

Why practice yoga? Practitioners' motivations for adopting and maintaining yoga practice

Journal of Health Psychology
1–10

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DOI: 10.1177/1359105314541314

hpq.sagepub.com



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Abstract

We examined motives for adopting and maintaining yoga practice in a national survey of yoga practitioners (360 yoga students, 156 yoga teachers). Both students and teachers adopted yoga practice primarily for exercise and stress relief, but reported many other reasons, including flexibility, getting into shape, and depression/anxiety relief. Over 62 percent of students and 85 percent of teachers reported having changed their primary reason for practicing or discovering other reasons; for both, the top changed primary reason was spirituality. Findings suggest that most initiate yoga practice for exercise and stress relief, but for many, spirituality becomes their primary reason for maintaining practice.

Keywords

motivation, spirituality, yoga

Yoga practices are becoming increasingly popular in the United States and around the world (Barnes et al., 2008). Many different types of yoga are practiced, each with distinct qualities and mixtures of core components including postures (asanas), breathing practices (pranayama), and meditation or relaxation (Büssing et al., 2012; National Center for Complementary and Alternative Medicine, 2014). In Western culture, yoga is typically regarded as a physical health practice, although yoga's roots are deeply philosophical and spiritual. Some have termed the physical health benefits “side effects” (Varambally and Gangadhar, 2012), while others have argued that yoga is a holistic system for improving mind, body, and spirit (Khalsa, 2007). Indeed, yoga's popularity may be due in large part to its ability to produce psychophysiological changes that reduce the

activity of the stress response systems and enhance self-regulation, resilience, mood, well-being, and quality of life (Büssing et al., 2012). Yoga has been shown to be an efficacious intervention for many health conditions, including arthritis (Haaz and Bartlett, 2012), metabolic syndrome (Innes and Vincent, 2007), asthma (Posadzki and Ernst, 2011), pain (Posadzki et al., 2011), and depression (Uebelacker et al., 2012). In addition, many

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people are pursuing yoga for stress reduction or general wellness (Chong et al., 2011).

Yoga, therefore, appears to be an accessible health practice that could benefit many people. Understanding the motivation to begin practicing yoga would provide useful avenues for more effective dissemination of this healthful activity. Furthermore, understanding motivation for continuing this practice could help individuals to maintain their practice, which may be particularly important for those engaging in yoga practice to ameliorate health problems. Currently, there is very little empirical data regarding why people adopt the practice of yoga and virtually no data on the stability of motives for continuing to practice yoga.

Existing studies tend to be based on focus groups and small samples. In a focus group study, common reasons given by community yoga practitioners for adopting yoga included to relieve stress, rehabilitate an injury, or become more flexible (Atkinson and Permuth-Levine, 2009). A survey of young adult cancer survivors who used yoga ($n=286$) found that they practiced for flexibility (96.7%), relaxation (94.5%), peace (81.3%), happiness (68.1%), depression/anxiety relief (56%), spirituality (45.1%), pain relief (42.9%), weight control (42.9%), and control of side effects (27.5%; Park et al., 2013). People participating in a yoga class in Texas ($n=290$), asked why they were beginning or coming back to yoga, reported many reasons, including general wellness (81%), physical exercise (80%), stress management (73%), seeking a spiritual experience (37%), alleviate a health condition (28%), personal recommendation (25%), illness prevention (23%), other (20%), seeking a hobby (18%), social interaction (16%), and doctor recommendation (5%; Quilty et al., 2013). A larger survey of yoga and meditation practitioners in Australia ($n=2567$) asked about their reasons for adopting either practice and reported similarly that health and fitness, and increased flexibility/muscle tone (both 71%) were by far the most common reasons for adopting, while other commonly reported reasons were reduce stress or anxiety (58%), personal development (29%), specific

health or medical reason (20%) and spiritual path (19%; Penman et al., 2012). Unfortunately, this latter study did not distinguish between yoga and meditation practice, but rather asked about "yoga or meditation." Importantly, these studies all allowed participants to report multiple motivations, apparently reflecting the many reasons people begin to practice yoga; however, none asked about primary motivation.

