

Transformative Practices for Integrating Mind–Body–Spirit

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ABSTRACT

This paper explores the clinical use of transformative practices that arose from the varied religious traditions of the world. Examples include prayer, meditation, mantra, affirmation, *tai chi*, and yoga. The purpose of these practices was to lead the practitioner to long term spiritual transformation toward an enhanced awareness of spirit, and a corresponding diminishment of identification with the mental and physical aspects of life. Unfortunately, the vagueness of the definition of transformation demonstrates that it is a broad and diffuse multidimensional concept difficult to quantify and resistant to rigorous research. However, these spiritual practices, offered as interventions separate from their spiritual tradition, have begun to be evaluated to document their effect on psychological and physical well-being. Currently, there are a number of well-designed studies that attest to the health-enhancing and suffering-reducing benefits derived from religiously transformative practices. There also is research, although sporadic and mostly on forgiveness, slowly emerging to show that prosocial positive emotion skills can be taught, and when measured, demonstrate benefit. Randomized trials of transformative practices are needed to help all levels of the health care system focus their attention on the manifestations and effect of the care delivered.

INTRODUCTION

Transformation is defined as (1) to change in form or appearance or (2) to change in condition, nature, or character.¹ Transformative practices that arose out of the religious traditions of the world are specific tactics designed to bring about transformation through spiritual insight. Their goal is to lead a practitioner to an enhanced awareness of spirit and a corresponding diminishment of identification with the mental and physical aspects of life. Intentional transformative practices aim to change the mind, body, and spirit of an individual or group by altering their perception of the relationship among these three elements so that spirit becomes predominant.

Transformative practices exist with the portal of entry either the body, mind, or spirit. An example of transformative practice with primary attention of working through the body can be found in yoga postures. An example of a transformative practice with primary attention on the mind is meditation, and an example of transformative practice focused on spirit is prayer. To create transformation, a change agent

does not have to be wanted or positive. An example is the often life-changing effects of illness or surgery.

In terms of creating optimal health, transformative practices are tools that lead to improvement in physical, mental, or spiritual function. However, transformative practices can also be tools that change an aspect of the patient or the environment but have no effect on health. They also can be practices that make the health of body, mind, or spirit worse. Creating change of some kind is all that has to occur for something to be a transformative practice.

Unfortunately, the vagueness of the definition of transformation emphasizes that it is a broad and diffuse multidimensional concept difficult to quantify and resistant to easy delineation. The definition also suggests that transformation can be observed in almost any change process including either a superficial one or that of a deeper nature. To bring some order out of chaos, this paper grounds the idea of transformation through the writing of leading thinkers in transpersonal psychology.

Transpersonal psychology blends psychologic knowledge with spiritual experience to help crystallize how the sacred

is imbedded in all experience.² The theorists in this field utilize transformation as the integral role in cataloging human experience. They have created models that make the sequential developmental transformations of life the cornerstone of the human experience. From extensively exploring the developmental transformation process and the things that facilitate and hinder this throughout the life span, it has been possible to create transpersonal models to map human development from before the emergence of the ego to transcendence of the ego in spiritual unfolding. These models are based on the idea that human beings go through recognizable stages of development that require transformation to move from one stage to another.³

The transpersonal models take as implicit that individual human development mirrors human species development that mirrors an unfolding evolutionary spiritual development that is the fulfillment of life. They suggest that evolution is the process of life, and the end of evolution is complete spiritual awareness. Spiritual evolution is also the goal of the world's intentional transformative practices and of the religions that spawned them. Transpersonal theorists argue that spiritual development is the goal of transformation, while acknowledging the necessary unfolding of each separate stage of development along the way.

The goal of this paper is to look at transformative practices in the creation of health as well as to examine the use of research to document the effectiveness of transformative practices. After outlining a transpersonal model of development, I briefly review some health research on practices such as yoga, meditation, and prayer specifically designed to create positive transformation. This is followed by an exploration into the limited research into cultivating the positive virtues such as forgiveness, hope, gratitude and compassion. After discussing the research on forgiveness in depth, integral practice, or the simultaneous use of mind, body, and spirit interventions, will be explored as a vehicle for transformation.

