

Six Evidence-Based Integrative Health Practices to Manage Eight Common Chronic Conditions and Promote Self-Care: A Review with Findings Inspired by a Workplace Wellness Case Study

Ruthann Russo^{1*} and Luann Drolc Fortune²

¹Berkeley Research Group, Emeryville, CA, USA

²College of Integrative Medicine and Health Services, Saybrook University, Oakland, CA, USA

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*Corresponding author

Ruthann Russo, Berkeley Research Group, Emeryville, CA, USA, Tel: 484-357-7899; Email: rrusso@thinkbrg.com

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Abstract

Workplace Wellness (WPW) programs are rapidly appearing as one tactic to control healthcare costs and decrease chronic conditions. The Patient Protection and Affordable Care Act (PPACA) addresses these concerns by encouraging employers to adopt evidence-based employee WPW programs. One WPW program option focuses on Integrative Health Practices (IHPs) that have the potential to shift wellness responsibility to the individual, which may result in increased WPW effectiveness, individual self-care and overall improved health and wellness. This article presents current supporting evidence on specific IHPs for the eight most common costly and chronic conditions in the workplace. When introduced and examined via the case study method into WPW at one organization, employees reported that as a result of their participation, they were highly likely to take better care of themselves. The review portion of this research serves as the foundation for IHP selection and provides much needed evidence for employers to make more informed and inclusive decisions about WPW program content. The case study results provide a tested model for IHPs that can be integrated into existing WPW offerings. The findings of this observational study support the need for future investigative research on the use of IHPs in WPW programs.

Purpose and Rationale

Total U.S. healthcare expenditures were estimated to be \$3 trillion in 2015 and are projected to soar to \$3.3 trillion by the end of 2016 [1]. Workplace Wellness (WPW) programs are rapidly appearing as one tactic to control escalating costs incurred by employers in both direct expenses and lost human resources. Supporting the need for WPW programs to address chronic disease, the Centers for Disease Control approximates 83% of healthcare dollars are spent treating chronic conditions, and this figure is projected to increase 42% over the next decade [2]. The Patient Protection and Affordable Care Act (PPACA) [3] addresses these concerns by encouraging employers to adopt evidence-based employee WPW strategies. One WPW program option involves Integrative Health Practices (IHPs), such as meditation, yoga, and biofeedback, which have been shown to help manage chronic conditions. The legislative charge for WPW programs, the prevalence of chronic conditions, and evidence supporting the efficacy of IHPs to manage chronic disease provide the rationale for this research.

The use of IHPs in WPW programs may increase employee engagement in other areas related to health and wellness promotion. Individuals can perform IHPs independently after receiving adequate instruction. Regular practice of IHPs, when chosen based upon the individual's current readiness to change, are likely to result in improved engagement [4]. Therefore, IHPs encourage employees to participate more actively in their own self-care [5].

Self-care is decision-making in response to signs and symptoms that require the individual to be aware of and assess any change, take action, and appraise the outcome [6]. Self-care behavior encompasses a range of practices that individuals perform on behalf of their own health [7] and is deemed a key strategy in chronic illness management as well as essential to the enhancement of quality of life and life expectancy [8].

IHPs have been used successfully to manage stress and prevent chronic disease [9,12,15]. Although there are evidence-based research studies that support IHPs as effective interventions for all of the eight common chronic conditions, WPW programs often associate IHPs primarily with stress management. Interestingly, many researchers have described stress as the root of chronic disease [10,11-14]. The stress response is a group of modifications in response to a stressful event that result in changes in physiology that may include an increase in heart rate, blood pressure, respiration

rate, and metabolic shifts, all of which result in the release of energy from the body [11]. Over time, these symptoms lay the foundation for the development of chronic disease [10,11]. As a result, by adopting IHPs in WPW programs, employers have an opportunity to manage employees' current and prevent the development of future chronic conditions.

IHPs can be used to alleviate the effects of the stress response and decrease the risk of chronic illness by triggering certain positive physiological responses that may involve the nervous, immune, musculoskeletal, cardiovascular, and/or endocrine systems [11]. These mechanisms of IHPs include one or more of the following:

- (a) Activation of the relaxation response and decrease in stress hormones [12,16,17];
- (b) Stimulation or inhibition of areas of the brain [18-20];
- (c) Increase in blood flow or modification of brain waves [21];
- (d) Stimulation of the immune system [22,23] and
- (e) An increase in cortical thickness and neuroplasticity of the brain [24-26]. It appears, therefore, that IHPs can be used to mitigate the effects of stress and potentially decrease the risk of chronic illness.