Yoga practitioners' motivations may change over time as their practice evolves. Understanding what contributes to changes in motivation may be important to understand in helping people to maintain their practice long-term, which may be particularly helpful for those engaging in yoga practice to ameliorate health problems. Preliminary evidence suggests that the length of time someone practices yoga contributes to benefits of the practice (Carbonneau et al., 2010).

In the United States and other parts of the West, yoga is often offered as a fitness course along with classes in Pilates, Zumba, and group cycling (Prichard and Tiggemann, 2008). This emphasis on its physical benefits is part of its cultural appeal (De Michelis, 2005). However, although people may adopt yoga as a physical practice (e.g. fitness, flexibility), they may discover other aspects, such as yoga's spiritual or philosophical aspects that become more central motivations for them with continued practice (Büssing et al., 2012).

Such shifts in motivation have been characterized in the physical activity literature as moving from extrinsic motives to intrinsic motives (Ingledeew et al., 1998; Rothman et al., 2004). For example, people may begin an exercise program because they believe others feel they should, or because their workplace provides financial incentives. However, after commencing exercise, they may find that they are exercising to feel better and increase their energy and mobility (Ingledeew and Markland, 2008). A small qualitative study found that participants in a yoga intervention for people with or at high risk for diabetes reported continuing to practice for both intrinsic (e.g. feeling yoga improved their health and energy levels) and extrinsic (e.g. finding having others in the group

reinforcing) motives (Alexander et al., 2012), although that study did not examine change in motivation over time.

The present study aimed to examine people's motivations for adopting and maintaining yoga practice. Such shifts in motives are generally regarded as an important aspect of health behavioral change, as people move from the immediate motives impelling them to implement a new behavior to the long-term sustenance of that change in the maintenance stage (Prochaska, 2013; Rothman et al., 2004). Knowing why people begin practicing yoga and why they continue may shed light on the factors that appeal to novices and to regular practitioners, with important implications for making yoga practice a long-term lifestyle behavior as well as promoting yoga interventions for specific health conditions.

Method

Design

We relied on a cross-sectional survey design. We contacted approximately 110 yoga studios and asked studio managers to forward the survey invitation via email or Facebook to practitioners. Using a national directory of yoga studios and online searches, at least one studio in every state in the United States (randomly selected) was invited to assist with recruitment, using snowball sampling. Participants received an email introduction to the study with a link to the survey. Our survey was created using the online survey software Qualtrics, which encrypts data and maintains its confidentiality. All procedures were approved by the University of Connecticut's Institutional Review Board.

Sample

Eligibility requirements were being at least 18 years of age and having taken at least five yoga classes within the past 3 months. A total of 542 participants were recruited for this online survey. Of these, 156 reported being yoga teachers (114 part-time and 42 full-time). Yoga teacher participants ranged in age from 18 to 78 years

($M=42.21$, standard deviation (SD)= 11.89), were mostly female (93.4%), Caucasian (94%), and well educated (84.6% had a bachelor's degree or higher). The 360 yoga students who were not also yoga teachers ranged in age from 18 to 85 years ($M=45.78$, $SD=14.04$), were mostly female (84.4%), Caucasian (95%), and well educated (74.9% had a bachelor's degree or higher). The demographics of our sample were similar to other national samples of yoga practitioners (Birdee et al., 2008).

Measures

Participants completed a battery of questionnaires in the online survey. This analysis focuses on the questionnaires pertaining to reasons people reported for adopting and continuing yoga practice.

Primary reason for adopting yoga practice. Participants were asked, "What was the primary reason you first started practicing yoga?" and given a list from which they could endorse only one option. Options included relaxation, stress relief, pain relief, weight control, flexibility, spirituality, depression/anxiety relief, deal with physical health issues (e.g. back problems or injuries), get into shape, get exercise, and other. After that item, participants were asked "Were there any other reasons you first started practicing yoga?" and then to endorse all other reasons that they adopted practicing yoga from the same list of reasons. After the "Other" option, for both questions, participants could fill in their own response or reason for adopting or continuing yoga practice.

