joking among certain cultures. Once, during the first few days of a trip to the Amazon Valley, I (MB) had made, a member of the community we were living with was trying to fix the outboard motor that powered one of the village canoes. The small engine was mounted on a sawhorse, and when the man pried off the cover, he unexpectedly gashed his finger against a sharp corner. The cut was deep, and blood spewed out of the wound. He began to laugh at his mistake, as did the people around him. “Look how our friend fixes engines—by breaking himself!” shouted one onlooker, who began to laugh so uncontrollably that he fell on the ground and rolled around in the mud. I was somewhat confused about this reaction, as the injured man offered no outward expression of pain from what was obviously a deep and painful wound—instead he laughed at himself. I did not really understand the role of humor and playfulness as an integral part of this culture at the time, and it was not until many years later, and numerous visits to other cultures, that I began to understand the significance of the event that I had witnessed.

Humor is an important part of the traditional lifestyle in many areas, allowing people to survive in physically challenging environments and situations, as well as used as a device for passing along lessons and traditions through storytelling.

Humor is also a very important modality employed by some, but not all, traditional healers. Recently we spoke to Dr Rosita Arvigo, ND, a Doctor of Naprapathy and long-time research colleague who practices in Belize. Dr Arvigo was the apprentice to a great Maya healer, Don Elijio Panti. The story of Dr Arvigo’s relationship with Don Elijio Panti is told in her book, Sastun: My Apprenticeship with a Maya Healer.

“I studied Maya medicine with Don Elijio Panti in Belize for almost 12 years, until he died at age 103. He was very sharp, very present and very funny. He was actually the funniest man I ever knew...Don Elijio always referred to himself as the doctor clown. And he said that if he had to make a choice between being a doctor and a clown, he would rather be a clown. He thought he was a better clown than a doctor. And he felt that if you were a good clown, you were a good doctor. But if you were a doctor, and not a clown, then you weren’t such a good doctor. So he thought that laughter was very, very important in medicine. I don’t know if he would say it was the most important factor, but he often stated, ‘most people think too much. Get them to laugh, and half their trouble and sickness will go away and the blessed plants will do the rest!’ So we could say that he thought that laughter was halfway home to healing.”

“His system in the clinic would be to greet the patient. Sometimes he would even greet them with teasing. Often a patient would come in and he would be at the [plant] chopping block, chopping away at his medicine, and someone would come in and not know who he was and say, ‘We’re here to look for Don Elijio Panti, the healer.’ And he would say to them, ‘The old scoundrel. They chased him out of town a long time ago...He’s gone! You missed him.’ And people would get really dejected. They’d come from far away and they would start to turn around and leave. And he’d say, ‘No, no, no, no. I only jest. That is my way. I love to jest and make jokes.’ And he would invite them in. He would find out where they were from and what the ailment was. And he would distribute the herbs and put them in little plastic bags. And when he had all that done, then he would start to tell stories...He would get up from his little bench and then he would start dancing and doing little movements to accentuate all the stories that he told. And then he would get people laughing so hard that sometimes I would hear them say, ‘Stop, stop. I’m too sick. I can’t laugh"
Lessons From the Field

for contemporary physicians might be, lighter, Dr. Arvigo replied, humor, to make the patient’s spirit
plants that he gathered specifically for heal. To date, there appear to be a paucity of controlled studies doc-
world pushed scientists to investigate and define how laughter can

And to conclude, she offered that one of Don Elijio’s lessons for contemporary physicians might be,

And Western thinking began to crystallize around this subject in 1979 when Norman Cousins, a noted magazine editor, published “Anatomy of an Illness.” In this book he describes how he managed a painful rheumatologic disease, ankylosing spondylitis, by watching funny videos. His novel approach of using humor—known to many traditional healers and grandmothers around the world—was to make people laugh….He was an actor on stage and the clinic was his stage.”

In response to a question as to whether or not Don Elijio had any plants that he gathered specifically for humor, to make the patient’s spirit lighter, Dr. Arvigo replied,

“…zorillo [Chioscoca alba—a very strong plant that can only be used with great caution], skunk root, was a plant that could rid people of dark, heavy emotions. And of course, therefore, you would be lighter. So I would guess that it would be zorillo and the herbal baths—baths were really the most important for that.”

In an earlier study, published in 1997, 2 groups of patients who had experienced myocardial infarctions were followed during cardiac rehabilitation. The experimental group was allowed to view self-selected humor for 30 minutes for each day as an adjunct to standard therapy. The findings showed that the group viewing the tapes had less arrhythmias, lower plasma and urinary catecholamines, required less beta-blockers and nitroglycerine, and had less recurrence of myocardial infarctions over the controls, thus indicating that recovery could be positively impacted.5

In conclusion, there is certainly an area deserving of further study. In contrast there are a wealth of studies that demonstrate the detriment of stress on health. However, there are a few studies looking at a variety of medical conditions that seem improved with humor or are altered by perceiving humor in life.