The purpose of this research is to highlight the evidence for and provide a model to incorporate IHPs, such as meditation and yoga, into WPW programs. Geared to cultivate increased self-awareness and self-care, these interventions have the potential to shift wellness responsibility to the individual, resulting in increased WPW effectiveness and overall improvement in the health and wellness of employee populations. The PPACA requires such programs to be evidence-based [3]. This article presents a compilation of the current research for specific IHPs matched to their evidence-based use to manage symptoms of the most common chronic conditions. Employers can use these findings to inform their WPW designs as the research provides a tested model for an IHP component that can be integrated into WPW offerings.

The six practices included in this research are acupressure, biofeedback, guided imagery, meditation, qigong, and yoga (Table 1). The National Center for Complementary and Integrative Health (NCCIH) refers to these practices as mind-body practices [27]. However, the NCCIH also stated that the phrase integrative health is used when mind-body or any other complementary practices are incorporated into mainstream healthcare [28]. Because the practices referenced here are intended to be used adjunctively and not in place

Table 1: Integrative Health Practices: Definitions.

MB Practice	Definition	Source
Acupressure	Based on meridian theory, application of pressure to points stimulates meridians, a network of energy pathways throughout the body, to increase the flow of qi (bio-energy), subsequently altering physiological states.	Lee & Frazier, 2011 [44]
Biofeedback	Individuals are trained to change physiological activity such as brainwaves, heart function, breathing, muscle activity, and skin temperature as measured by precise instruments.	Association for Applied Psychophysiology and Biofeedback, 2008 [43]
Guided imagery	An instructor guide provides directions for imagined scenes intended to bring relaxation and an altered state.	Ezra & Reed, 2008 [45]
Meditation	A group of techniques, such as mantra meditation, relaxation response, mindfulness meditation, and Zen Buddhist meditation. Most types of meditation have four elements in common: a quiet location; a specific, comfortable posture; focused attention; and an open attitude"	NCCIH, 2014 [27]
Qi gong	A component of traditional Chinese medicine that involves movement, meditation and controlled breathing. The intent is to improve blood flow and the flow of qi (energy).	NCCIH, 2014 [27]
Yoga	With origins in ancient Indian philosophy, a mind and body practice with various styles that combine physical postures, breathing techniques, meditation, and relaxation.	NCCIH, 2014 [27]

of mainstream treatments, the phrase Integrative Health Practices (IHPs) is used to represent the practices investigated in this research.

This review focused on eight common chronic conditions including the seven most common chronic conditions that are linked to more than 20% of employer healthcare spending: depression, increased blood glucose, high blood pressure, obesity, tobacco use, physical inactivity, and stress [29]. Pain, the eighth chronic condition addressed in this review, also has been identified as a condition that is costly to employers. Headache, back pain, and arthritis-related pain have been found to be responsible for lost productive time, costing employers an estimated \$61.2 billion per year [29]. The Center on an Aging Society found that back pain is a leading cause of work-loss days, estimating that 83 million work days are lost to back pain each year [30].

The Use of IHPs in WPW Programs

Similar to our research, WPW program research designs have incorporated multiple IHPs. It does not appear, however, that those IHPs were matched to common chronic conditions. Additionally, the rationale for the inclusion of one or more IHP interventions in prior WPW research does not appear to be tied to evidence-based support, perhaps because the evidence-based requirement did not exist prior to the PPACA. The present study involves a review of research on IHPs for each of the eight common chronic conditions and only includes evidence-based IHPs in the subsequent WPW program. The following paragraphs summarize WPW programs that have incorporated IHPs, many side-by-side with more traditional interventions.

The C. Everett Koop National Health Award recognizes exemplary WPW programs; the 2012 winners offered onsite fitness centers, walking paths, health coaching, educational and physical activity interventions and wellness coaching [31]. To complement these mainstream interventions, IHPs such as meditation and yoga were included in the educational interventions category for these WPW programs. The Cleveland Clinic offers its employees yoga classes and also offers a mindfulness-based resiliency program that its team implements for several external corporate WPW programs [32]. Aetna has offered yoga and mindfulness meditation to its employees as part of its WPW program since 2009 [33]. In 2012, Aetna employees participated in a randomized controlled trial that found improvements in perceived stress, sleep quality, and heart rhythm coherence ratio as a result of yoga and mindfulness meditation practices [34].

