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**Daane, Kimberly C. *Yoga as a Means of Increasing Job Satisfaction in the Workplace*****Abstract**

Employees are the backbone of all organizations. The success or failure of an organization often depends on the behavior of its employees (Tsai, 2011). For this reason, it is important that organizations invest in keeping their employees satisfied with their jobs. Many organizations choose to implement wellness initiatives to boost their employees' job satisfaction (Blake & Lloyd, 2008; Schröer, Haupt, & Pieper, 2014). One popular exercise, yoga, has not yet been studied as a way of increasing job satisfaction, though it appears to have great health benefits (Adhia, Nagendra, & Mahadevan, 2010). The purpose of this study was to look at the difference in job satisfaction between those who had practiced yoga and those who had not. A sample of 32 yoga students was surveyed on yoga practice, exercise habits, past yoga experience, and levels of job satisfaction. It was predicted that students who had practiced yoga would have increased levels of job satisfaction. Results of an independent samples  $t$  test did not support the proposed hypothesis. Future studies should focus on controlling for the many variables involved in this research.

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## Chapter I: Literature Review

Organizations that contain employees who are highly satisfied tend to perform better than organizations with employees who are highly dissatisfied (Ostroff, 1992). Low job satisfaction can frustrate employees and cost an organization time and money (Ostroff, 1992). Therefore, it is very important that organizations find ways to promote job satisfaction among employees. Many organizations implement wellness initiatives that involve healthy eating or physical fitness activities with the hope that employees will become more satisfied at work (Tsai, 2011). The benefits of these initiatives have been shown throughout literature on organizations (Chu, Koh, Moy, & Müller-Riemenschneider, 2014; Conn, Hafdahl, Cooper, Brown, & Lusk, 2009; Haslam, Atkinson, Brown, & Haslam, 2005; Verweij, Coffeng, van Mechelen, & Proper, 2011). However, other initiatives, such as those involving yoga, have not been widely studied. The purpose of this study was to look at the link between practicing yoga and job satisfaction among employees. Given the many benefits of physical activity initiatives, meditation, and yoga, it is expected that yoga would also be effective at increasing job satisfaction among employees. This chapter first introduces wellness initiatives as they relate to job satisfaction, then explores physical activity initiatives specifically. Next, an overview of the role of mindfulness and meditation in job satisfaction is provided, leading to yoga as a wellness initiative.

### **Wellness Initiatives**

Literature on workplace wellness shows that implementing wellness initiatives can have a positive impact on job satisfaction in an organization (Blake & Lloyd, 2008; Schröer et al., 2014). Examples of initiatives include: onsite fitness facilities, discounted gym memberships, healthy food in vending machines, and smoking cessation programs (Schröer et al., 2014). Initiatives can be as simple as offering pamphlets on alcoholism or as elaborate as creating an

onsite fitness center or a new cafeteria where chefs make healthy food for employees. While wellness initiatives can offer many benefits to organizations and employees, they must be carefully implemented and thought-out.

Workplace wellness initiatives are an important prevention strategy adopted by organizations to target the health and wellbeing of working age adults (Blake & Lloyd, 2008). Organizations are beginning to implement wellness initiatives in order to create a more efficient workplace. Lifestyle-related health issues affect the economic position of organizations and contribute to reduced productivity and increased absenteeism (Mitchell & Bates, 2011; Schröer et al., 2014). One study showed that absenteeism is significantly associated with the presence of all health conditions and lifestyle health risks (Mitchell & Bates, 2011). This same study also showed that even if workers are not absent due to a health condition, their work task performance at work is often limited due to their health (Mitchell & Bates, 2011).

Research by Schröer and his colleagues (2014) shows that workplace health promotion interventions can improve physical activity, dietary behavior, and healthy weight. After looking at hundreds of studies, reviews, and meta-analyses involving physical activity, healthy weight, and nutrition interventions, Schröer and his colleagues (2014) discovered that the best interventions included more than one wellness activity. For instance, programs that included both physical activity and nutrition changes were more effective in changing employee behavior than just single activity initiatives (Schröer et al., 2014). Healthier employees can be more productive and are less prone to absenteeism, which could save an organization both time and money (Baicker, Cutler, & Song, 2010; Schröer et al., 2014). In fact, it was found that medical costs fall by over three dollars for every one dollar that is spent on wellness programs (Baicker et al., 2010). Absenteeism costs have also been shown to fall by more than \$2.50 for every dollar spent

(Baicker et al., 2010). In order to further increase effectiveness, however, the organization implementing the initiative needs to make additional changes within the organization's culture and communication.

Effective implementation of health initiatives requires a change in organizational health culture through a combination of education, behavior change interventions, needs-based facilities, as well as services and strategies for developing supportive and health-promoting work environments (Blake & Lloyd, 2008). In their research, Blake and Lloyd (2008) found that using the social ecological model to implement a wellness initiative can produce great results for organizations. The social ecological model used included making changes to an organization on multiple levels (individual, environment, and policy). Particularly, two organizations in Great Britain made changes at the individual level (such as fitness classes), the environmental level (creating room for bicycle storage), and at the policy level. By making organizational changes at different levels, employees became more knowledgeable about initiatives and found more ways to participate in different activities. It is also important that employers demonstrate a commitment to health and wellness. This value should be integrated in an organization's mission and long-term vision just to encourage employees to make sustainable lifestyle changes (Blake & Lloyd, 2008). Organizations that make changes to multiple levels of the ecological model (i.e., individual, managerial, and policy) appear to take on a larger commitment to wellness initiatives and have the potential to make a long-term impact on the health of their employees.