TRANSPERSONAL THEORY OF DEVELOPMENT

To create their inclusive models of development, transpersonal theorists integrate religious and spiritual traditions with psychologic theorizing. They do this to create a model of human development that encompasses all aspects of development. Religious models are usually limited at elucidating the psychologic domains, and are generally concerned with spiritual rather than the personal modes of development. The psychologic theorists generally ignore the spiritual dimension of human experience to focus on individual personality development. The transpersonal theorists suggest that physical, psychologic, and soul development are way stations in the spiritual journey of evolutionary unfolding.

Smith posits the notion of a "Great Chain of Being,"⁴ a webbing that unifies the teachings of the world's religions. He says that life is a rich tapestry of interwoven levels that reaches from matter to body to mind to soul to spirit. These levels exist in a chain that supports and makes coherent the different aspects of consciousness. That is, human awareness attends first to matter, then shifts to the individual body, and then to the mind of the individual. From there it evolves to contact spirit as individual soul, and finally development finishes as the individual's consciousness merges into the infinity of spiritual awareness. For many religions or theorists, the five stage chain is simplified as enfolding from body and mind to spirit.⁵

This Great Chain consists of higher levels of development such as spirit that enfold each of the less developed levels such as mind and matter. While the higher levels enfold the less developed levels, they do not obliterate them and therefore each level exists everywhere at every time. That is, each person is always composed of spirit, body, and mind. However, every human does not have equally developed access to each developmental or experiential level. For each person, and existence as a whole, each level possesses the important features of the lower levels, but adds elements not found in the lower levels.⁶ The Great Chain is a way to describe the myriad of levels upon levels of transformation available as human consciousness grows. The Great Chain suggests there are multiple levels of awareness, each existing simultaneously, in essence saying that everything in the world is interwoven with everything else. A simple exemplar is that physical matter such as the body is a component of spiritual enfolding, but spirit contains something greater than simply the physical composition of the body.

Transpersonal theorists posit that realizing the depth and span of the Great Chain of Being is the purpose of life. By purpose, they mean the ultimate in evolution where human development reaches its peak.⁷ Generally, human beings are able to grasp only part of the Great Chain. It is through transformation that they become capable of experiencing more and more levels. Realizing and experiencing the Great Chain in all its manifestations, as matter, body, mind, spirit, and soul, is the summative human experience and requires passing through each of the prior levels of development.⁸ As each level of development is experienced by an individual, it appears full, and for a period of time that awareness is sufficient. Then something happens and evolution moves forward, and the limitations of the prior level of development become apparent. For example, a person can aspire to obtain a huge amount of money in order to maximize the experience of physical pleasure. When that goal is accomplished, emptiness often ensues as the limitations of physical experience become apparent.

It is at this point in development that the question of transformation looms large. Can an individual transform their experience to another level where fulfillment is available in physical and intellectual pleasure? If they are able to do this,

then physical enjoyment is possible but it is no longer the only available pleasure. If they cannot transform from body to mind they may become bitter or put so much energy into trying to experience pleasure they exhaust themselves. When transformation fails, helplessness and resentment are often the result. The implications for this in health care can be illustrated by a patient at the end of life. If the patient relies exclusively on their body to create meaning and joy, then the imminent loss of that will lead to despair. The challenge for this individual confronting mortality is to transform his level of development focused on the physical to soul or spirit.

It is helpful to examine a model of different levels of adult development before looking at the efficacy of specific transformative practices to create health. Human development has been mapped from infancy to adulthood; one examination of this is called Spiral Dynamics (SD) originated by Graves,⁹ who considered his work an extension of Maslow's¹⁰ work on a hierarchy of needs. Beck and Cowan continued to study and expand Graves' theories, and it is they who referred to this model as SD.¹¹

SD uses the metaphor of a spiral to describe the human developmental process. The spiral suggests it is not a hierarchical model, as each level of development is both a whole and a part.¹² Each level is complete where it is and always a part of many more encompassing levels. As individuals progress up the spiral through transformation, they transcend and include all their previous levels. The earlier stages of human development are more basic and available to more people. The latter stages are more significant, complex, and rare. Because each level transcends and includes prior ones, the earlier stages are more common, while the later stages have greater depth. One can think first of self, and then learn to think of others without losing the ability to think of oneself.