Changes in reasons for practicing yoga. Participants were asked, "Have your reasons for continuing to do yoga changed/did you discover new reasons since you first started practicing yoga?" answered no or yes (coded as 0 or 1). Those who answered this question in the affirmative were presented with the question, "What was the primary reason you continued to practice yoga?" and asked to endorse one of the options listed above. They were then asked, "What were other reasons that you continued to

practice yoga?" and to endorse all other reasons for which they continued practicing yoga.

Yoga practice characteristics. We assessed type of yoga practiced most frequently with a single item that asked respondents to characterize the typical yoga practice they had done most frequently in the past 3 months using a drop-down menu with 10 response options (Hatha, Power yoga/Power Vinyasa, Vinyasa/Ashtanga, Iyengar, Bikram, Sivananda/Integral, Kundalini, Svaroopaa and Other). Respondents were also asked to report how long they have been practicing yoga, and the average amount of time spent practicing yoga per week (as an indicator of the intensity of practice).

Data analysis plan. Of the 542 participants who completed at least part of the survey, 360 yoga students and 156 yoga teachers completed the section on reasons for practice; only these participants were included in the present analyses. Completion status of this portion of the questionnaire did not differ by demographic or yoga-related characteristics.

We examined the primary reason and other reasons that participants reported for adopting practice, and for those who reported new reasons for practice, we examined these newly discovered reasons. We also examined the relationship between time practicing (length and frequency) with changes in reasons for practice. We analyzed students and teachers separately given that they may differ in their yoga practice and motivation in important ways (Penman et al., 2012). Finally, we examined the primary reason for continued yoga practice for the entire sample of students and of teachers (those who found new reasons and those who did not). These analyses were conducted using descriptive and bivariate correlational statistics.

Analysis

Description of yoga practice

Students practiced a mean of 245 (SD=178) minutes per week in a yoga studio and a mean of

85 (SD=82) minutes per week at home, and reported they had been practicing yoga for a mean length of 8 years and 5 months (SD=7.67 years). The type of yoga practiced most frequently was Power yoga/Power Vinyasa (32.1%), followed by Iyengar yoga (22.1%) and Hatha yoga (17.8%).

Not surprisingly, teachers practiced more frequently, particularly home practice, and were more experienced. They practiced an average of 374 (SD=192) minutes per week in a yoga studio and 168 (SD=164) minutes per week at home, and reported that they had been practicing yoga for a mean time of 13 years and 2 months (SD=9.26 years). For teachers, the type of yoga practiced most frequently was Power yoga/Power Vinyasa (41.0%), followed by Hatha yoga (18.8%) and Vinyasa/Ashtanga yoga (16.7%).

Students' and teachers' reasons for adopting yoga practice

Reasons for adopting yoga practice were almost identical for students and teachers, an expected outcome given that all yoga teachers adopted out as yoga students. For both teachers and students, the most commonly endorsed primary reason for adopting yoga practice was exercise, followed by flexibility and stress relief (see Table 1). Many selected "Other" as their primary reason for adopting practice. In the free-response "Other" option, respondents reported that they adopted practicing yoga for many other reasons, including "Curiosity," "A friend took me," "Mind body connection," "To meet new people," and "Relationship decision."

Both students and teachers endorsed many additional reasons for beginning their practice, with a mean number of 4.1 reasons (range=1–11), indicating that they were drawn to yoga for many reasons. Over half of students and 40 percent of teachers also reported that "relaxation," "stress relief," and "flexibility" were additional reasons that they adopted yoga practice, and nearly half of the students also endorsed "get in shape" and "get exercise."

Table 1. Primary reason and additional reasons students and teachers reported for adopting yoga practice.