Commitment to wellness initiatives can also be demonstrated through an organization's communication with their employees. Employees will be much more likely to participate in wellness initiatives if they are tailored and targeted to specific employees at the right time and place (Kent, Goetzel, Roemer, Prasad, & Freudlich, 2016). Kent and her colleagues (2016)

conducted a literature review, talked to experts about health promotion programs, and visited companies with successful health promotion programs to identify the best practices of health promotion programs. Through this process, the researchers found that good communication is important so organizations can not only market offerings to employees, but they can also educate, motivate, and build trust with their employees (Kent et al., 2016).

Commitment and communication are also vital to actual employee participation in wellness programs that are implemented (Kapinos, Caloyerias, Liu, & Mattke, 2015). Kapinos and her colleagues (2015) conducted a study to find out whether workplace wellness programs could reduce the health care cost for high risk employees (individuals who were at a greater risk of health issues) or employees who have greater participation in wellness activities. In this descriptive study, researchers used a model to calculate the wellness programs' cost effectiveness by looking at health insurance claims made by employees. The findings of this study showed that participants not only needed to participate, but they needed to actively participate in an initiative in order to reduce health care costs to an organization (Kapinos et al., 2015).

Kapinos and her colleagues (2015) also found that primary prevention activities did not reduce the health care costs to an organization, except for employees who actively participated in the activities. This is a key finding, as it shows that organizations will not only need to create an effective initiative, but they will also need to keep employees motivated to continue participating in a wellness initiative consistently over time. One category of wellness initiatives that is often used to keep employees motivated over a long period of time includes physical activity initiatives (Kapinos et al., 2015). Physical activity initiatives are also among the most popular and successful initiatives that are implemented by organizations (Kapinos et al., 2015).

## Physical Activity Initiatives

Many organizations choose to implement wellness initiatives aimed at increasing physical activity among employees. Likewise, many research studies have been conducted to assess the benefits of physical activity interventions in the workplace (Chu et al., 2014; Conn et al., 2009; Haslam et al., 2005; Verweij et al., 2011). There are many different ways to implement a physical activity intervention in an organization; some organizations choose to build an onsite fitness center, while others provide employees with a discount to a local gym. Some initiatives involve creating desks for employees that allow them to stand while they work. Regardless of the intervention, there are many benefits to engaging in physical activity (Conn et al., 2009; Verweij et al., 2011).

From a broad perspective, there have been several meta-analyses conducted which look at the physical and mental effects of physical activity initiatives (Chu et al., 2014; Conn et al., 2009; Verweij et al., 2011). Conn and her colleagues (2009) conducted a meta-analysis of worksite physical activity interventions that occurred between 1969 and 2007. More than 100 worksites and over 38,000 participants were included in this meta-analysis. The researchers found that some physical activity interventions can improve both health and worksite outcomes, such as productivity and job satisfaction (Conn et al., 2009). Conn and her colleagues (2009) also noted that more research is needed in this field, as diverse results were found between studies. Different types of programs need to be compared directly, and conducting cost-benefit analyses of interventions would also be helpful to see if companies are getting sufficient benefits from the programs that they are implementing (Conn et al., 2009). However, many research studies have shown that engaging in physical activity at work can have a number of benefits to employees.

Evidence suggests that workplace physical activity, as well as dietary behavior intentions, have the potential to significantly reduce body weight (Quintiliani, Poulsen, & Sorensen, 2010; Huang, Huang, Li, Wang, Chen, & Tang, 2014; Verweij et al., 2011). Workplace health promotion programs have been shown to be an effective way to improve employees' nutritional habits, promote physical activity, and reduce obesity (Huang et al., 2014). Verweij and colleagues (2011) reviewed 22 studies published between 1980 and 2009. Each of these studies looked at workplace interventions that targeted physical activity and/or dietary behavior on weight outcomes. Their review showed that weight loss contributes to better health, which can lead to decreased absenteeism and greater productivity among employees (Verweij et al., 2011). Further, the researchers also found that when an environment component, such as team competitions or family involvement, is added to an intervention, a greater amount of weight loss can occur (Verweij et al., 2011). The researchers concluded that using a physical activity and a diet intervention, especially while including an environmental component, can be successful in preventing weight gain among employees. The workplace can play an effective part in promoting employee health through improvements in dietary patterns and weight management (Quintiliani et al., 2010).

It also appears that mental health can be improved through physical activity. Chu and her colleagues (2014) conducted a meta-analysis in which the researchers reviewed evidence of the effectiveness of workplace physical activity interventions on mental health outcomes. The researchers found that workplace physical activity programs were associated with a significant reduction in depressive symptoms. Although this result may not seem directly related to the workplace, depression and anxiety can greatly impact performance and safety at work (Haslam et al., 2005). Haslam and his colleagues (2005) conducted several focus groups and found that

employees who suffered from anxiety and depression experienced impaired performance due to their condition and/or medication. After reviewing several meta-analytic studies, it can be concluded that physical activity initiatives can positively impact employees and the entire organization.

Beyond meta-analyses, several individual studies have been conducted that demonstrate the great impact of physical activity initiatives. Based on results from one experimental study, it appears that employees utilize time at work to exercise when it is available to them. Bale, Gazmarairan, and Elon (2015) conducted an intervention study where employees were randomly placed into experimental and control groups. Employees in the experimental group were given 30 minutes of time to exercise during work hours, while those in the control group were not given time. Researchers found that 45% of employees used time at work to exercise when it was given. Participants who felt comfortable taking time off to exercise were 2.8 times more likely to use time to exercise than those who did not feel comfortable taking time off. This research study shows that employers may want to set aside time for all employees to participate in physical activity. Many people are willing to take part in physical activity initiatives if they are given time at work to participate, and if they feel comfortable doing so.