These differing levels of development are described as *memes*, which refers to an organizing system of values or particular kinds of psychological existence. Beck and Cowan¹¹ assigned colors to describe the various memes because they did not want values distinctions being made between the various levels. If all levels of development are necessary, one level is not better or worse than another and they are each integral aspects of the Great Chain of Being. While the descriptions of the differing levels focus on the mental and values aspects of consciousness, every level has a corresponding physical and spiritual dimension. Wilber¹³ and SD theorists suggest that an individual spends 50% of their time and energy in one developmental level, and 25% in both the previous and subsequent stages.

Stages of development

Beige. Survival needs and animalistic behavior are characteristic of the beige meme. Beige has an individual, self-expressive direction. While in beige, biologic needs are the center of attention: food, shelter, sex. There is an undevel-

oped awareness of the individual as a differentiated self. Infants are naturally in beige. Beige is found in early prehistoric cave cultures, in individuals with extreme medical conditions, and in severe life conditions that offer survival as the compelling priority. The beige in each person is instinctual and survival focused.

Purple. The purple meme focuses on communal relationship, safety, and security. At this stage, a priority is to find safety in numbers, so kinship, family bonds, and tribal connections are important. Purple also satisfies safety and security needs through superstition, and the use of magical cause-and-effect relationships that offer predictability in a seemingly chaotic world. As children experience this meme, they often develop strong attachments to a favorite doll or stuffed animal. Purple is primarily motivated by interest in safety and security.

Red. Red is the power meme that is focused on the self and the importance of self-expression. Developmentally, this is the first time an individual experiences a differentiated sense of self and is able to realize personal power and the ability to influence the environment. One's motivation is to avoid shame and gratify impulses to experience pleasure. While in red, one does not save for a rainy day, but lives in the moment. In red, people are more willing to take risks and there is little guilt. At this developmental stage, one's desires are for freedom, creativity, power, fun, and control.

Blue. People look primarily for meaning and purpose in this meme. They learn to control their impulses and they experience guilt. This is a communal/relationship-based meme, and has a focus on self-sacrifice as opposed to self-expression. In this meme, one easily defers to a higher authority (i.e., God, the government, rules and regulations, parents, or teachers). This meme offers a clear sense of right and wrong, and in this stage it is important to distinguish the good from bad and focus on conformity.

Orange. The orange meme values self-achievement such as finding the best solutions and emphasizes striving for a better life. The personal power of the red meme is combined with the meaning and purpose of the blue meme (orange) to create the drive for autonomy, material abundance, and the integrated use of rational thought. Things get done with orange because the ability to think on multiple levels emerges. A person in orange takes charge and wants credit for accomplishments. In orange, it is common to think one's own solution is best and try hard to convince others of this.

Green. The green meme has a communal, relationship focus in which the need for community, equality, and unity are paramount. At this level, decisions, it is hoped, are reached through consensus and not through power. In green,

the importance of shared resources is emphasized, and sensitivity and social causes are important. The acceptance of diversity as well as inclusion are important, yet the green meme can be unyielding in its demands for open-mindedness. A person in green is motivated by group recognition where he or she hopes everyone will be equally rewarded.

Yellow. A significant shift occurs in development during the green to yellow meme transition. Maslow¹⁰ referred to this as the shift from subsistence needs to being needs, as one's focus shifts from personal survival to the well being of the whole. In yellow, one wants to and needs to take a systemic perspective with a tendency to look at the big picture. Here one can see the value of all the previous memes, understand what they offer and appreciate their contribution to the whole. A person operating at this meme acts appropriately in a wide range of settings and with a wide range of people. There is a heightened awareness of the natural ebb and flow of the universe.

Turquoise. Turquoise is a relationship meme with a holistic perspective. The relationship focus takes the desire for safety, security, and kinship, but this time elevates it with the desire to develop a supportive relationship with the whole. Trusting one's intuition is important, and things are experienced with an integrated felt sense. Learning takes place through observation and participation and a sense of simply being. There is a desire to use personal capacities in service to the whole. People often live simply, because they have become global citizens.

Coral. Coral is the final meme currently mapped, and little is known or written about this level of development because of its rarity. At coral, individuals have transcended their sense of self and operate without apparent "egoity". They have submerged their individuality for the greater good but can maintain personal identities.

