

Winter 2016

Subtle Energies

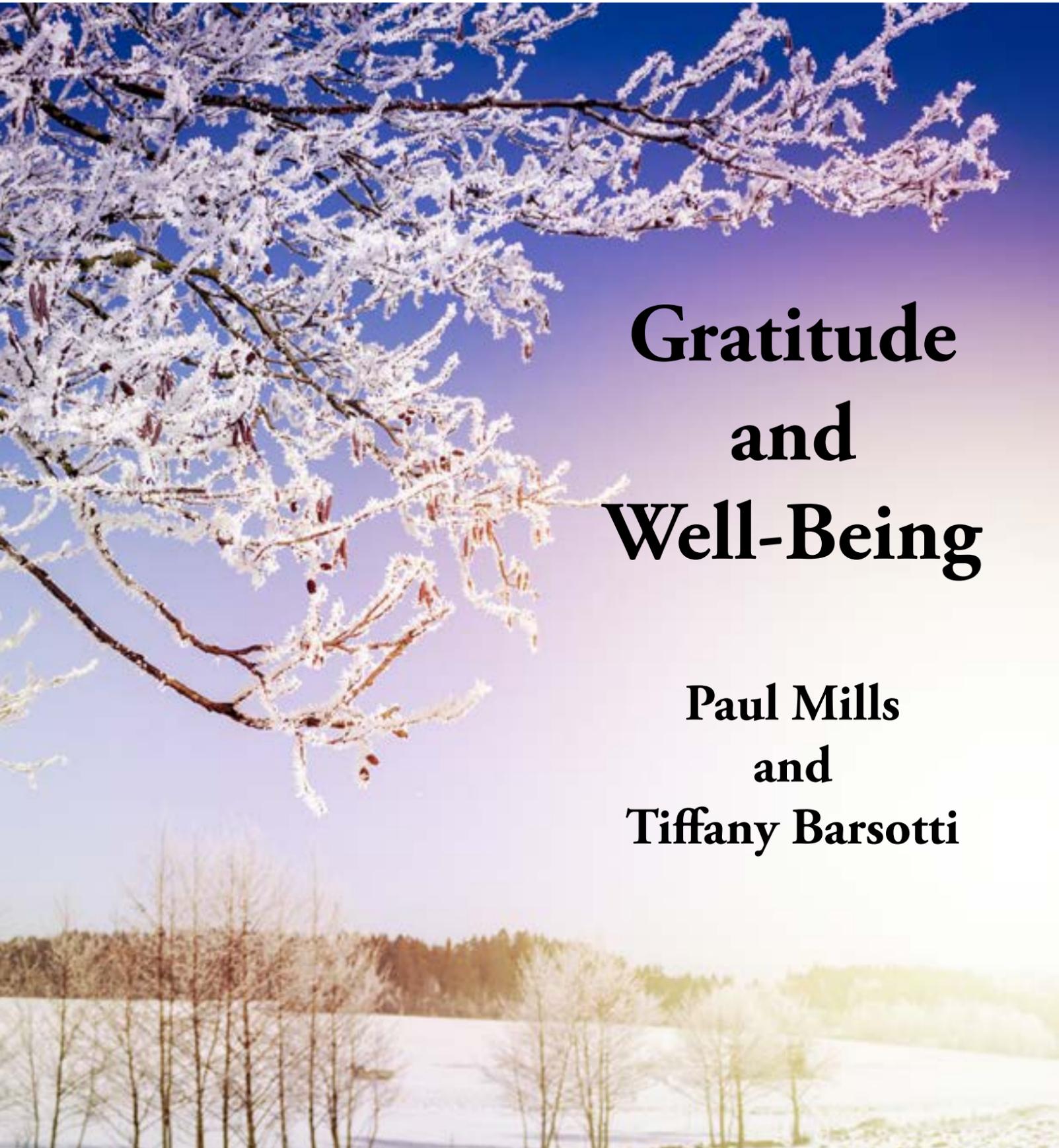
Magazine

Bridging Science & Spirit



Recognition of Bob Nunley . Heidi Rose Robbins . Lesley Carmack
Christine Bair . Chiara Marrapodi . Donnalee Ruth Forbes
Paul Mills and Tiffany Barsotti

Volume 27, Issue 4



Gratitude and Well-Being

Paul Mills
and
Tiffany Barsotti

The root of joy is gratefulness... It is not joy that makes us grateful; it is gratitude that makes us joyful.