Research has also shown that employees can increase their physical activity at work by simply making small changes to their workday. Mansi, Milosavljevic, Tumilty, Hendrick, Higgs, and Baxter (2015) conducted a study in New Zealand where meat processing factory workers were given pedometers to track their steps each day. The results of this study showed that a pedometer-driven walking intervention, in combination with goal setting and self-monitoring supported by weekly e-mails, is feasible and effective in increasing step count within the workplace over the short term (Mansi et al., 2015). This research showed that interventions do

not have to be large or costly to make a difference. If an organization helps employees become aware of their physical activity, and encourages goal setting and self-monitoring, employees are more likely to engage in a greater amount of physical activity. Further, the use of pedometers outside of work has been shown to increase physical activity (Chan & Tudor-Locke, 2008). This research indicates that initiatives at work could produce greater effects beyond the workplace, which could further increase positive health benefits.

It also appears that the effects of physical activity can last into the long-term. Grande, Cieslak, and Silva (2015) conducted a three-month workplace exercise program in Brazil that aimed at changing health behaviors. This study involved 165 office workers. Results showed that the number of employees who were physically active increased after the workplace exercise intervention. This study showed that engaging in workplace exercise had a significant positive effect on health behavior and willingness to become more physically active. Further, in the long-term, psychological distress is negatively associated with physical activity via low self-efficacy (Watanabe, Otsuka, Shimazu, & Kawakami, 2016). This means that if individuals have higher levels of stress and anxiety, they will be less likely to engage in physical activity because they do not think they will be able to exercise. However, physical activity is also negatively related to psychological distress (Watanabe et al., 2016). This means that once individuals begin to exercise, their levels of anxiety and stress will decrease. These studies show that engaging in physical activity in the workplace promotes employees' physical activity both in the short-term and long-term.

However, not all of the research is supportive of the benefits of physical activity at work. Upon reviewing current literature, it appears that one recent study has shown an ineffective physical activity initiative. Roessler, Rugulies, Bilberg, Andersen, Zebis, and Sjøgaard (2013)

studied the effects of a worksite strength-training program on self-reported workplace factors and job satisfaction. This study did not provide evidence for an effect of the worksite strength-training program on factors of influence at work, sense of community, time pressure, or job satisfaction (Roessler et al., 2013). Although this study did not find any significant positive effects of physical activity in the workplace, the research outlined above overwhelmingly shows that physical activity initiatives are greatly beneficial to both employees and organizations (Bale et al., 2015; Chu et al., 2014; Haslam et al., 2005; Mansi et al., 2015; Roessler et al., 2013; Wantanabe et al., 2016).

The overwhelming support for physical activity initiatives in the workplace suggests that yoga could be beneficial in increasing employee job satisfaction, as it is also a physical exercise. However, another part of yoga involves “mental exercise”, like mindfulness or meditation (Govindaraj, Karmani, Varambally, & Gangadhar, 2016). Although mindfulness is typically not a part of traditional exercises, exercising the brain has also been shown to benefit the body (Kabat-Zinn, 2015). In the next section, the benefits of mindfulness and meditation are detailed, along with their connection to job satisfaction.

### **Meditation, Mindfulness, and Job Satisfaction**

Although the support for physical activity initiatives is strong, yoga is different than other physical activity initiatives in that it is often thought of as a less intense, “calm” form of exercise (Kabat-Zinn, 2015). Yoga often coincides with other activities, such as meditation and relaxation techniques. Many times, yoga sessions involve meditation, along with doing different physical postures and stretching, as well as regulated breathing (Govindaraj et al., 2016). Some people classify yoga as a meditative practice, right alongside Buddhist meditation and transcendental meditation (Wenk-Sormaz, 2005). Meditation is a practice of being mindfully aware of one’s self

in the present moment (Kabat-Zinn, 2015). It can be thought of as a deep state of relaxation, where an individual concentrates on something, such as breathing or counting, and eliminates any other distracting thoughts (Kabat-Zinn, 2015). Meditation is similar to other self-regulation practices, such as biofeedback, where individuals are trained to control body functions, such as their heart rate (Wenk-Sormaz, 2005). Both of these practices require individuals to consciously attempt to control their attention (Wenk-Sormaz, 2005).

After many years of research, meditation has been found to effectively reduce levels of stress, physiological arousal, and psychological anxiety (Kang & Choi, 2009; Wenk-Sormaz, 2005). Wenk-Sormaz conducted a pre-test post-test study looking at whether or not meditation can reduce habitual responding (automatic stress/anxiety response to a stimulus). Participants, Yale students and graduates, were assigned to either a meditation, learning, or rest group, and then randomly assigned to attention and cognitive tasks. Results showed that participants were able to reduce habitual responding when they engaged in meditation. In another study, researchers also found that by practicing medication, nursing students were able to decrease their stress and anxiety (Kang, Choi, & Ryu, 2009).

Workplace stress can often lead to low job satisfaction, so meditation, as well as similar activities like yoga, may be effective at increasing job satisfaction. Research conducted in Thailand has shown that employees who regularly engage in meditation are more likely to report lower levels of job burnout (Charoensukmongkol, 2013). Charoensukmongkol conducted a study in which she distributed an online survey to 93 meditation practitioners and 54 non-practitioners in Thailand. It was found that individuals who practiced meditation were also more equipped to deal with work-related stress and had higher levels of job satisfaction than those who did not practice meditation (Charoensukmongkol, 2013). Shiba, Nishimoto, Sugimoto, and Ishikawa

(2015) conducted two studies and found that practicing meditation can positively influence many aspects of job performance, including job satisfaction, subjective job performance, and engagement at work.