This developmental taxonomy displays the multiplicity of human motivation and development. It points out the difficulty of designing transformative interventions that are appropriate for all levels. In addition, it reminds us that human beings can strive for enhanced clarity that has a reduced focus on the self, and by doing so are responding to the call of evolution and spirit.

TRANSFORMATIVE PRACTICES

Each of the major religions of the world developed practices the purpose of which is long-term spiritual transformation. Examples of this are prayer, meditation, mantra, affirmation, *tai chi*, and yoga. These practices, offered as interventions separate from their spiritual tradition, have begun to be evaluated to document their effect on psychologic and physical well-being. The effects are often beneficial for

physical markers such as blood pressure, immune response, and wound healing as well as psychologic variables such as depression anger and stress. However, the period of time research subjects are tracked is invariably too short to create transformation from one level of development to another. Therefore, the full transformative powers of these practices are rarely examined.¹⁴

Shapiro suggested expanding the field of meditation research to include studies on the deeper goals of meditation: liberation from the egoic self, developing a sense of harmony with the universe, and the ability to increase one's compassion, sensitivity, and service to others. Although the research focuses primarily on spiritual practice as a technique for self-regulation, people practice spiritual transformation practices for many reasons. One study tested whether a process of development existed that looked at the evolving nature of the self-regulation, self-exploration and compassionate service aspects of meditation.¹⁵ Long-term practitioners of Buddhist meditation were retrospectively asked about initial reasons for starting to meditate. The highest percentage reported self-regulation, with only 22% reporting self-exploration. After 4.26 years of practice, however, it was found their self-regulation reasons for continuing meditation had decreased, while self-exploration and self-liberation as reasons for meditation had increased.

The compelling question is what does it mean to use a transformative practice designed for spiritual liberation for self regulation? Wilber refers to changes that do not lead to transformation as translations.¹⁶ Translation means change that allows us to remain within established boundaries, while transformation refers to change from one level of development to another. At every level of development, numerous translations are necessary for maintaining homeostasis.

Significant problems emerge when translations fail. An experience of crisis is what happens at that point, and often a transformation ensues. Unfortunately, under stress these transformations can be either in a positive or negative direction. Many people when their normal coping (translations) fails regress to a more primitive level, while others learn significantly enhanced coping and emerge with an enhanced worldview. Real change (transformation) often does not occur without some discomfort as old ways are left behind.

It is more likely that looking at practices designed for spiritual transformation on measures of blood pressure, balance, and breathing capacity is to look at translation and not transformation. In most cases, the long-term evolution of the individual is not being measured or attended to. That does not mean that using spiritual transformation practices for other than furthering evolution is incorrect or unimportant. Reducing suffering is another critical component of religious teachings.¹⁷ Often people use religion and religious practices as a form of coping in an uncertain and dangerous world.¹⁸ There are a number of well-designed studies that attest to the health-enhancing and suffering-reducing benefits religiously derived transformative practices lead to:

- Two controlled trials have shown *t'ai chi* practice to help elderly adults reduce the number of falls.^{19,20}
- The practice of yoga has been shown to decrease the debilitating effects of arthritis. Garfinkel, *et al.*, conducted the first randomized, controlled study of the effect of a yoga-based regimen for osteoarthritis (OA) of the hands.²¹ Pain, tenderness and finger range of motion were shown to improve after 8 weeks of yoga training. The authors published a follow-up study that showed significant decreases in pain intensity for patients with carpal tunnel syndrome after 8 weeks of yoga training.²²
- Benefits reported from recent randomized trials on Transcendental Meditation™ (TM) include reductions in diastolic and systolic blood pressure in African Americans.^{23,24} In addition, a study of 21 patients with coronary artery disease (CAD) showed a reduction in ischemia and improved exercise tolerance after 8 months among TM subjects compared with a wait-list control group.²⁵
- In a 3-year follow-up, study researchers demonstrated a sustained reduction in anxiety and depression as well as decreased medical utilization in patients practicing mindfulness meditation.²⁶
- Data from a recent prospective trial found that patients with CAD ($n = 94$) randomized to a meditation-based intervention evidenced fewer recurrent coronary events at 5-year follow-up compared to those patients receiving usual care.²⁷
- In a study on the effect of yoga practice, 53 yoga-trained people with asthma were matched to controls, and found to suffer from fewer asthma attacks, have enhanced peak flow rate, and reduced medication use.²⁸
- In a recent study conducted on adults with asthma, yoga practice led to greater exercise tolerance and reduced use of β -adrenergic inhalers.²⁹