	Original primary reason to adopt practice		Additional original reasons to adopt practice	
	Students, <i>n</i> (%)	Teachers, <i>n</i> (%)	Students, <i>n</i> (%)	Teachers, <i>n</i> (%)
Relaxation	25 (6.9)	5 (3.2)	194 (53.9)	64 (41.0)
Stress relief	52 (14.4)	31 (19.9)	189 (52.5)	63 (40.4)
Pain relief	12 (3.3)	3 (1.9)	63 (17.5)	24 (15.4)
Weight control	16 (4.4)	4 (2.6)	98 (27.2)	25 (16.0)
Flexibility	60 (16.7)	10 (6.4)	209 (58.1)	65 (41.7)
Spirituality	13 (5.0)	11 (7.1)	87 (24.2)	50 (32.1)
Depression/anxiety relief	18 (5.0)	15 (9.6)	79 (21.9)	43 (27.6)
Deal with physical health issues	29 (8.1)	10 (6.4)	68 (18.9)	34 (21.8)
Get into shape	40 (11.1)	9 (5.8)	159 (44.2)	45 (28.8)
Get exercise	70 (19.4)	33 (21.2)	172 (47.8)	55 (35.3)
Other	25 (6.9)	25 (16.0)	63 (17.5)	39 (25.0)

Table 2. Newly discovered primary and additional reasons for continuing to practice yoga for those who discovered new reasons to practice.

	New primary reason to continue practice		Additional new reasons to continue practice	
	Students, <i>n</i> (%)	Teachers, <i>n</i> (%)	Students, <i>n</i> (%)	Teachers, <i>n</i> (%)
Relaxation	24 (10.9)	2 (1.5)	139 (62.9)	80 (60.2)
Stress relief	35 (15.8)	17 (12.8)	137 (62.0)	77 (57.9)
Pain relief	3 (1.4)	3 (2.3)	58 (26.2)	41 (30.8)
Weight control	1 (0.5)	2 (1.5)	75 (33.9)	49 (36.8)
Flexibility	15 (6.8)	2 (1.5)	140 (63.3)	82 (61.7)
Spirituality	52 (23.5)	67 (50.4)	106 (48.0)	66 (49.6)
Depression/anxiety relief	20 (9.0)	10 (7.5)	75 (33.9)	56 (42.1)
Deal with physical health issues	8 (3.6)	0 (0)	63 (28.5)	45 (33.8)
Get into shape	15 (6.8)	2 (1.5)	102 (46.2)	49 (36.8)
Get exercise	11 (5.0)	1 (0.8)	122 (55.2)	63 (47.4)
Other	37 (16.7)	27 (20.3)	65 (29.4)	40 (30.1)

Discovery of new reasons to continue practice

The majority of both students and teachers changed their motivation for practicing yoga or discovered new aspects (see Table 2). Among students, 221 (61.3%) reported yes, they had changed their primary reason for doing yoga or discovered other aspects, while 139 (38.6%) reported no, they had not. The total amount of

practice (length of practice multiplied by amount) was positively correlated with change in the primary reason for practice ($r = .12$, $p = .025$), suggesting that more experienced students are more likely to discover other aspects of yoga and to change their motivation.

For those students who discovered new reasons for practice, spirituality was the most common primary reason, cited by nearly a quarter of them. Stress relief, relaxation, depression/

Table 3. Current primary reasons for practicing yoga.

	Students, <i>n</i> (%)	Teachers, <i>n</i> (%)
1. Relaxation	32 (8.9)	5 (3.1)
2. Stress relief	58 (15.8)	22 (13.6)
3. Pain relief	9 (2.5)	3 (1.9)
4. Weight control	5 (1.4)	2 (1.2)
5. Flexibility	47 (13.1)	2 (1.2)
6. Spirituality	59 (16.4)	72 (44.4)
7. Depression/anxiety relief	25 (7.0)	12 (7.4)
8. Deal with physical health issues	22 (6.1)	0 (0.0)
9. Get into shape	32 (8.9)	2 (1.2)
10. Get exercise	31 (8.6)	4 (2.5)
11. Other	29 (11.2)	38 (23.4)

anxiety relief, and “other” were also commonly cited as new primary reasons. Principal among the free-response “Other” option was sense of community, along with fun, enjoyment/euphoria, self-discovery, and better sleep. Over half of the students endorsed relaxation, stress relief, and flexibility as new additional reasons that they continued to practice, and nearly half also endorsed get exercise and get in shape. For students who had reported change/discovering new reasons, the mean number of additional reasons endorsed for continued practice was 5.05 (range = 1–10).