Mindfulness, which is an introspective consciousness, is often taught in meditation. Mindfulness can reduce anxiety, and, studies have found that mindfulness can help to reduce the anxiety of employees who are in situations of employment uncertainty (Hugh-Jones, Rose, Koutsopoulou, & Simms-Ellis, 2017; Jacobs & Blustein, 2008). Lack of job security, job flux, and at-will employment policies all have the potential to cause an employee to have feelings of stress. This is important, as work-related stress is often associated with consequences for both individuals and organizations, such as lowered job satisfaction, elevated turnover intentions, and increased cardiovascular risk (Jacobs & Blustein, 2008). By practicing meditation, individuals can reduce their stress and anxiety levels. This has the potential to positively affect the physical and mental health of the individual. The individual's company will also see benefits as the employee will probably become more satisfied with his or her job, leading to greater productivity and less risk for turnover (Jacobs & Blustein, 2008).

Additional experimental studies have been conducted that look at the efficacy of meditation in the workplace. Anderson, Levinson, Barker, and Kiewra (1999) conducted a study which looked at the effects of meditation on teachers' levels of stress. In this study, 91 teachers were randomly placed into control and experimental groups. In between the pre- and post- tests, teachers in the experimental group engaged in a 5-week meditation class, while the control group did not receive an intervention. The researchers found that meditation significantly reduced the amount of teachers' perceived stress (Anderson et al., 1999). Further, the researchers noted that meditation only needed to be practiced 2-5 times per week to have an effect on stress levels, and

that it may be beneficial for school psychologists to assist teachers in practicing meditation and other stress-reduction techniques (Anderson et al., 1999). This study shows that practicing meditation just a few times per week may greatly affect employees' levels of stress. Meditation is clearly a promising avenue for reducing stress, increasing focus and awareness, and increasing job satisfaction (Wongtongkam, Krivokapic-Skoko, Duncan, & Bellio, 2017). Yoga and meditation share many similarities in practice, so it is argued that yoga could yield similar positive effects for employees in the workplace.

### **Yoga as a Wellness Initiative**

Interventions aimed at increasing physical activity, meditation, and mindfulness have been widely studied, and research has shown their many positive effects. Despite the recent popularity of yoga and research that supports its benefits (Adhia, Nagendra, & Mahadevan, 2010), yoga has not been studied as a means of improving job satisfaction within organizations. Yoga is a great form of exercise that can be performed by individuals of all ages, in many different locations, and without any equipment. This makes yoga an optimal choice of exercise for organizations to implement.

Yoga has been shown to improve many health issues including anxiety, stress, and immune function (Diamond, 2012). Yoga has the ability to positively impact the body's endocrine and immune systems. This means, by practicing yoga, an individual can decrease their chances of illness, disease, and even death (Diamond, 2012). Practicing yoga is affordable and can be done by individuals of all abilities. This makes it an ideal activity for people to do anytime and anywhere. Yoga alone, and with integration of mindfulness techniques, has also been shown to lower levels of stress and improve sleep quality (Diamond, 2012; Wongtongkam

et al., 2017). An individual can become healthier and a more engaged and efficient employee through practicing yoga (Diamond, 2012).

Yoga appears to be more effective than traditional physical fitness exercises in some ways (Ross & Thomas, 2010). Research shows that yoga may be as effective as or better than traditional forms exercise at improving a variety of health-related outcome measures (Ross & Thomas, 2010). Ross and Thomas (2010) reviewed eighty-one studies as a part of a meta-analysis, including those involving the keyword “yoga” published in clinical and nursing journals after 1970. Their results showed that yoga interventions appeared to be equal or superior to exercise in nearly every outcome measured. For example, yoga was more beneficial than exercise in reducing stress, fatigue, and pain (Ross & Thomas, 2010). Yoga was also better than traditional forms exercise at increasing quality of sleep in both healthy and diseased populations (Ross & Thomas, 2010).

Even though yoga may be more beneficial than traditional exercise and fitness routines, there are very few research studies that look at the effectiveness of yoga initiatives in the workplace. However, a few recent studies have looked at how yoga reduces stress and fatigue in the workplace. Yoga and mindfulness interventions have been shown to improve perceived levels of stress and sleep quality (Wolever et al., 2012; Wongtongkam et al., 2017). Wolever and her colleagues conducted a study where 239 full-time professionals were randomly assigned to either a therapeutic yoga stress reduction program, a mindfulness program, or a control group with no intervention. All groups completed pre- and post-tests regarding their levels of stress. Individuals in the intervention groups saw significant improvements in their stress levels and quality and quantity of sleep (Wolever et al., 2012).

Fatigue, a variable similar to stress, was also found to be reduced by yoga and breathing exercises. Latha (2003) conducted a pre-test post-test study where software professionals, executives, academicians, and students were asked to complete a fatigue inventory. A subset of the sample then underwent training classes in yoga posture and breathing exercises. This group was compared to those who did not undergo this training. This study showed that yoga posture and breathing exercises can reduce levels of general fatigue (Latha, 2003). Researchers have also found that mindfulness exercises can be a promising intervention for treating anxiety and depression (Hofmann, Sawyer, Witt & Oh, 2010). Although these studies did not look at job satisfaction, fatigue, anxiety, and stress can play a role in how satisfied employees feel at work (Latha, 2003).

Only one study was found that reviewed an actual measure of job satisfaction. A study conducted by Suchipriya and Singh in 2001, looked at the relationship between spiritual practices on attitude building and job satisfaction. The researchers examined the opinions of managers in India to determine the relationship between spiritual practices (meditation, relaxation, yoga, ethical virtues), attitude building, and job satisfaction. The researchers in this study included yoga in their set of “spiritual tools”. Researchers found a very small positive correlation between the use of spiritual tools and attitude building. This indicated that employees did not strongly consider spiritual tools as a means to attain job satisfaction (Suchlpriva & Singh, 2001). This study had a weak result and it was only correlational, so it is very possible that yoga may actually have greater effects in the workplace than what this study shows. In order to see the effects of yoga interventions, more research needs to be conducted to examine how yoga may impact aspects of the workplace, especially in terms of job satisfaction.