POSITIVE PSYCHOLOGY AND THE VIRTUES

Another aspect of human functioning that reflects upward movement within the Great Chain of Being is the ability to express more prosocial positive emotion skills such as tolerance, forgiveness, hope, altruism, and gratitude. That is, individuals or groups can become more proficient in forgiving or generosity and through this see more of the whole. These positive abilities are separate but desired concomitants to transformative practices such as meditation and prayer. Whether the practice of transformative practices actually leads to greater expression of the virtues requires research. The skills such as gratitude, forgiveness, compassion, and hope are encouraged in spiritual writings. Recently, they have become a topic of empirical investigation in the new field of positive psychology.³⁰ Positive psychology was launched to study and build upon human strengths in contrast to the psychological and psychiatric

communities, overwhelming attention to human weakness and illness.³¹ Interestingly, in a recent study of cancer patients and their caregivers, the development of positive strengths such as forgiveness and acceptance was defined by both groups as what they needed in terms of spirituality.³²

Research, although sporadic, is slowly emerging to show that these skills can be taught and, when measured, demonstrate benefit. The effect of gratitude on psychological and physical well-being was evaluated in three studies.³³ In the first two studies, participants were randomly assigned to note on a regular basis one of three experimental conditions: their hassles, things for which to be grateful or for which to account either in neutral life events or in making social comparisons. In the first study, weekly logs were kept, and in the second study, daily logs were kept of their moods, coping behaviors, health behaviors, physical symptoms, and life appraisal. In the third study, people with neuromuscular disease were randomly assigned to either the gratitude group or to a control group. The gratitude group showed increased well-being across several, although not all, of the outcome measures across the three studies relative to the comparison groups. The effect on positive mood appeared to be the strongest finding.

There is a body of research that shows that people high in hope suffer less depression, endure pain longer, have better psychological adjustment with a multiplicity of measures, have better adherence to medication regimes, have better academic performance and find greater meaning in difficult life events.³⁴ One controlled outcome study showed that a hope intervention was more helpful for depressed elderly patients than a standardized group intervention for depression. The hope intervention was designed to reduce functional disabilities and other symptoms of major depression among patients who had not achieved remission with medication or other types of psychotherapy. While both groups showed decreases in depression, participants in the hope condition showed significant decreases in anxiety, hopelessness and functional disability as well as improvement in social interaction.³⁵

Seligman and colleagues have been researching and training learned optimism for more than 15 years.^{36,37} These researchers use cognitive methods to train people to dispute pessimistic thinking, and teach methods simple enough to work for both adults and children. The goal is the development of a strength, not the remediation of a weakness. Their research shows that optimism training is successful, and once learned becomes self-reinforcing. That is, people use the skills they have been taught to help themselves. They have documented that learned optimism cuts in half the future incidence of depression and anxiety in both children and adults.

In one study, 231 college students who showed the most pessimistic explanatory style were randomly assigned to 8-week training or a wait-listed control condition.³⁸ These students were considered at risk for depression. After the in-

ervention period ended, the students were all followed for 3 years. The intervention group experienced significantly fewer anxiety disorders and moderate depressive episodes, but there was no difference in severe depressive episodes between the groups. In addition, the intervention group showed significantly fewer depressive and anxiety symptoms than the control group as measured through self-report. These results suggest that learned optimism may be able to prevent forms of mental illness, not just repair damage when manifest.