Among teachers, 133 (85.8%) endorsed that they had changed their primary reason for practicing yoga or discovered other aspects, while only 22 (14.2%) reported they had not. Similar to the student sample, we found a positive correlation between change in the primary reason and years of experience among teachers ($r = .15$; $p = .065$), although the correlation coefficient was only marginally statistically significant. Spirituality was the most common discovered primary reason, cited by just over half of teachers. Over half also endorsed relaxation, stress relief and flexibility as additional new reasons for practicing, and over 40 percent endorsed exercise, depression/anxiety relief, and spirituality as additional reasons for continuing to practice. In the free-response “Other” option, teachers commonly reported community, along with fun, self-knowledge, and mindfulness.

For these teachers who had reported change in primary reason/discover new reasons, the mean number of additional reasons endorsed for continued practice was 5.35 (range = 1–10).

Primary motivation to continue practice

The primary reason for continuing to practice yoga, which was the same as their original primary reason for those who did not report changing it, and was the new primary reason code for those who did, is shown in Table 3. Among students, spirituality and stress relief were the most common reasons, while for teachers, spirituality was by far the most common, followed by a variety of reasons reported as other.

Discussion

As yoga practice continues to become more widespread, both as a remedy for health conditions and as a way for people to improve their holistic wellness (Barnes et al., 2008), we need to understand more about how and why people engage in this practice, and what sustains practice over time. Such information will be helpful for those designing yoga interventions or working to disseminate yoga more broadly and to make it more accessible as well as for advancing our general understanding of yoga practice.

A focus on shifting motives from the purely physical to those more psychological and spiritual in nature may also be relevant to other activities in which people engage to enhance their holistic well-being, including walking (e.g. Kassavou et al., 2013; Ledford, 2012), Qi Gong (e.g. Gaitan-Sierra and Hyland, 2013), gardening (e.g. Van Den Berg and Custers, 2011), extreme sports (e.g. Brymer and Schweitzer, 2013), connecting with nature (e.g. Cervinka et al., 2012), and labyrinth walking (e.g. Sandor and Froman, 2006). For many of these activities, a process of deepening practice may lead to similar shifts in the reasons for engagement and the benefits derived.

Our results suggest that people are initially drawn to yoga for its physical aspects, such as getting exercise and increasing flexibility; these were the primary reasons for adopting yoga practice reported by both students and teachers. Importantly, however, both teachers and students endorsed many other motives for beginning practice. In fact, people typically reported an average of four reasons for beginning, which suggests that even beginners see yoga as a practice with the potential to affect many dimensions of their lives. These perceptions of potential benefit may not only influence people's inclination to begin practicing yoga but also the effects they perceive as a result of their practice (Sohl et al., 2011). It would be interesting to know where people acquire their ideas about what yoga is and what it might bring to their lives. Clearly, people come to yoga practice with pre-formed expectations and specific goals about yoga and what it can do for them.

With continued practice, people may find additional reasons for practicing yoga. We found that the majority of students and teachers endorsed having changed their primary reason for doing yoga or discovering other reasons for practicing. This change was related to more lifetime practice only for students, a finding that may be due to limited variability for the teachers, of whom over 85 percent endorsed having changed their reasons for practicing. The greater shift reported by teachers relative to students may reflect their greater length of time

practicing (13 years compared to 8 years, respectively) or that there is something unique about being a yoga teacher. Perhaps those who change their reasons for practicing are more likely to become yoga teachers or vice versa. In addition to total lifetime "dose" of yoga, many other characteristics of the yoga practice may be important influences on change in motives over time, such as the consistency and intensity of practice along with the styles and traditions of yoga practices and particular teachers encountered.