## The Current Investigation

Through reviewing the literature, it appears that yoga initiatives in the workplace may have the ability to create a positive change in job satisfaction among employees. The current research study looked at whether or not practicing yoga could increase employees' levels of job satisfaction. Specifically, this study aimed to find a link between practicing yoga and employee job satisfaction. In order to find this link, the current research investigated yoga through a survey study involving a sample of students from yoga studios in the Midwestern United States. Students took an online survey in which they indicated their current levels of job satisfaction, exercise habits, past yoga experience, and other variables.

This study aimed to answer three research questions. First, what is the difference in job satisfaction prior to practicing yoga and after practicing yoga? Secondly, how do participants perceive the usefulness of practicing yoga? Finally, what are the employees' satisfaction with the yoga sessions? These questions were intended to be answered by using a pre-test post-test yoga intervention. However, due to issues with data collection, only the pre-test survey was captured. This pre-survey sample was divided into two groups based on the participants' amount of yoga experience. Due to this, only the first research question was able to be answered, but it was revised to "What is the difference in job satisfaction between the New to Yoga and Past Yoga Experience groups?" Based on previous research on meditation, yoga, wellness initiatives and job satisfaction, the researcher hypothesized that employees who engaged in yoga would see an increase in job satisfaction over those who had not practiced yoga.

## **Chapter II: Methodology**

This chapter introduces the method that was used to look at the effects of practicing yoga on job satisfaction among employed yoga students. The method used in this study was an online survey sent to yoga students at two different yoga studios. Thirty-two participants responded to the online survey, which were divided into two group based on how long they had previously practiced yoga. Data were then analyzed to compare the two groups on levels of job satisfaction. The following sections outline the participants that were collected, measures used, and data collection procedures.

### **Participants**

Part of the sample of employees used in this study was located via a yoga studio located in Minneapolis, MN. The yoga studio, Incorporate Yoga, is a completely mobile studio that specializes in leading yoga classes for organizations. Typically, Incorporate Yoga will travel to a workplace and hold a series of yoga classes for employees. Usually a series consists of one session a week for 8-10 weeks. Incorporate Yoga usually holds classes at more than one organization running at the same time, and these organizations are typically comprised of office and health care workers.

The second yoga studio used to survey participants was Latitude 44 Yoga, which is located in Eau Claire, WI. Unlike Incorporate Yoga, Latitude 44 serves a much broader population. Latitude 44 has a brick and mortar location located in the center of a small city. The classes offered at Latitude 44 vary based on experience, age, and length. Some classes last a number of weeks, while others are ongoing. Students can pay for a series of classes up front or as they go.

The entire sample was comprised of 28 females, 3 males, and one participant who chose not to answer. This is a slightly higher ratio of women to men than the estimate that about 85% of yoga practitioners are women (Ross, Friedmann, Bevans, & Thomas, 2013). Eighteen participants took their classes at Incorporate Yoga, and 14 participants took their classes at Latitude 44. Eleven participants had some college as their highest level of education completed. Ten participants had 4-year degree as their highest level of education completed. Eight participants had Master's degree as their highest level of education completed. One participant had Doctoral degree as their highest level completed, and two participants chose not to answer. In other words, about 63.3% of the sample had an education level of at least a Bachelor's degree. This is actually slightly lower than the estimate that about 87.4% of yoga practitioners have at least a Bachelor's degree (Ross et al., 2013). See Table 1 for a look at the data on education level.

Twenty-five participants said they worked full time, five participants said they worked part time, one participant chose not to answer, and one participant chose "other" and stated that they currently worked at an internship. Twenty-eight participants stated that their job is primarily comprised of desk work. Three participants chose "other", with one stating that their job is comprised of both, one stated that they worked in nursing, and one stated that they worked in research. Thirty of the 32 participants disclosed their age. Also, 23.3% of the 30 participants had an age of 34 or 36. The average participant age was 36.83 ( $SD = 12.52$ ).

Table 1

*Highest Degree Completed*

Response	Frequency	Percentage
Some college	11	36.7
4-year degree	10	33.3
Master's degree	8	26.7
Doctoral degree	1	3.3

Fourteen participants stated that they have attended two or more classes with either Incorporate Yoga or Latitude 44. Eight participants stated that they had attended four classes, six participants said they had taken five classes, two participants said they had taken three classes, one participant took two classes before the survey, and one person had not taken any classes prior to the survey.

Twenty-four participants (75%) said that they had practiced yoga in the past. Sixteen of these 24 participants said that they tried yoga but did not practice routinely. The remaining eight participants said they practiced routinely in the past. The past routines of these eight participants varied with time frames between one month and 15 years, and inconsistent practicing to practicing several times a week. Eighteen participants said that this was their first time attending sessions at either Incorporate Yoga or Latitude 44.

Twenty-one participants (65%) said that they exercised regularly outside of yoga sessions. The type of exercise varied with participants engaging in walking, cardio, personal training, running, biking, kayaking, and swimming. Of these participants, 25% said that they exercised four or five hours per week. About 20% of these participants said they exercised six or seven hours a week. One person stated that they exercised 250 hours per week. This response

was removed as there only 168 hours in a week. The average time spent exercising per week was 6.72 hours ( $SD = 5.13$ ).

## Materials

Participants were surveyed on their current physical activity practices, current participation in yoga classes, past experience with yoga, as well as aspects of job satisfaction. Additionally, demographic information was collected from participants. All of this information was asked in a single online survey that was emailed to participants.