The quality of positive psychology or specific virtue that has the greatest empirical support is the quality of forgiveness. A number of controlled intervention studies attest to the effectiveness of forgiveness training to improve emotional, physical and relationship well-being. The investigators in the first empirical study to examine the effectiveness of forgiveness as an intervention³⁹ used the process model developed by the Human Development Study Group.⁴⁰ They devised an eight-session group forgiveness training for elderly women that reduced anxiety and depression. The next published study used this process model to experiment with a forgiveness intervention on 12 randomly assigned female incest survivors. Each subject met individually with the experimenter for weekly counseling sessions and then served as their own control. Reductions were seen in trait and state anxiety and depressive symptoms as well as increases in the participant's willingness to forgive the offender.⁴¹

The largest interpersonal forgiveness intervention study to date is the Stanford Forgiveness Project⁴² which was an extension and enlargement of Luskin's dissertation study.⁴³ The dissertation study showed forgiveness training reduced hurt, state and trait anger and increased compassion, self-efficacy, forgiveness likelihood, and hope. The Forgiveness Project was the first study to attempt a forgiveness intervention with a large number of participants and that recruited a large cohort of men. This randomized study of 259 adults compared effects of a six-session (90 minutes each) manual-based cognitive behavioral intervention with a wait-listed control group with assessments at baseline, post-test, and 4.5-month follow-up. Repeated measures analysis of variance (ANOVA) for perceived stress revealed a gender effect ($p = 0.025$, with women showing more stress), and a significant time by condition interaction. Treatment versus control effect size at follow-up was 0.54. State and trait anger showed significant time by condition interaction effects. Effect sizes at follow-up were 0.31 for state and 0.52 for trait anger. The treatment group reported a significant decrease in frequency of stress symptoms at follow-up. Self-reported physical health (SCL-90 Somatic and Other Subscales) improved significantly for treatment, but not control condition. For forgiveness self-efficacy ($p = 0.000$), the effect size at follow-up was 0.60. The intervention also increased forgiveness likelihood more than controls ($p = 0.000$; effect size = 0.59), and the intervention made participants more forgiving of their offender ($p < 0.03$).

The forgiveness methodology used in the Forgiveness Project was tested and showed effectiveness with the families of victims of political violence,⁴⁴ mothers whose sons were murdered,⁴⁵ patients with moderate hypertension* and financial service advisors after the stock market crash of 2000.[†] In each case, the forgiveness intervention led to improvement in physical, psychological, and/or business outcomes. Lower blood pressure was found only with hypertensive patients who were angry at baseline. The financial service advisors showed less stress, increased positive emotion and improved sales after forgiveness training. The people who had lost family members to violence showed significant decreases in stress, depression and hurt and significant increases in physical vitality, optimism, and forgiveness.

Two laboratory studies looked at the effect of forgiveness versus unforgiveness to ascertain the relationship between forgiveness and physiological reactivity. The first asked participants to offer forgiveness versus unforgiveness imagery in response to prompts about an interpersonal hurt. The results indicated improvement in physiologic stress responses, such as muscle tension and blood pressure, and improved perceived control⁴⁶ when in the forgiveness condition. The second study showed that trait forgiveness was associated with lower levels of blood pressure, while state forgiveness was associated with lower blood pressure and heart rate, all of which are indications of reduced allostatic load.⁴⁷ Increased blood pressure recovery after stress was also linked to trait forgiveness.

The study of these positive human experiences is in its infancy. These skills have the potential to reduce suffering, and may serve as effective vehicles for creating or sustaining transformation. Translation of these trainings in gratitude, forgiveness and empathy could be important in institutions like a hospital. Their stark lack is obvious in many people's experience in the health care system both for practitioner and patient. There is no end to the permutations to be explored to match an individual's level of development with the motivation to practice specific virtues and track the effect the training has on physical, emotional and spiritual well being. It is possible that through the enhanced use of both spiritual practice and virtuous traits, real transformation could occur in health care.

INTEGRAL PRACTICE

Integral practices are designed to effect changes on many levels of development at one time. The integral approach is

*Tibbits D, Pivotaly C, Lumen R, Luskin FM, Ellis G, Amanda P, Mollusk M. Hypertension reduction through forgiveness training family practice. Submitted for publication.

†Luskin FM, Aberman R, DeLorenzo A. The training of emotional competence on financial service advisors. 2003. Unpublished manuscript, Stanford University, Stanford, CA.

to combine methods that work with body, mind and spirit both sequentially and simultaneously. Integral practices are difficult to separate from the normal use of transformative practice. For example, in one of the yoga studies referenced above the researchers taught both breathing methods and physical postures. Kabat-Zinn's mindfulness⁴⁸ program teaches physical postures and walking meditations, as well as the formal sitting meditation practice.

