OUTCOMES OF AN INTEGRATED JOURNALING AND MINDFULNESS PROGRAM ON A US UNIVERSITY Campus

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Abstract
The goal of the present study was to implement and investigate a positive psychology program based on journaling and mindfulness on a US campus. As a result of this program, there was a statistically significant increase in mindfulness among the participants. Qualitative analysis of verbal responses revealed that all participants perceived the sessions as beneficial for relaxation, peace of mind, and increase in positive thoughts and emotions. Thus, journaling and mindfulness techniques can be successfully incorporated into college life to increase psychological well-being of student population, reduce stress, and improve overall college atmosphere.

Cuvinte-cheie: jurnalizare, atenție/grijă, stare psihologică de bine, sporirea gândurilor și emoțiilor pozitive.

Key words: journaling, mindfulness, psychological well-being, enhancing positive thoughts and feelings.

1. INTRODUCTION

Mindfulness in its very general meaning can be defined as a state of paying attention in a non-judgmental way and being aware of the here and now of our experience. It is the opposite of mindlessness, or running your life on an “automatic pilot”, and being unconscious of what is going on inside of you and in the external world. “Mindfulness is a lifetime’s journey along a path that ultimately leads nowhere, only to who you are” (Kabat-Zinn, 2009). In its more narrow sense it usually means “mindfulness meditation”, or a specific method of learning to consciously pay attention to our inner world and not being distracted by the constant brain chatter, which is characteristic of being mindless (Shapiro, Schwartz & Santerre, 2002). For the purposes of the present study we will use the term to mean both the state of being mindful and various techniques used to achieve this state. We intentionally avoided or limited the use of the word “meditation” as it may have invoked some negative connotations associated with New Age or Buddhism and may have been misinterpreted by the participants of our study.

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We chose to introduce mindfulness sessions on a university campus for several reasons. First, hundreds of empirical studies demonstrated the beneficial effects of mindfulness in treating depression, anxiety, chronic pain, insomnia, substance abuse, heart disease, eating disorders, etc. (for a review see Zinn-Kabat, 1990; Shapiro & Carlson, 2009; Newberg & Waldman, 2009).

The reason that we believed that our students needed to be introduced to mindfulness is based on the statistics for US students in general and for Arkansas State University students in particular. The national estimate is that fifty percent of all college students reported feeling so depressed in the past year that their daily functioning was negatively affected (Kadison & DiGeronimo, 2004; Half of Us, 2008; The Jed Foundation, 2010). The past ten years the American College Health Association has surveyed college students and reports that stress is listed by college students as the number one barrier to academic success (American College Health Association and National College Health Assessment, 2009).

Through informal assessment and regular needs assessment surveys conducted, ASU students’ report stress to be a major problem in their lives, matching the national statistic. They also name stress as one the main reasons to seek services at the ASU Counseling Center.

Each semester the ASU Counseling Center provides a depression and anxiety screening for students. Typically, about a total of 400 students participate with approximately 30 percent meeting the criteria for clinical depression, general anxiety disorder or co-morbid depression and general anxiety disorder. The above statistics demonstrate the need for students to learn more healthy ways of coping with academic and life challenges. However, only about 25 percent of those meeting the criteria seek professional help because of the stigma attached to counseling, that is, embarrassment that others may find out, fears about being labeled crazy, and concerns about confidentiality (Tartakovsky, 2008; Ross, Niebling & Heckert, 1999). We hoped that our mindfulness sessions would not cause any negative associations in the participants.

Second, with the growth of positive psychology, more research has been conducted on positive effects of mindfulness in healthy populations that include enhancing compassion, peace of mind, joy, forgiveness, and improving memory and cognition (Newberg & Waldman, 2009). As a result, mindfulness has been described as one of the key interventions for achieving happiness and long-lasting psychological well-being. It has been included in all of the major books and textbooks on positive psychology (Baumgardner & Crothers, 2009; Compton, 2005; Haidt, 2006; Snyder & Lopez, 2007).

Finally, cultivating mindfulness has many advantages over more traditional and popular ways for treating mental and physiological problems and for increasing well-being (e.g., medicine, massage, exercise, or traveling). It is cheap, does not require special equipment, can be done almost anywhere and by people of all ages and cultures, alone or as a group. Haidt (2006) compares it to a pill that is all natural, costs nothing and has numerous positive side effects.
Mindfulness is usually associated with Buddhist tradition and is becoming more and more popular in the Western world yet it is not fully taken advantage of despite its numerous benefits. It is quite uncommon in certain parts of this country, especially in the Southern states known as the “Bible Belt” dominated by the culture of Protestantism because it is viewed as a part of a belief system different from Christianity. Our university is located in one of the Bible Belt states, thus, the fundamental research question was whether our positive psychology project based on mindfulness will even be successful on our campus. (As was stated above, when designing this project, we were careful to avoid terms like “meditation” and used more neutral nonsectarian language like “mindfulness”).