As has been hypothesized elsewhere (Büssing et al., 2012), we found that of those who endorsed having changed their primary reason for practicing, spirituality was the most common new primary reason for both students and teachers. Shifting one's reasons for practicing yoga is an intriguing process that is consistent with a view of yoga as a journey (Baptiste, 2011; Fishman, 2007; Powell et al., 2008), but this shift is heretofore wholly undocumented in empirical research. The motives endorsed for beginning and for continuing practice evidenced a shift toward more intrinsic (i.e. for enjoyment, satisfaction, and interest inherent in the behavior) rather than extrinsic (i.e. separable from the behavior itself such as gaining approval from others) motives (Deci and Ryan, 2008). These shifts, for a majority of both students and teachers, were in the direction from primarily physical to primarily psychological and spiritual reasons to practice, although physical reasons remained important as well. This shift suggests that, with continued practice, the holistic mind-body-spirit nature of yoga is increasingly experienced.

Spirituality and stress relief were the most common primary reasons for continuing yoga for the yoga students in our sample, and by far the most common reason for the yoga teachers. These findings are similar to those of Penman et al. (2012), who found that both students and teachers reported higher levels of most reasons for currently practicing yoga or meditation relative to starting. Furthermore, among students, fitness, flexibility, and stress management remained the highest endorsed reasons (all over

80%), with spirituality a reason given for continued practice for 40 percent of students, while for teachers, spirituality was the highest endorsed reason, with personal development a close second.

It is not surprising that yoga's capacity to provide stress relief is discovered and appreciated by yoga practitioners. In light of yoga's roots as a spiritual path, the predominance of spirituality as a reason for practicing is also not surprising. However, given the strong emphasis placed on physical aspects of yoga and its promotion as a physical exercise regimen in contemporary Western culture (De Michelis, 2005), it is indeed noteworthy that yoga practitioners so commonly find spirituality to be a central motivation for continuing their practice.

Limitations

The cross-sectional nature of this study does not allow drawing conclusions regarding causality; all relationships observed are correlational in nature. Our snowball sampling technique likely introduced biases in the sample we cannot account for. Thus, we do not know how well our study represents yoga practitioners, although our samples' demographics closely mirror those of nationally representative surveys (e.g. Birdee et al., 2008). We only studied yoga practitioners who continued to practice, and thus were not able to examine those who may have adopted and then abandoned yoga practice. This study relied on self-report and may be subject to recall bias, particularly regarding motivations for past behavior (i.e. reasons for beginning practice). This study did not attempt to fully characterize the type of yoga practiced or other activities beyond yoga poses (e.g. meditation, breathing exercises) that may be incorporated in respondents' yoga practice.

Conclusion and future directions

This study adds to the small body of literature addressing why people adopt a yoga practice and replicates previous findings that the

primary reason given for beginning practice is related to physical health (Atkinson and Permuth-Levine, 2009; Park et al., 2013; Penman et al., 2012; Quilty et al., 2013). Explicating the reasons for adopting a yoga practice sheds light on the expectations people may have regarding the impact of yoga on their health and well-being. This study extends beyond previous research by documenting reasons for continuing to practice yoga over the long term. The majority of respondents in this survey—both students and teachers—reported there had been a change in their reasons for practice. In both groups, there was a shift from primarily physical motives to those related to mental well-being and spirituality.

Such shifts seem critical in maintaining a yoga practice over a long period of time (Ingledeew and Markland, 2008). In addition to motivation, however, long-term practice relies on people's ability to successfully overcome barriers, which include time, financial resources, and opportunities to find appropriate classes (Quilty et al., 2013). It will be important for future research to examine more complex models of motivation, beliefs and expectancies, and potential barriers to yoga practice to better characterize people's adoption and maintenance of yoga practice (Schwarzer, 2008).

Some styles of yoga (and some yoga teachers regardless of their style) emphasize consciously setting an intention at the beginning of each class (Deary et al., 2011). It may be that teachers and students who practice in this way, with a deliberate intention in mind, are more cognizant of their reasons for practice, and perhaps more aware of how their intentions and motives shift over time. Although we did not assess intention-setting in the present study, this phenomenon warrants investigation in future research.