Brother David Steindl-Rast

Over the past decade there has been increasing interest in medicine to examine the supportive effects of positive psychological traits on our health and wellbeing. This has been a welcome contrast to the many previous decades where the focus had been almost solely on how so called negative traits such as stress, depression and anxiety adversely affect our wellbeing.

An example of this can be seen in the field of behavioral cardiology, a field of medicine that got its start in the late 1950s with the work of Friedman and Rosenman describing the Type A behavior pattern and its association with poorer outcomes in individuals with cardiovascular disease (Friedman & Rosenman, 1959). Type A is characterized by hostility, time urgency, and competitiveness. Based on that initial trajectory of Type A observations, the ensuing five-plus decades of behavioral cardiac research often focused on these components, as well as on factors of anger and stress. Thousands of such studies showed that such negative traits are adversely associated with morbidity and mortality in cardiac patients (Chida & Steptoe, 2009; Rutledge, Reis, Linke, Greenberg, & Mills, 2006).

More recently in behavioral cardiology, as well as in other fields, the tide has shifted to looking at more positive psychological attributes such as compassion, empathy, and gratitude. In contrast to the adverse associations of negative psychological traits with wellbeing and clinical outcomes, studies of positive psychological attributes indicate beneficial effects on quality of life, as well as on physical health. For gratitude in particular, there is a growing body of research showing such far-reaching beneficial effects.

In order to demonstrate the growth of gratitude research, we conducted a search of the medical literature (<http://www.ncbi.nlm.nih.gov/pubmed/>) from 1960 to the present using the search word "gratitude". Figure 1 clearly demonstrates

the significant increase in the number of studies on the topic of gratitude, with the number of papers appearing between 2011 and the present being greater than all the 60 prior years' research combined. Much of the growth of scientific interest in gratitude can be traced to the pioneering work on gratitude by psychologists Robert Emmons and Michael McCullough (McCullough, Emmons, & Tsang, 2002).

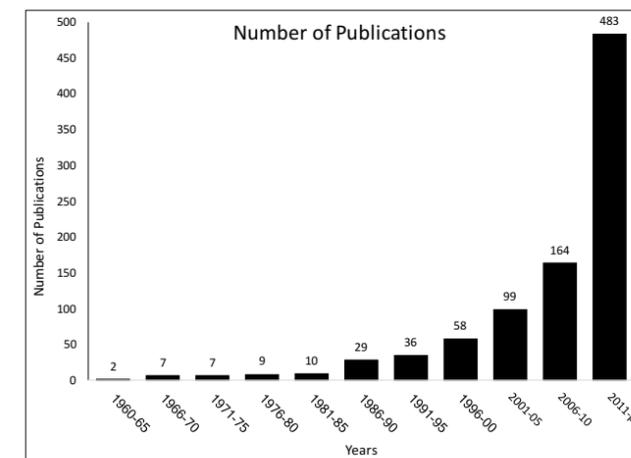


Figure 1. Number of publications appearing in PubMed (<http://www.ncbi.nlm.nih.gov>) by 5-year increments from 1960 to the present using the search word "gratitude" (as of November 15, 2016).

In general, a review of these large number of studies shows that the frequency with which one experiences the feeling of gratitude, as well as the depth of emotion when experiencing it, is linked to improvements in different indicators of wellbeing, as well as associated reductions in stress, anxiety and depression. For individuals who are ill, feelings of gratitude and awe have been found to facilitate perceptions and cognitions that go beyond the focus of their illness and include positive aspects of one's personal and interpersonal reality in the face of disease. In line with this, some studies have noted that cultivating gratitude doesn't necessarily reduce seeing the negative features of life, but rather often offers or encourages more readily seeing the positive in life (Eaton, Bradley, & Morrissey, 2014; Wood, Maltby, Stewart, Linley, & Joseph, 2008). It is worth noting that while gratitude is considered a positive psychological factor, it is not necessarily

good for all people under all circumstances; for example, displaced gratitude under conditions of exploitation. We can ask ourselves “exactly what is gratitude”?

Gratitude provides us with a more intimate connection with ourselves and the world around us.

While there are numerous definitions of gratitude, at its foundation we can say that gratitude is a healing, life-affirming, and uplifting human experience that shifts us from focusing on the negative to appreciating what is positive in our lives. Not surprisingly, there are vast individual differences in dispositional gratitude, which entails how frequently and intensely people experience gratitude in everyday life. Gratitude provides us with a more intimate connection to ourselves and the world around us. Gratitude, along with love, compassion, empathy, joy, forgiveness, and self-knowledge, is a vital attribute of our wellbeing. In the feeling of gratitude, the spiritual is experienced. According to Alex Wood, gratitude is part of a wider life orientation towards noticing and appreciating the positive aspects of life (Wood, Froh, & Geraghty, 2010).