Table 2: Integrative Health Practices for WPW Concerns.

IH Practice	Smoking Cessation	High Blood Pressure	Obesity	Physical Inactivity	Stress	Depression	Increased Blood Glucose	Pain
Acu-pressure	Di et al., 2014 [46] Yeh et al., A, 2014 [52]	Bergmann et al., 2014 [10] Gao et al., 2012 [48] Darbandi et al., 2012 [47] Zheng et al., 2014 [58]	Darbandi et al., 2012 [47] Kim et al., 2014 [53] Elder et al., 2013 [56] He et al., 2012 [59] Hsieh et al., 2012 [60] Chien et al., 2014 [62]		Gao et al., 2012 [48] Hmwe et al., 2015 [54]	Honda et al., 2012 [49] Hmwe et al., 2015 [54]	Bay & Bay, 2011 [50]	Chen & Wang, 2014 [51] Kober et al., 2002 [55] Lang et al., 2007 [57] Luo et al., 2013 [61] Yeh et al., 2014 [63]
Biofeed-back	Ojedokun et al., 2013 [64]	Alabdulgader, 2012 [65] Lin et al., 2012 [71] Danielson et al., 2014 [67] Lin et al., 2012 [157] Linden & Moseley, 2006 [81] Patel et al., 1981 [83]	Bozinovska et al., 2014 [66] Joseph et al., 2014 [72] Koithan, 2009 [73] Meule et al., 2012 [79] Teufel et al., 2013 [82]		Danielson et al., 2014 [67] Koithan, 2009 [73] LeMaire et al., 2011 [77] Rotkis et al., 2014 [78] Teufel et al., 2013 [82]	Beckham et al., 2013 [68] Hammond, 2005 [74] Rotkis et al., 2014 [78] Siepmann et al., 2008 [80]	McGinnis et al., 2005 [69] McGrady & Horner, 1999 [75]	Corrado et al., 2003 [70] Nestoriuc et al., 2008 [76] Rotkiset al., 2014 [78]
Guided Imagery	Wynd, 2005 [84]	Jallo et al., 2013 [85] Ko et al., 2012 [90]	Hamilton et al., 2013 [86] Koithan, 2009 [73]	Duncan, et al., 2011 [87] Anderson & Moss, 2011 [91]	Koithan, 2009 [73] Gruzelier, 2002 [22] Ko et al., 2012 [90] Trackhten-berg, 2008 [23]	Apostolo & Kolcaba, 2009 [88] Rees, 1995 [92] Sloman, 2002 [94] Sloman, 2002 [94]		Carroll & Seers, 1998 [89] Posadzki & Ernst, 2011 [93] Posadzki et al., 2012 [95]
Meditation	Brewer et al., 2011 [96] Carim-Todd et al., 2013 [102] Elwafi et al., 2013 [114] Tang et al., 2013 [121]	Bai et al., 2015 [97] Chung et al., 2012 [103] Goldstein et al., 2012 [108] Devi et al., 2015 [115] Goldstein et al., 2012 [158] Nidich et al., 2009 [123] Paul-Labrador et al., 2006 [112]	Caldwell et al., 2012 [98] Dalen et al., 2010 [104] Daubenmier et al., 2011 [109] Katterman et al., 2014 [116] Koithan, 2009 [73]		Koithan, 2009 [73] Melville et al., 2012 [105] Poulin et al., 2008 [110] Shapiro et al., 2005 [117]	D'Silva et al., 2012 [99] Hoffman et al., 2010 [106] Kenney & Williams, 2007 [111] Manocha et al., 2011 [118] Ramel et al., 2004 [122] Prakhinkit et al., 2014 [124]	Bay & Bay, 2011 [50] Herzog et al., 1991 [107] Paul-Labrador et al., 2006 [112] Wilson et al., 2013 [119]	Kabat-Zinn et al., 1985 [100], 1987 [101] Mehling et al., 2014 [113] Rosenzweig et al., 2010 [120] Zeidan et al., 2012 [20]
Qi Gong		Freeman et al., 2014 [125] Guo et al., 2008 [132] Lee et al., 2004 [136] Lee et al., 2007 [140] Xiong et al., 2015 [144]	Elder et al., 2007 [126] Koithan, 2009 [73] Liu et al., 2011 [134]	Ho et al., 2012 [127]	Griffith et al., 2008 [128] Jouper & Hasseman, 2008 [133] Koithan, 2009 [73] Wang, et al., 2014 [141]	Tsang et al., 2008 [129] Griffith et al., 2008 [128] Tsang et al., 2013 [137] Yeung et al., 2013 [142]	Liu et al., 2008 [130] Liu et al., 2011 [134] Tsujiuchi et al, 2002 [138] Xin et al., 2007 [143]	Lee et al., 2007 [131] Sawynok & Lynch, 2014 [135] VonTrott et al., 2009 [139]
Yoga	Carim-Todd et al., 2013 [102]	Cohen et al., 2011 [145] Cohen et al., 2013 [149] Cade et al, 2010 [151] Hagins et al., 2013 [154]	Chung et al., 2012 [103] Koithan, 2009 [73] Murthy et al., 2010 [152] Sharpe et al, 2007 [155]	Bryan et al., 2012 [146]	Chong et al., 2011 [147] Kim, 2014 [150] Koithan, 2009 [73] Melville et al., 2012 [105]	Cramer et al., 2013 [148] D'Silva et al., 2012 [99]	Herzog et al, 1991 [107] Kim, 2014 [150]	Cramer et al., 2013 [148] Mehling et al., 2014 [113] Michalsen et al., 2005 [153] Wren et al., 2011 [156]