Ornish et al.'s integral practice studies^{49,50} used interventions aimed at improving diet, exercise, stress management, and group support. The intervention was intensive and required a significant time and lifestyle commitment from participants. The first study demonstrated that coronary artery stenosis could be reversed through lifestyle change that could be maintained over 5 years. The second study showed improved stress management, diet, and exercise practices. Both led to enhanced quality of life and physical (plasma lipids, weight, blood pressure) improvement in both men and women.

Leonard and Murphy (1995) created Integral Transformative Practices (ITP)⁵¹ to explicate what was required of an integral approach to transformation. Their two overarching points are: (1) transformation takes time, there is no quick fix and it can take years or decades of intensive effort and (2) transformation requires regular discipline and practice. There has to be intention and an assertive willingness to practice regularly through expected periods of disillusionment and plateau. The ITP model is centered on the movement practice of a set of *aikido*, *yoga*, and *tai chi* based physical exercises (*katta*). Along with the *katta*, emphasis is placed on using affirmations or positive statements of intent, the regular practice of meditation, creating social support, eating a high-fiber low-fat diet and obtaining regular aerobic exercise. They report anecdotal evidence of salutary change in physical, emotional and spiritual abilities.

The SAGE⁵² project tests the ITP model with seniors. Three cohorts of seniors were recruited to participate in a year-long trial of education, group support, and guided practice. The first two cohorts were recruited from the general population, and the third cohort was composed of atrial arrhythmia patients. Each group met for 2 hours per week for a period of 1 year. The outcome measures were quality of life, vagal function, physical markers such as weight and flexibility, and computer-based testing of cognitive ability.

The analysis of the cognitive testing has been completed while the evaluation of the rest of the data is ongoing. One of the difficulties associated with aging is cognitive decline.⁵³ Of particular concern is the development of dementia. Even in normal aging, there are decrements in cognitive function over time. To assess the impact of integral practice on cognitive function, SAGE administered the Micro-cog test to each participant. This computer based individually administered test of intellectual ability was administered at baseline and at the end of the 12 month intervention. After aggregating the data from the three

groups, a significant improvement was demonstrated over the year on a number of cognitive abilities. Cognitive improvement was shown in reasoning, memory, reaction time and on the two indices of global cognitive functioning. For the global indices the effect sizes were in the 0.4 range. Limitations of the study are a lack of a comparison group and the possible practice effect of taking the same test twice. There may be value in this integral approach to cognitive enhancement in a senior population, and further experimentation is warranted.

IMPLICATIONS

The use of methods for transformation will always be part of the human experience because transformation of consciousness is the essential human endeavor. We have an opportunity in the coming decades to test and begin to understand the multiplicity of ways in which transformative practices work. Maybe we can map the span of human development and gain understanding of the relative merit of different methods for specific levels of development. This paper touched on three aspects facilitating human growth: spiritual practices, integral models and cultivation of human virtues. Clearly, the human experience will be improved by a greater understanding and dissemination of all three.

Research is needed to continue to explicate the ways in which these practices promote physical and emotional well-being. Some interesting areas to consider are:

1. Do people who meditate together work together?
2. What are the effects of transformative practices on relationships and people who live and work together?
3. Which practices are most effective for different physical or emotional conditions or is the effect similar for each practice?
4. Is an integral approach superior to the use of single therapies?
5. Are the virtues more powerful transformative tools than spiritual practices divorced from their spiritual and cultural context?
6. What are ways to maximize treatment effectiveness when dealing with people at different levels of development?
7. Are some interventions best for people at some developmental levels and not for others?

A specific domain within which to explore transformative practices would be to explore Organizational Development interventions for health care systems. There are many ways researchers could look at changing the culture of health care through promulgation of kindness based interventions. It is interesting to imagine how health care practices could change through transformation, if the institutional values were of forgiveness, gratitude and optimism. The use of transformative practices can be embedded into patient care

and then evaluated for health impact and patient satisfaction. It is possible that medication adherence would improve if patients were given some training in self regulation. If health care providers were occasionally reminded that the penultimate human experience is spiritual, they may relate to their patients more gently. Trainings in the virtues done for selected staff could be evaluated for both quality of life and job satisfaction. Randomized trials of transformative practices are needed to help all levels of the health care system keep their attention on the care they deliver.

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