As part of our own scientific investigations in this area, over the past few years at the Center of Excellence for Research and Training in Integrative Health at the University of California, San Diego, we have been examining the role of gratitude in individuals with different types of cardiovascular disease, including asymptomatic heart failure. This is a condition where the heart has undergone some type of structural damage but the individual has yet to develop any overt symptoms of heart failure itself, including dyspnea (shortness of breath upon exertion) and excessive fatigue. In our research, we find that those patients with more dispositional or trait gratitude sleep better, are less depressed, have less fatigue, have more self-confidence to take care of themselves, and have less systemic inflammation

(Mills, Redwine, et al., 2015). All of these factors are highly relevant to supporting greater wellbeing.

In these same studies, we took the opportunity to examine the role that gratitude might have in the known beneficial effects of spirituality on wellbeing (Mills, Wilson, et al., 2015). We conducted what is called a mediation analysis, a statistical model used to explain underlying processes by which one variable exerts its effect on another (in this case how spirituality might lead to enhanced wellbeing) by considering the effect of a third variable (in this case gratitude). We found that gratitude fully or partially accounted for (mediated) the beneficial effects of spiritual wellbeing on sleep quality, mood, confidence in self-care, and fatigue (Mills, Redwine, et al., 2015). That is, the observed relationships between spiritual wellbeing and better mood and sleep quality in our patients were in fact due to the specific contributions of gratitude as a fundamental component of spiritual wellbeing.

Based on the promising findings of those studies, we then conducted another study, a prospective intervention study. We examined whether patients with heart failure who kept a gratitude journal for two months would improve their mental and physical wellbeing (Redwine et al., 2016). This was a randomized controlled trial using journaling as a way to cultivate gratitude, with the aim of increasing its presence in the patients’ lives and thus enhancing its potentially beneficial effects on their wellbeing. We gave patients journals and instructed them to write daily entries on two or three things that they were grateful for. We found that those patients who were randomized to gratitude journaling plus their usual care, versus patients who were randomized to usual care alone, showed reduced circulating levels of inflammatory biomarkers (Figure 2) as well as increased heart rate variability (HRV) (Figure 3) (Redwine et al., 2016). HRV refers to the variation in time interval between heartbeats, being influenced by components of the autonomic nervous system, and is considered an important indicator of health. Heart failure is typically characterized by a loss of HRV as the disease progresses.

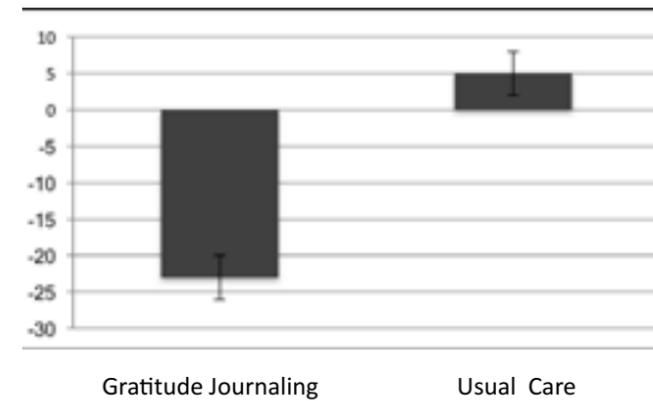


Figure 2. Percent change in a panel of inflammatory biomarkers (CRP, IL-6, TNF-alpha, sTNFr1) in response to gratitude journaling versus usual care in cardiac patients (Redwine et al., 2016)



Figure 3. Change in the root mean square of successive differences (RMSSD), a measure of heart rate variability (HRV), in response to gratitude journaling versus no gratitude journaling in cardiac patients (Redwine et al., 2016)

We are currently in the process of conducting qualitative assessments of the patients’ journals in order to explore potential associations of journaling content and the observed outcomes. Thus far, an examination of the journals reveals that patients most commonly expressed their gratitude about family, friends, and the weather.