Johnson and Johnson's (J&J's) WPW program, which has been in place since 1978, includes a mental health and well-being component [35]. More recent mental health and well-being programs offered to J&J employees include resilience and stress management training, relaxation programs, yoga, and meditation [35]. J&J also offers employees a healthy nutrition program and smoking cessation in the healthy lifestyle component of its program. Although these programs employed various degrees of IHPs, they did not link IHPs to the most common chronic conditions. Further, although likely safe, not all of the interventions were evidence-based.

The Benson-Henry Institute found that a program that consists of relaxation training, enhancement of positive attitudes and beliefs, nutrition, exercise, recuperative sleep, social support and coping has improved participant symptoms including headaches and chronic low-back pain [36]. The program comprised 12 weekly 2.5 hour sessions that included hatha yoga, imagery, and mindfulness meditation to complement the mainstream interventions [36]. In addition to pain improvement, the study also found statistically significant improvements in stress management and patient engagement.

Tarantino et al. tested the use of a program for stress management that included some IHPs with 84 healthcare professionals [37]. The program included Reiki, guided imagery, yoga and meditation, among others. After participants completed the 8-week course, the researchers found significantly lower levels of stress and significantly increased confidence in the ability to cope among the study participants [37].

One study used stress management programs that involved a variety of interventions [38]. These interventions included relaxation training, biofeedback, and yoga. In this case, IHPs were combined with psychosocial approaches and resulted in lower perceived stress by the study group [38]. This research provided a good example of the use of IHPs as an adjunct to conventional psychotherapy interventions. Neither it nor the previously described research examples in this section matched specific IHP interventions to chronic conditions and symptoms.

Methods

Methods are described for the two approaches addressed in this article. First, the literature review process that was used to identify research supporting the use of IHPs for common chronic conditions is described. Second, the findings from the WPW case study that applied the evidence-based IHPs from the literature review to the workplace are presented.

Identifying Evidence-Based IHPs for Chronic Conditions

Components of WPW programs that qualify for tax credits must be evidence-based, which means they must be supported by current research published in peer-reviewed journals [3] or otherwise proved on the basis of rigorous scientific research [3]. Although IHPs are one form of employee wellness that use evidence-based practices, there are few published summaries of their effective use to manage specific chronic conditions. The review portion of this research sought to fill that gap.

IHPs were researched for each of the eight common chronic conditions using both the specific IHP and the condition in each key

search phrase. The databases searched were: Academic Search Premier, CINAHL Complete, Cochrane Library, Medline and PubMed. Keyword searches were performed in a pair that linked each IHP with each one of the eight common chronic conditions. For example, yoga was paired first with smoking cessation, then high blood pressure, and each of the other eight common chronic conditions. This same pairing and searching procedure was performed for each of the other six IHPs. The original search included the pairing of two additional IHPs, hypnosis and tai qi, with each of the eight common chronic conditions.

IHPs were included in the final list of evidence-based interventions in Table 2 if they were

- (1) Practices that, after appropriate instruction, can be performed independently,
- (2) Found in the review of literature to be effective in managing at least 6 of the 8 common chronic conditions,
- (3) Contained at least two research studies published in the past five years with positive findings for managing at least 6 of the 8 chronic conditions. Hypnosis and tai qi were eliminated because they did not meet these criteria.