**Job Satisfaction Survey.** The Job Satisfaction Survey (Spector, 1985) was used to measure job satisfaction of participants. The Job Satisfaction Survey is a 36-item scale ( $\alpha = .91$ ) which measures overall job satisfaction, calculated by satisfaction with nine job-related facets. There are four items for each of the nine facets These facets include: pay ( $\alpha = .75$ ), promotion ( $\alpha = .73$ ), supervision ( $\alpha = .82$ ), fringe benefits ( $\alpha = .73$ ), contingent rewards ( $\alpha = .76$ ), operating procedures ( $\alpha = .62$ ), coworkers ( $\alpha = .60$ ), nature of work ( $\alpha = .78$ ), and communication ( $\alpha = .71$ ; see Appendix A). Sample questions include, “I feel a sense of pride in doing my job” and, “When I do a good job, I receive the recognition for it that I should receive”.

**Yoga practice questions.** All employees were surveyed on their current physical activity practices and current and past participation in yoga classes. Additionally, employees were asked how many yoga sessions they plan on attending, and how invested they intended on being during the yoga sessions (see Appendix B).

**Demographic questions.** Questions regarding participants’ demographics were also asked. These included participants’ job title, age, gender, and education level (see Appendix C). These questions aimed to divide participants into categories that were used to compare levels of job satisfaction.

## **Data Collection Procedures**

Data collection began in January 2017 with Incorporate Yoga. All students attending a new yoga session were told about the study, and that participation was voluntary. All potential participants were sent an email with a link to the online survey. It is estimated that about 50 students were given a link to the survey. The survey introduced the study and that participation was voluntary and that their responses would be kept confidential. After a few months of data collection, 21 responses were collected for the pre-survey. Although this was a pre-survey intended to capture responses from new yoga students, many of the participants had a lot of past experience practicing yoga. Additional pre-survey responses were unable to be collected from this yoga studio, and the post-survey was not sent due to participants having a high amount of past yoga experience.

In order to collect additional responses, another yoga studio, Latitude 44 Yoga, was contacted to assist in collecting data. As with Incorporate Yoga, participants were told about the study and that their participation was voluntary. Interested participants were sent a link to the online survey. After two months, about 17 responses were collected. Participants were also sent reminder emails two days after the initial email. Many of these responses were from participants that were brand new to yoga. The post-survey was sent to these same individuals, but only one response was received back. Data collection ended in October 2017.

## Chapter III: Results

The purpose of this study was to find a link between practicing yoga and employee job satisfaction. Specifically, the aim of this study was to attempt to find a difference in job satisfaction between the New to Yoga and Past Yoga Experience groups. This section describes how the data was collected, cleaned, and then analyzed to look at differences in job satisfaction between groups, along with other variables.

### Data Cleaning

As only one response was received on the post-survey, the data could not be analyzed, and thus, the pre-survey was used exclusively for data analysis. The data was exported from the online survey tool, Qualtrics, and imported into SPSS and cleaned. A single outlier for the question regarding hours per week spent exercising was removed. A participant stated that they spend 250 hours per week exercising, which is not possible. Three participants were not currently employed, and they were automatically removed from the survey.

The sample was divided into two groups based on the length of time between the day of their first yoga session and the date they took the survey. For the purposes of this paper, the two groups will be referred to as “New to Yoga” and “Past Yoga Experience”. The New to Yoga group was comprised of participants who had taken one month or less of classes. The Past Yoga Experience group was comprised of participants who had taken more than one month of classes before taking the survey. The two groups ended up being equally divided with 16 members in each group.

In order to conduct the independent-samples  $t$  test, job satisfaction questions that were worded negatively were recoded so that a high agreement score would indicate a low satisfaction score. This is important so that all questions, regardless of how they are worded, indicate a high

score meaning high satisfaction. After variables were recoded, a total mean variable was computed that encompassed all of the job satisfaction questions. Analyses was then performed to answer the research question, “What is the difference in job satisfaction between the New to Yoga and Past Yoga Experience groups?”

### **Hypothesis Testing**

An independent samples *t* test was performed using the computed overall job satisfaction score and the two groups, New to Yoga and Past Yoga Experience. The results of the *t* test show that there was not a significant difference between the scores of the New to Yoga ( $M = 4.46$ ,  $SD = .56$ ) and the Past Yoga Experience ( $M = 4.24$ ,  $SD = .75$ ) groups;  $t (30) = .96$ ,  $p = .352$ . These results indicate that the variability in the two groups is about the same.

**Additional research questions.** There were two additional research questions planned for this study. The second research question was, “How do participants perceive the usefulness of practicing yoga?” Unfortunately, because only the pre-survey received responses, data were not received to analyze this question. The third research question was, “What are the employees’ satisfaction with the yoga sessions?”. As with the second research question, data were not received to analyze this question. There were no questions asked on the pre-survey that could be analyzed to look at this research question.

**Analyses of demographics.** The demographic information was further explored, and independent sample *t* tests were run to examine differences in job satisfaction between certain groups. An independent samples *t* test was performed using the total job satisfaction mean score and yoga class locations. The results of the analysis show that there was a non-significant difference between the scores of the Incorporate Yoga ( $M = 4.39$ ,  $SD = .71$ ) and the Latitude 44

( $M = 4.30$   $SD = .61$ ) groups;  $t (30) = .37$ ,  $p = .721$ . These results indicate that the variability in the two groups is about the same.

Regular exercise was also analyzed as it relates to job satisfaction. This question is of particular interest because exercise has been shown to increase job satisfaction (Conn et al., 2009). An independent samples  $t$  test was performed to see the difference in job satisfaction between those who exercised regularly and those who did not. The results show that there was not a significant different between the 21 people who exercised regularly ( $M = 4.42$ ,  $SD = .66$ ) and the 11 participants who did not ( $M = 4.20$ ,  $SD=.67$ );  $t (30) = .89$ ,  $p = .381$ . These results indicate that the variability in the two groups is about the same.