We are also extending this more traditional line of research by examining potential human energy changes in response to gratitude practice by using the BioWell device, which captures electro-photonic emissions to assess the human energy of different organs and systems. We find that even a

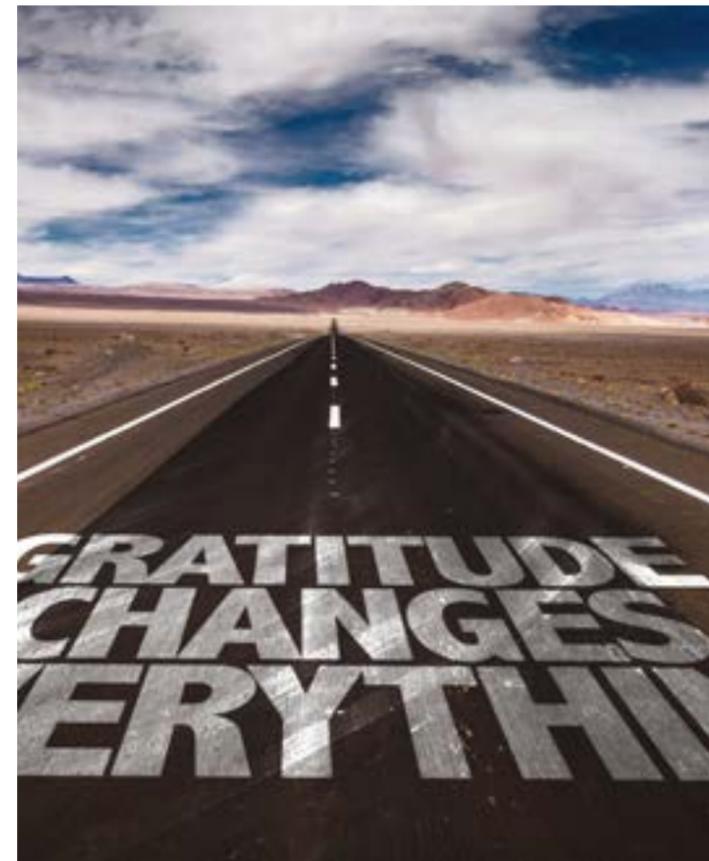
brief 10-minute bout of journaling on the topic of gratitude improves the energy profile of the heart and the cardiovascular system at large.

As far as how gratitude acts to support our health and wellbeing, findings suggest that gratitude, due to its orientation towards positive appraisal, is likely incompatible with the so called negative triad of beliefs associated with depression (Evans et al., 2005). Indeed, gratitude is related to both hedonic wellbeing (i.e., subjective wellbeing as characterized by higher positive affect, lower negative affect, and more life satisfaction) and eudaimonic wellbeing (i.e., psychological wellbeing as characterized by aspects such as environmental mastery, personal autonomy, purpose in life, positive relations with others, and personal growth (Evans et al., 2005; Ryff & Keyes, 1995). In turn, both hedonic and eudaimonic wellbeing have been linked to reduced likelihood of stress and depression (e.g., (Pressman & Cohen, 2005; Wood et al., 2008), as well as alterations in immune function associated with improved health (Ryff, Singer, & Dienberg Love, 2004). Thus one potential pathway by which gratitude promotes wellbeing, as well as better cardiovascular health in cardiac disease, may be through the enhancement of both subjective (hedonic) and psychological (eudaimonic) wellbeing.

There are many ways to cultivate gratitude. The simple act of keeping a gratitude journal, which we used in our research, can increase gratitude. Engaging in intentional gratitude practices can boost the frequency, depth, and range of circumstances for which we are grateful. Such practices that actively cultivate a more conscious experience of gratitude take us beyond reciprocal gratitude, and greatly enrich our lives and our sense of connection to the life around us. Prayer frequency has also been found to increase gratitude (Lambert, Graham, & Fincham, 2009). In this way gratitude may serve as a pathway through which spirituality exerts its known positive effects on physical and mental health. Anthropologist and author of the book *Living in Gratitude: A Journey That Will Change Your Life*, Angeles Arrien, wrote

‘Through conscious and sustained practice over a period of time, we can discover how gratitude and all its related qualities—thankfulness, appreciation, compassion, generosity, grace, and so many other positive states—can become integrated and embodied in our lives’.

Asking each day “What am I grateful for?” can bring awareness and appreciation of the positive features within and around us, helping us to embrace life as it is with all of its imperfections. When gratitude is present in our awareness, everything changes and we can find ourselves transformed. By cultivating gratitude, we cultivate wellbeing.