We identified a large number of evidence-based research studies that support the use of IHPs to address many chronic conditions and their symptoms, as well as behaviors that promote health and wellbeing. The number of studies that support each IHP cross-referenced by common chronic condition are presented in Table 2. Based upon the criteria for inclusion used in this study, yoga addresses all eight of the eight common chronic conditions (Table 2). All of the other practices (i.e., acupressure, guided imagery, biofeedback, meditation, and qi gong) each address 7 of the 8 conditions. Only guided imagery, qi gong and yoga were found to manage physical inactivity effectively. As a result, a WPW program that includes yoga alone, or guided imagery or qi gong combined with one of the other IHPs (acupressure, biofeedback, or meditation) will address all eight of the most common chronic conditions. IHPs may be the only group of evidence-based interventions that can interchangeably be used to manage the most common chronic conditions (Table 2).

Case Study: Incorporation of IHPs into a WPW Program

The IH model used in this research was introduced in conjunction with an existing WPW program at a medium-sized organization of 175 employees located in a suburban area on the east coast of the United States. The organization was one location of a Fortune 100 firm in the technology industry. Of the 175 employees, 146 attended a pre research information session and were provided with informed consent pursuant to the Saybrook University IRB under which this research was conducted.

Employees who signed informed consents were invited to participate in an 8-week WPW program that incorporated the 6 IHPs that were found to manage the 8 most common chronic conditions. The program included an introduction to one of the following IHPs each week: meditation, guided imagery, biofeedback, yoga, qi gong, and acupressure. Because they are an inherent foundation for most IHPs [9], week one was dedicated to learning about and practicing breathing exercises. Two weeks were dedicated to learning and practicing various meditation techniques. The primary researcher for

this article was also the facilitator for the IHP sessions offered as part of the organization's WPW program.

This research used the mind-body skills group model established by the Center for Mind Body Medicine in 1996 as the structure for conducting these IHP sessions [9]. The human resource managers at the organization where this research was conducted elected to name the groups Resiliency Training as they believed this term would be more well-received by employees than mind-body skills or integrative health groups. During each week of an 8-week period, one IHP topic was presented during a training session that was conducted two times a week on Tuesdays. One session was held in the morning and one was held in the afternoon to accommodate employee schedules. Each training session was approximately 45 minutes long and each was conducted in a large, private conference room at the workplace.

The sessions began with a 10-15 minute description of the IHP that included a presentation of the mechanisms of action and supporting research. This presentation was followed by an employee question-and-answer session. After employee questions were answered, employees were invited to participate in practicing the IHP for the next 15-20 minutes. At the conclusion of the practice, a few employees were asked to share their experience and comments with the group. Finally, employees were provided with a tangible tool or reference card to assist them in practicing the skill independently. At the completion of the eight training sessions, attendees were asked to complete a questionnaire.

Results

Human resources staff reported that historically, attendance at similar WPW program events in this organization was between 0 and 10%. The mean number of attendees at the training sessions was 49, which represents 28% of the total employees at this location and 34% of employees who signed informed consents. Attendance ranged from a low of 19 employees at the guided imagery session, to a high of 60 attendees at the second meditation session. At this location of the organization, 91% of staff were engineers and 8% were administrative support staff; 78% of staff were male and 22% were female. Although gender and position were not collected as data elements during the training sessions, attendance was observed as generally consistent with the overall demographics of the organization.

Forty-two individuals attended the last session and completed a post-training session survey. The survey asked participants to identify which of the common chronic conditions they had ever experienced as well as to identify the impact of the WPW training sessions they attended. Because of the use of an exploratory case study, it was not possible to calculate statistical significance of the findings.

Employees were asked whether they were currently experiencing any of the most common chronic conditions or whether they had done so in the past. Those most commonly experienced at any time were stress (57% of respondents), back pain (52%) and headache (45%), followed by being overweight (32%), physical inactivity (31%) and high blood pressure (24%). The two least commonly experienced conditions were tobacco abuse (7%) and arthritis (10%). No employees reported current tobacco use (Table 3).