One study looked at the relationship of humor and the antisocial Type A personality, evaluating whether a more mirthful outlook was significant.3 Compared to controls, 40% of those known to have coronary heart disease (either by having a heart attack or having undergone heart bypass surgery) were found to use humor less often during adversity and they also laughed less. In the study, 300 patients were asked for their reactions to hypothetical situations such as showing up to a party and finding that they were wearing an identical outfit to someone else or having a drink spilled on them by a waitress. The situations were designed to measure reactions to surprising circumstances. In addition, measurements evaluating the daily use of humor were included. Patients with and without a history of coronary artery disease were queried. Another questionnaire measured anger and hostility. In the end, there was a significant inverse association observed between people frequently laughing and using humor to cope with difficult situations and antisocial Type A personality traits—people who laughed more were healthier. These results were noted after adjustments for other covariates including hypercholesterolemia, hypertension, and diabetes mellitus (P< .03. The authors acknowledged that, although they could not explain exactly how laughter could protect the heart, it seemed to be one more added therapeutic intervention that could improve cardiovascular conditioning.6

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Studies in psychoneuroimmunology have shown that humor, also known as mirthful laughter, has powerful physiological effects. Lee Berk, PhD, a pioneer in laughter studies, published 1 of the first papers documenting its hormonal effects. Ten healthy subjects were randomized to view a 60 minute long humor video. The
results showed elevations in their growth hormone, while their cortisol, dopamine, and epinephrine levels decreased as compared to the controls. The implication of the findings was that humor could reverse some of the classical physiological changes occurring during stress (elevations of cortisol, dopamine and epinephrine).6

Recently, another study published by Berk and associates7 looked at a variety of immunological changes in 52 male subjects who viewed a 60 minute humor video. Measurements of natural killer (NK) cell activity, immunoglobulins (IgG, IgA and IgM), complement C3, leukocytes, interferon-γ (IFN-γ) and cortisol were taken. In this study, NK cell activity—cells that assist in immune surveillance—were elevated and remained elevated for at least 12 hours after viewing the one hour video. This is significant in that other studies looking at the effects of elevated psychological stress and/or depression have been correlated with depressed NK cell activity.8 The inference is that immunity is negatively impacted with the suppression of these particular cells. Furthermore, the authors hypothesized that with the duration of elevation of NK cells being 12 hours, daily exposure to humorous videos could prolong this elevation of the NK cell population—adding even more powerful immune protection. Immunoglobulin levels—antibodies that assist in clearing toxins and bacteria in the serum and body fluids (saliva, tears, colostrum)—were noted to be elevated in the experimental group, suggesting as well that humor enhances immunity. The authors note that this response may have been derived from down regulated cortisol levels, which were also recorded in the experimental group. Finally, cell mediated responses also seemed positively affected by exposure to humor; IFN-γ, a cytokine that modulates cell-mediated immunity, was found to be elevated in those exposed to humor. IFN-γ has been implicated in activating cytotoxic T lymphocytes and NK-mediated cytolytic functions thought to be effective as antitumor defense mechanisms.

A positive correlation of elevated NK cell activity and humor was also recently noted by Bennet and associates.9 Thirty-three subjects were randomized to view a humorous or distracting video. As predicted, stress was reduced in the humor group and subjects who scored greater than 25 on the humor response scale had increased immune function. Furthermore, in observing the participants, the investigators noted that “the amount of mirthful laughter was the major contributing factor for the increased immune function seen in these subjects, rather than decreased stress levels.”

For those in pain, humor seems an effective distraction. In a questionnaire survey of 53 patients with chronic cancer evaluating the effectiveness of self initiated non-pharmacologic interventions, laughing was rated as the most effective “therapy.”10,11 Interestingly, in a study by Zillman and colleagues comparing pain thresholds in those exposed to either comedy or tragedy, the genres raised pain tolerance equally.12

One most innovative program has been the establishment of the Clown Care Unit, initiated in 1989 at Babies and Children’s Hospital at Columbia-Presbyterian Medical Center (CPMC) in New York. Three studies were funded by The Richard and Hinda Rosenthal Center for Complementary and Alternative Medicine at The Columbia College of Physicians and Surgeons to learn about the effects of clowning around with hospitalized children. Dr Fredi Kronenberg, Professor of Clinical Physiology and Director of the Rosenthal Center reported that,

“In collaboration with the Department of Pediatrics, the Rosenthal Center awarded 3 pilot research grants to CPMC faculty to investigate the value of clown therapy for pediatric cancer and heart patients. The projects were, ‘the effect of clowns on decreasing physiological and psychological indicators of distress in children and adolescents undergoing cardiac catheterization,’ ‘the impact of clowns on distress during invasive procedures in the pediatric oncology day clinic,’ and ‘clown therapy and the pediatric surgical patient.’ Since the Clown Care Unit (CCU) was established researchers at the hospital have collaborated with these specially trained clowns to study the medical significance of ‘clown therapy.’ The researchers, from Behavioral Medicine, Psychiatry and Anesthesiology together with pediatric oncologists, cardiologists and surgeons hypothesized that ‘the joyful distraction provided by the clowns would increase patient cooperation, decrease parental anxiety and decrease the need for sedation during anxious moments in the hospital.’ Results showed that during cardiac catheterization there were significant decreases in observed child distress, in child self-reported distress and parent-rated distress with the clowns present. Doctors found the procedure significantly easier to perform with the clowns present. According to the investigators, ‘clown therapy proved to be non-toxic, did not cause respiratory depression, sedation or gastric upset.’ Equally important, positive changes in the behavior and mood of hospital caregivers were observed when the clowns were around. Instead of restraining children, the young patients are paraded into the room escorted by clowns with the appropriate musical accompaniment.”

“The research efforts were successful in that CCU clowns were introduced into three medical settings in which they had not been previously, and they have remained there even after completion of the studies. Not only did they help us demonstrate the feasibility of introducing clowns into settings where painful, invasive procedures are performed, they also showed how their very presence transforms the expectations of caregivers and patients alike.”13

The relationship between humor and health is a complex one. Groucho Marx once noted that “A clown is like an aspirin, only he works twice as fast.” Patch Adams, the founder of the Gesundheit community, where laughter therapy is a daily medical routine, would no doubt agree. Both men, to do their work, require a community—the former as an audience and the latter to magnify the power of the healing response. After all, half of the fun in laughter, as well as healing, is sharing it.

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