Overall, the results show that there were no significant differences between individuals in their levels of overall job satisfaction based on length of time of yoga practice, past yoga experience, exercise habits, and other variables. In the next chapter, these results will be discussed. While yoga did not significantly improve job satisfaction, it is likely that the limitations in this study contributed to the findings.

## **Chapter IV: Discussion**

The purpose of this study was to explore the difference in job satisfaction between those who had practiced yoga and those who had not. Thirty-two participants responded to an online survey regarding their past yoga experience, exercise habits, and job satisfaction. Due to issues with data collection, only one research question could be answered, “What is the difference in job satisfaction between the New to Yoga and Past Yoga Experience groups?” The following sections outline a general discussion of the study’s results, an explanation of the limitations of the study, and suggestions for future research. The underlying cause of many of the limitations with this study stems from issues with data collection. These issues will be discussed further in this section, along with recommendations to avoid these issues in future research.

First, the overall mean job satisfaction score was similar for new and experienced yoga students. Unfortunately, due to data collection issues, the post-survey was not able to be sent to participants. The post-survey contained questions that were designed to answer hypotheses two and three. Due to this, hypotheses two and three were unable to be analyzed.

In an exploratory manner, job satisfaction scores were compared between different groups within the following variables: the location of yoga classes and exercise outside of yoga classes. Again, results revealed that job satisfaction was similar for all groups compared. These results were somewhat surprising, especially for the variable regarding exercise outside of yoga practice, because there is literature that shows that exercise can increase job satisfaction (Conn et al., 2009). However, other factors have also been shown to greatly influence employees’ job satisfaction. For example, it appears that stress, stability of work schedule, coworker relations, the nature of the work, pay and promotion opportunities can all have a strong influence on levels

of job satisfaction (Jorde-Bloom, 1988; Shader, Broome, Broome, West, & Nash, 2001). The following section outlines the limitations of the study, including the control of outside factors.

## **Limitations**

There were a number of limitations in this study that involved the control of outside variables such as sample size and demographics, time between yoga practice and the survey, and the location of the samples. First, this study had intended on being a pre-test post-test study which would employ a paired samples *t* test. In other words, the intent was to survey the same group of participants with a pre-survey prior to practicing yoga, followed by a separate post-test after practicing yoga for about a month. However, data collection proved challenging, as many of the participants were experienced with yoga, as opposed to the “brand new” participants that were anticipated. When data collection at the first yoga studio was exhausted, another yoga studio was contacted to collect more data. Due to the use of a new group of participants, employing a paired samples *t* test was not possible. As indicated above, respondents elected to complete only the initial pre-survey, and so post-survey data was unknown. There were enough participants who had taken many classes (over one month) to be used as the Past Yoga Experience, but no data was collected on the designed post-survey. This is a limitation because hypotheses two and three were unable to be analyzed. The time between participants’ first yoga class and the survey was also an issue, as a number of participants stated that it had been greater than 6 months since their first class. Other participants stated that it had been one month, two months, or just a few days since their first session.

The location of the samples themselves are also a limitation. As stated, two different yoga studios were used to enroll participants in this study. This is a limitation for many reasons. First, these yoga studios were different. The initial yoga studio, Incorporate Yoga, aimed to serve

employees at organizations and the studio actually traveled to organizations to hold classes. Incorporate Yoga is also located in a large metropolitan area, Minneapolis, MN. Many of Incorporate Yoga's clients come from large organizations or corporate campuses. On the other hand, Latitude 44 Yoga is located in a smaller city and serves a broader population, and is not focused exclusively on the employee population. While Incorporate Yoga had a lot of participants with higher education levels, Latitude 44 Yoga had a more diverse population, with many participants stating that some college was their highest level of education. Participants in both the Past Yoga Experience and New to Yoga groups had taken different classes from different instructors at different locations. The fact that these samples were dissimilar makes it difficult to say that practicing yoga would cause a difference in job satisfaction.

Finally, a small sample size was an issue here. It is likely that a sample of 32 participants was not large enough to see a significant difference between groups. It is possible that job satisfaction might not actually be influenced by practicing yoga, as the researcher in this study found. However, due to the limitations with data collection and the sample, the findings should be interpreted with some caution. A number of recommendations for future research are offered below based on the experience of conducting the current study.

### **Recommendations for Future Research**

Future studies should focus on controlling the many factors involved in this study. Specifically, the sample should be one large group of brand new yoga students. They should all be surveyed at the same time, before practicing yoga, and again after practicing yoga. All participants should take the same number of classes by the same instructor. All of these details are very important as a more controlled environment is necessary in order to not only to conduct the study as planned, but to also obtain significant results that would be useful.

Another consideration for future research is the use of a control group. This means that an additional group would be surveyed that does not receive any intervention. By doing so, researchers could get a better look at how practicing yoga at any or multiple amounts, compares to not practicing yoga at all. This would, however, require a larger sample, and one that would ideally contain those who do not practice yoga at all, and those practicing yoga regularly. It could be difficult in finding this sample at a single location.

Future researchers may also want to consider looking at other variables. For example, it is possible that the meditation aspect of yoga could impact individuals in different ways. Some individuals might find meditation to be a stronger influence than the physical exercise portion of yoga, so it may be worth looking at different levels and types of meditation within yoga. Some individuals may find that they receive more benefit from yoga by practicing at a different location (i.e. at home or outdoors) or at a different time of day, such as before work.