Yoga is becoming more widely accepted and is increasingly promulgated as an intervention to promote health. The literature is sparse on what leads people to adopt a yoga practice and virtually non-existent with regard to what leads them to continue practicing over time. The finding that people's reasons to continue to practice shift from physical motives to motives related

to mental well-being and spirituality supports the view that yoga is a holistic body–mind–spirit practice. Even those who begin their practice for purely physical reasons (e.g. at the recommendation of a healthcare provider to deal with an injury) are likely to experience effects beyond increased flexibility and strength. This finding can help frame expectations for those who begin a yoga practice and may yield clues about how to sustain practice over time. Sustaining a yoga practice over time is especially important for yoga interventions designed for specific health conditions.

Although the majority of students and teachers alike reported experiencing a shift in their reasons for continued practice, further research is needed to more fully characterize what specific elements in a yoga practice induce these shifts. Longitudinal research tracking the effects of yoga over time can provide insight into the directionality of relationships described here.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

References

- Alexander GK, Innes KE, Brown CJ, et al. (2012) “I Could Move Mountains”: Adults with or at risk for type 2 diabetes reflect on their experiences with yoga practice. *The Diabetes Educator* 36: 965–975.
- Atkinson NL and Permeth-Levine R (2009) Benefits, barriers and cues to action of yoga practice: A focus group approach. *American Journal of Health Behavior* 33: 3–14.
- Baptiste B (2011) *Journey into Power: How to Sculpt Your Ideal Body, Free Your True Self, and Transform Your Life with Yoga*. New York: Simon & Schuster.
- Barnes PM, Bloom B and Nahin RL (2008) Complementary and alternative medicine use among adults and children: United States, 2007. *National Health Statistics Reports* 12: 1–24.
- Birdee GS, Saper RB, Bertisch SM, et al. (2008) Characteristics of yoga users: Results of a national survey. *Journal of General Internal Medicine* 23: 1653–1658.
- Brymer E and Schweitzer R (2013) Extreme sports are good for your health: A phenomenological understanding of fear and anxiety in extreme sport. *Journal of Health Psychology* 18: 477–487.
- Büssing A, Hedtstück A, Khalsa SB, et al. (2012) Development of specific aspects of spirituality during a 6-month intensive yoga practice. *Evidence-Based Complementary and Alternative Medicine* 2012: 981523.
- Carbonneau N, Vallerand R and Massicotte S (2010) Is the practice of yoga associated with positive outcomes? The role of passion. *The Journal of Positive Psychology* 5: 452–465.
- Cervinka R, Roderer K and Hefler E (2012) Are nature lovers happy? On various indicators of well-being and connectedness with nature. *Journal of Health Psychology* 17: 379–388.
- Chong CM, Tsunaka M, Tsang HH, et al. (2011) Effects of yoga on stress management in healthy adults: A systematic review. *Alternative Therapies in Health and Medicine* 17: 32–38.
- Deary L, Roche J, Plotkin K, et al. (2011) Intentionality and hatha yoga: An exploration of the theory of intentionality, the matrix of healing—A growth model. *Holistic Nursing Practice* 25: 246–253.
- Deci EL and Ryan RM (2008) Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology/Psychologie Canadienne* 49: 182–185.
- De Michelis E (2005) *A History of Modern Yoga: Patanjali and Western Esotericism*. New York: Continuum International Publishing Group.
- Fishman LM (2007) *Yoga and Multiple Sclerosis: A Journey to Health and Healing*. New York: Demos Medical Publishing.
- Gaitan-Sierra C and Hyland ME (2013) Mood enhancement in health-promoting non-aerobic exercise: The role of non-specific mechanisms. *Journal of Health Psychology*. Epub ahead of print 12 April 2013. DOI: 10.1177/1359105313482163.
- Haaz S and Bartlett SJ (2012) Yoga for arthritis: A scoping review. *Rheumatic Disease Clinics of North America* 37: 33–46.
- Ingledeew DK and Markland D (2008) The role of motives in exercise participation. *Psychology & Health* 23: 807–828.
- Ingledeew DK, Markland D and Medley AR (1998) Exercise motives and stages of change. *Journal of Health Psychology* 3: 477–489.