When asked to rate the impact of the training sessions, overall stronger positive findings appear to be present for employees who attended at least 4 sessions. Of the 42 survey respondents who attended at least four training sessions, 95% agreed or strongly agreed that they would be more likely to take better care of themselves as a result of their participation in the training, compared with 67% of employees who attended less than 4 sessions. Of respondents who attended at least four training sessions, 90% agreed or strongly agreed that they were more aware of their actions after they had participated in the training, compared with 78% of employees who attended less than 4 sessions. Number of sessions attended did not appear to be as much of a factor for recommending the training to co-workers. Of respondents who attended 4 or more sessions, 90% agreed or strongly agreed that they would recommend the training sessions to their coworkers, compared with 89% of employees who attended less than 4 sessions.

Lowest overall scores were for employees who attended less than 4 sessions: 56% said they would share the skills with their family (compared with 63% who attended 4 or more sessions) and 56% said they would integrate the skills into their everyday life, compared with 68% who attended 4 or more sessions. When asked how likely, as a result of attending the training sessions, the employee would be to practice at least one IHP per day, of those who attended less than 4 sessions, 67% would engage in such a practice, compared with 79% of employees who attended 4 or more sessions. Results of the post-training survey are provided in Table 4.

Table 3: Employees who experienced the common chronic conditions.

Symptom	Current (%)	Past (%)	Total Respondents Who Had Experienced this Symptom (%)
High blood pressure	14.3	9.5	23.8
Depression	5.7	11.9	17.6
Increased blood sugar	7.1	5.7	12.8
Tobacco use	0	7.11	7.1
Physical inactivity	14.3	16.7	31.0
Stress	33.3	23.8	57.1
Overweight	26.2	5.7	31.9
Back pain	28.6	23.8	52.4
Headache	23.8	21.4	45.2
Arthritis	7.1	2.4	9.5

Table 4: Percentage of Employees Who Agreed or Strongly Agreed with the Statements.

As a result of my participation in resiliency training, I believe that I will:	All Employees (N = 28)	Attended ≥4 sessions (n = 19)	Attended <4 sessions (n = 9)
Practice at least one resiliency skill per day	75	79	67
Be more aware of my actions	86	90	78
Take better care of myself	86	95	67
Integrate the skills into my everyday life	64	68	56
Share the skills with my family	61	63	56
Recommend resiliency training to my friends	82	84	78
Recommend resiliency training to my coworkers	89	90	89

Discussion

Although this research provided important foundational evidence and tools for the use of IHPs in WPW programs, it was limited by its design as a case study, and as such, its findings represent only the location and population studied. In addition, the use of case study method is observational and exploratory in nature, which prohibits the generation of calculations that measure statistical significance. Future research could replicate this study with more participants as well as intervention and control groups to validate and generalize these findings.

Because it is important for employers to know whether the chronic condition(s) experienced by the employees are likely to improve as a result of IHPs, future research should include follow up to measure the severity of each chronic condition both before and after the intervention. Conditions such as tobacco use, which are currently identified as one of most common and costly for employers, were reported by a very small number of participants (0% currently; 7% in the past). As a result, future research also should seek to validate chronic conditions on that list.

Employers have the ability to make a substantial contribution to positive health outcomes by creating a culture of health that supports healthy lifestyles for employees [39]. Berry and Mirabito claimed that “employers are better positioned to eliminate employee-generated barriers to change than the medical community” because they have continuous access to the working population [40]. In addition, employers benefit from a WPW intervention because stress increases absenteeism and negatively impacts work performance, employee productivity, and satisfaction rates [41,42]. IHPs can be used to address these concerns.

Incorporation of IHPs in a WPW program provides both choice and evidence to address those conditions that are most costly to the employer. Inclusion of yoga, or meditation and guided imagery, in the WPW program is one example of how this goal could be accomplished. Additionally, interventions in a group setting are a low cost investment for employers. When taught and practiced in a group setting, IHPs involve new learning together with respectful and nonjudgmental interactions with others [9]. Indeed, some IHPs implemented in a group format have been found to “facilitate imaginative solutions to personal and professional problems” [9]. Such practices contribute to a more productive, positive, and potentially more creative workplace and a more satisfied and engaged workforce.

The inclusion of IHPs in WPW programs provides an overarching means to promote success in other behavior changes. Based on the findings from this case study, IH practices have the potential to increase individual awareness and result in improved self-care. The combination of a choice in relevant, evidence-based IHPs and training in the science and practice of each intervention, as was done during each training session in this research, may have contributed to the positive findings. Improved self-care could ultimately result in greater individual employee satisfaction and contributions. In the process, the shift to increased self-responsibility also could trigger a shift to a healthier, more empowered corporate culture.

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