Further, practicing yoga for only a few minutes during the workday could yield some benefits. So called “office yoga” sessions, where employees do simple stretches and breathing exercises at their desks, have become increasingly popular in recent years (Capitolo, 2013; Coles, 2017). Future researchers may want to look into making small changes in the workday, as these types of yoga sessions do not have to take a lot of time or expertise, and they can be done at the convenience of the employee. Researchers should consider altering the location of yoga practice and the time of day yoga is practiced, as these factors could impact employees’ levels of job satisfaction in different ways.

## **Conclusion**

The purpose of this study was to explore the difference in job satisfaction between those who had practiced yoga and those who had not. After several months of data collection, data was

analyzed. Findings indicated that both beginner and experienced yoga users experienced similar high levels of job satisfaction. The two remaining research questions regarding the perceived usefulness and satisfaction with the yoga sessions were unable to be answered. Based on these findings, it is inconclusive as to whether yoga has a direct effect on job satisfaction.

There were several limitations in this study related to data collection, the use of multiple yoga studios and participant pools, the inability to collect data with the created post-survey, and the sample and sample size. These limitations greatly inhibited the possibility of significant findings to the research questions. Several recommendations are offered for future research, including the need to survey a larger, new-to-yoga group of participants from one yoga studio, and similar pre-class yoga experience, and standardized class experiences. Despite the lack of significant findings, looking at the effects of practicing yoga on job satisfaction remains an area that needs to be researched further. Those who practice yoga may experience greater job satisfaction, which may yield positive benefits for both employees and organizations.

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### Appendix A: Job Satisfaction Survey

<b>JOB SATISFACTION SURVEY</b> Paul E. Spector Department of Psychology University of South Florida Copyright Paul E. Spector 1994, All rights reserved.							
<b>PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT.</b>		Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much					
1	I feel I am being paid a fair amount for the work I do.	1	2	3	4	5	6
2	There is really too little chance for promotion on my job.	1	2	3	4	5	6
3	My supervisor is quite competent in doing his/her job.	1	2	3	4	5	6
4	I am not satisfied with the benefits I receive.	1	2	3	4	5	6
5	When I do a good job, I receive the recognition for it that I should receive.	1	2	3	4	5	6
6	Many of our rules and procedures make doing a good job difficult.	1	2	3	4	5	6
7	I like the people I work with.	1	2	3	4	5	6
8	I sometimes feel my job is meaningless.	1	2	3	4	5	6
9	Communications seem good within this organization.	1	2	3	4	5	6
10	Raises are too few and far between.	1	2	3	4	5	6
11	Those who do well on the job stand a fair chance of being promoted.	1	2	3	4	5	6
12	My supervisor is unfair to me.	1	2	3	4	5	6
13	The benefits we receive are as good as most other organizations offer.	1	2	3	4	5	6
14	I do not feel that the work I do is appreciated.	1	2	3	4	5	6
15	My efforts to do a good job are seldom blocked by red tape.	1	2	3	4	5	6

16	I find I have to work harder at my job because of the incompetence of people I work with.	1 2 3 4 5 6
17	I like doing the things I do at work.	1 2 3 4 5 6
18	The goals of this organization are not clear to me.	1 2 3 4 5 6

<p style="text-align: center;"><b>PLEASE CIRCLE THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT.</b></p> <p style="text-align: center;">Copyright Paul E. Spector 1994, All rights reserved.</p>		Disagree very much Disagree moderately Disagree slightly Agree slightly Agree moderately Agree very much					
19	I feel unappreciated by the organization when I think about what they pay me.	1	2	3	4	5	6
20	People get ahead as fast here as they do in other places.	1	2	3	4	5	6
21	My supervisor shows too little interest in the feelings of subordinates.	1	2	3	4	5	6
22	The benefit package we have is equitable.	1	2	3	4	5	6
23	There are few rewards for those who work here.	1	2	3	4	5	6
24	I have too much to do at work.	1	2	3	4	5	6
25	I enjoy my coworkers.	1	2	3	4	5	6
26	I often feel that I do not know what is going on with the organization.	1	2	3	4	5	6
27	I feel a sense of pride in doing my job.	1	2	3	4	5	6
28	I feel satisfied with my chances for salary increases.	1	2	3	4	5	6
29	There are benefits we do not have which we should have.	1	2	3	4	5	6
30	I like my supervisor.	1	2	3	4	5	6
31	I have too much paperwork.	1	2	3	4	5	6
32	I don't feel my efforts are rewarded the way they should be.	1	2	3	4	5	6
33	I am satisfied with my chances for promotion.	1	2	3	4	5	6
34	There is too much bickering and fighting at work.	1	2	3	4	5	6
35	My job is enjoyable.	1	2	3	4	5	6
36	Work assignments are not fully explained.	1	2	3	4	5	6

## Appendix B: Yoga Practice Questions

### Pre-test

1. Have you practiced yoga in the past?

Yes

No

- a. (LOGIC) When? And in what way?
2. On average, what is the total number of hours you spend exercising per week **outside** of yoga? \_\_\_\_\_
3. How many total hours do you spend practicing yoga each week? \_\_\_\_\_
4. How many yoga sessions do you plan on attending? \_\_\_\_\_
5. How invested do you intend to be during the yoga sessions?

### Appendix C: Demographic Questions

1. What is your current job title? \_\_\_\_\_
2. What is your age? \_\_\_\_\_
3. What is your gender?
  - a. Male
  - b. Female
  - c. Other: \_\_\_\_\_
  - d. I prefer not to answer
4. What is the highest level of education you have completed?
  - a. Less than High School
  - b. High School / GED
  - c. Some College
  - d. 4-year College Degree
  - e. Master's Degree
  - f. Doctoral Degree
  - g. Other: \_\_\_\_\_