- Innes KE and Vincent HK (2007) The influence of yoga-based programs on risk profiles in adults with type 2 diabetes mellitus: A systematic review. *Evidence-Based Complementary and Alternative Medicine* 4: 469–486.
- Kassavou A, French DP and Chamberlain K (2013) How do environmental factors influence walking in groups? A walk-along study. *Journal of Health Psychology*. Epub ahead of print 1 December 2013. DOI: 10.1177/1359105313511839.
- Khalsa SB (2007) Yoga as a therapeutic intervention. In: Lehrer PM, Woolfolk RL and Sime WE (eds) *Principles and Practice of Stress Management*. New York: Guilford Press, pp. 449–462.
- Ledford CJW (2012) Exploring the interaction of patient activation and message design variables: Message frame and presentation mode influence on the walking behavior of patients with type 2 diabetes. *Journal of Health Psychology* 17: 989–1000.
- National Center for Complementary and Alternative Medicine (2014) Available at: <http://nccam.nih.gov/health/yoga> (accessed 19 May 2014).
- Park CL, Cho D, Blank TO, et al. (2013) Cognitive and emotional aspects of fear of recurrence: Predictors and relations with adjustment in young to middle-aged cancer survivors. *Complementary Therapy in Clinical Practice* 19: 77–82.
- Penman S, Cohen M, Stevens P, et al. (2012) Yoga in Australia: Results of a national survey. *International Journal of Yoga* 5(2): 92–101.
- Posadzki P and Ernst E (2011) Yoga for low back pain: A systematic review of randomized clinical trials. *Clinical Rheumatology* 30: 1257–1262.
- Posadzki P, Ernst E, Terry R, et al. (2011) Is yoga effective for pain? A systematic review of randomized clinical trials. *Complementary Therapies in Medicine* 19: 281–287.
- Powell L, Gilchrist M and Stapley J (2008) A journey of self-discovery: An intervention involving massage, yoga and relaxation for children with emotional and behavioral difficulties attending primary schools. *European Journal of Special Needs Education* 23: 403–412.
- Prichard I and Tiggemann M (2008) Relations among exercise type, self objectification, and body image in the fitness centre environment: The role of reasons for exercise. *Psychology of Sport and Exercise* 9: 855–866.
- Prochaska JO (2013) Transtheoretical model of behavior change. In: Gellman MD and Turner JR (eds) *Encyclopedia of Behavioral Medicine*. New York: Springer, pp. 1997–2000.
- Quilty MT, Saper RB, Goldstein R, et al. (2013) Yoga in the real world: Perceptions, motivators, barriers, and patterns of use. *Global Advances in Health and Medicine* 2: 44–49.
- Rothman AJ, Baldwin AS and Hertel AW (2004) Self-regulation and behavior change: Disentangling behavioral initiation and behavioral maintenance. In: Baumeister RF and Vohs KD (eds) *Handbook of Self-Regulation: Research, Theory, and Applications*. New York: Guilford Press, pp. 106–124.
- Sandor MK and Froman RD (2006) Exploring the effects of walking the labyrinth. *Journal of Holistic Nursing* 24: 103–110.
- Schwarzer R (2008) Modeling health behavior change: How to predict and modify the adoption and maintenance of health behaviors. *Applied Psychology: An International Review* 57: 1–29.
- Sohl SJ, Schnur JB, Daly L, et al. (2011) Development of the beliefs about yoga scale. *International Journal of Yoga Therapy* 21: 85–91.
- Uebelacker LA, Epstein-Lubow G, Gaudiano BA, et al. (2012) Hatha yoga for depression: Critical review of the evidence for efficacy, plausible mechanisms of action, and directions for future research. *Journal of Psychiatric Practice* 16: 22–33.
- Van Den Berg AE and Custers MHG (2011) Gardening promotes neuroendocrine and affective restoration from stress. *Journal of Health Psychology* 16: 3–11.
- Varambally S and Gangadhar BN (2012) Yoga: A spiritual practice with therapeutic value in psychiatry. *Asian Journal of Psychiatry* 5: 186–189.