References

Chida, Y., & Steptoe, A. (2009). The association of anger and hostility with future coronary heart disease: a meta-analytic review of prospective evidence. *J Am Coll Cardiol*, 53(11), 936-946. doi:10.1016/j.jacc.2008.11.044

Eaton, R. J., Bradley, G., & Morrissey, S. (2014). Positive predispositions, quality of life and chronic illness. *Psychol Health Med*, 19(4), 473-489. doi:10.1080/13548506.2013.824593

Evans, J., Heron, J., Lewis, G., Araya, R., Wolke, D., & team, A. s. (2005). Negative self-schemas and the onset of depression in women: longitudinal study. *Br J Psychiatry*, 186, 302-307. doi:10.1192/bjp.186.4.302

Friedman, M., & Rosenman, R. H. (1959). Association of specific overt behavior pattern with blood and cardiovascular findings; blood cholesterol level, blood clotting time, incidence of arcus senilis, and clinical coronary artery disease. *J Am Med Assoc*, 169(12), 1286-1296.

Lambert, N. M., Graham, S. M., & Fincham, F. D. (2009). A prototype analysis of gratitude: varieties of gratitude experiences. *Pers Soc Psychol Bull*, 35(9), 1193-1207. doi:10.1177/0146167209338071

McCullough, M. E., Emmons, R. A., & Tsang, J. A. (2002). The grateful disposition: a conceptual and empirical topography. *J Pers Soc Psychol*, 82(1), 112-127.

Mills, P. J., Redwine, L., Wilson, K., Pung, M. A., Chinh, K., Greenberg, B. H., . . . Chopra, D. (2015). The Role of Gratitude in Spiritual Well-being in Asymptomatic Heart Failure Patients. *Spiritual Clin Pract (Wash D C)*, 2(1), 5-17. doi:10.1037/scp0000050

Mills, P. J., Wilson, K., Iqbal, N., Iqbal, F., Alvarez, M., Pung, M. A., . . . Redwine, L. (2015). Depressive symptoms and spiritual wellbeing in asymptomatic heart failure patients. *J Behav Med*, 38(3), 407-415. doi:10.1007/

s10865-014-9615-0

Pressman, S. D., & Cohen, S. (2005). Does positive affect influence health? *Psychol Bull*, 131(6), 925-971. doi:10.1037/0033-2909.131.6.925

Redwine, L. S., Henry, B. L., Pung, M. A., Wilson, K., Chinh, K., Knight, B., . . . Mills, P. J. (2016). Pilot Randomized Study of a Gratitude Journaling Intervention on Heart Rate Variability and Inflammatory Biomarkers in Patients With Stage B Heart Failure. *Psychosom Med*, 78(6), 667-676. doi:10.1097/PSY.0000000000000316

Rutledge, T., Reis, V. A., Linke, S. E., Greenberg, B. H., & Mills, P. J. (2006). Depression in heart failure a meta-analytic review of prevalence, intervention effects, and associations with clinical outcomes. *J Am Coll Cardiol*, 48(8), 1527-1537. doi:10.1016/j.jacc.2006.06.055

Ryff, C. D., & Keyes, C. L. (1995). The structure of psychological well-being revisited. *J Pers Soc Psychol*, 69(4), 719-727.

Ryff, C. D., Singer, B. H., & Dienberg Love, G. (2004). Positive health: connecting well-being with biology. *Philos Trans R Soc Lond B Biol Sci*, 359(1449), 1383-1394. doi:10.1098/rstb.2004.1521

Wood, A. M., Froh, J. J., & Geraghty, A. W. (2010). Gratitude and well-being: a review and theoretical integration. *Clin Psychol Rev*, 30(7), 890-905. doi:10.1016/j.cpr.2010.03.005

Wood, A. M., Maltby, J., Stewart, N., Linley, P. A., & Joseph, S. (2008). A social-cognitive model of trait and state levels of gratitude. *Emotion*, 8(2), 281-290. doi:10.1037/1528-3542.8.2.281

<http://behavioralmedicine.ucsd.edu/paul-mills-phd.html>

<http://fmph.ucsd.edu/integrative-health-coe/index.html>



Paul J. Mills is a Professor of Family Medicine and Public Health and Director of the Center of Excellence for Research and Training in Integrative Health at the University of California, San Diego. He has expertise in psychoneuroimmune processes in wellness and disease with a current focus on integrative medicine, publishing over 325 manuscripts and book chapters on these topics. He was a keynote presenter at the 2016 ISSSEEM conference.



Rev. Tiffany Barsotti, M.Th., C.Ht., is a Spiritual and Medical Intuitive Counselor and researcher at HEAL and THRIVE www.healandthrive.com in Encinitas, California, working as an integrative practitioner alongside physicians and other allied health professionals. A focus of her clinical work is subtle energy, biofield therapies, and energy psychology. Tiffany received her Masters of Theology in Energy Medicine with special emphasis in Medical and Spiritual Counseling from Holos University Graduate Seminary.