There are different types of mindfulness techniques that may fit individual preferences and one’s level of proficiency in this skill. The most common is mindfulness meditation where “an attempt is made to attend nonjudgmentally to all stimuli in the internal and external environment but not to get caught up (ruminate on) any particular stimulus” (Shapiro, Schwartz & Santerre, 2002, p. 633). It is usually done in a sitting position, but can also be practiced while walking, dancing (e.g., Sufi dervishes), and doing almost any kind of a routine activity like eating. Although it sounds easy, it is an extremely difficult task for an inexperienced practitioner whose untrained mind habitually will try to distract him/her from focusing on the here and now by weaving stories and running “reverberating loops of negative thought and emotion” (Taylor, 2006).

Because the majority of the student population at ASU is not familiar with the practice of mindfulness meditation per se, we chose to use gentler techniques that would gradually and slowly teach them to first become more consciously aware of the workings of their mind, then learn to focus on positive thoughts and images, and finally introduce them to a few minutes of silent mindful meditation. Thus, we chose a quiet and pleasant location in one of the rooms of the Student Union where the participants can sit in a comfortable chair and be exposed to a variety of mindfulness exercises: following suggestions for guided meditation and visualization, focusing on breathing, listening to music or nature sounds, and/or repeating positive affirmations.

In addition to mindfulness methods per se, another component of our sessions was journal writing, which served as a preliminary stage to mindfulness and helped students prepare their minds for the subsequent mindfulness exercises. The reason that we incorporated journaling into our study was two-fold. On the one hand, in terms of their benefits they have lots in common: journaling helps focus on one’s inner world, increase positive thoughts and decrease negativity. In addition to numerous psychological benefits, it enhances physical health (Pennebaker, 1997) and academic performance, for example, it helps high-school students become more active in their pursuit of learning (Scherer, 2002). On the other hand, journaling shares several advantages listed above for mindfulness: it is cheap, does not require special equipment, can be done almost anywhere and by people of all ages and cultures.
The two types of journaling (based on their content and objectives) that we incorporated into our study were gratitude and reappraisal. Research by positive psychologists revealed that writing about positive events – “three good things in life” – increases happiness and decreases depressive symptoms for six months (Seligman, Steen, Park & Peterson, 2005). Thus, on a good day we encouraged our participants to write about their positive experiences. However, when one is upset and cannot really feel positive, it helps to acknowledge these feelings and to be honest with oneself (Niederhoffer & Pennebaker, 2002). According to Pennebaker (1997), it is not just the act of writing about an upsetting event and letting off the steam that has positive effect but rather making sense out of it. Thus, we suggested to our participants that on a day when they were upset, they honestly share their thoughts and feelings in a confidential writing and then try to change their attitude about what happened (if possible).

And finally, we attempted to use two biofeedback techniques in our study in order to provide the students and ourselves with some empirical data that would demonstrate how efficient the practice of journaling and mindfulness would be. All of our participants were offered a Biodot skin thermometer (Biodot Skin Thermometers, 2008) that measured skin temperature and provided some visible feedback on the level of stress or relaxation. Some of our participants experimented with EmWave Personal Stress Reliever (emWave Personal Stress Reliever, 2010), a device that shows the effects of stress and/or relaxation on one’s body by measuring and displaying subtle changes in one’s heart rhythms.

2. PURPOSE OF THE PRESENT STUDY

Previous mindfulness studies are valuable in terms of demonstrating the benefits of mindfulness and describing in detail its theoretical principles and specific techniques. Many of these studies were conducted on the participants of formal mindfulness programs who had strong incentives to participate (e.g., they expected to receive health benefits from the program) or were intrinsically interested (Newberg & Waldman, 2009). Some of the studies involved very experienced meditators who had already achieved high levels of mindfulness (e.g., Buddhist monks). Our study was an attempt to bring mindfulness techniques into the mainstream in the area of this country where mindfulness has not been traditionally popular. We planned to investigate whether the above techniques would work with population who was not familiar with mindfulness and its benefits and who did not receive a strong incentive for participation. Our study may also contribute to mindfulness research by adding journaling as a preparatory stage to mindfulness exercises per se.

There were two major goals for this project: theoretical and practical, that is, to contribute to the advancement of psychological science by collecting and analyzing data on the effects of mindfulness interventions; and, to enhance mental health and cognitive growth of our student body and to prevent stress, burnout, and depression by using the above interventions.
Thus, we intended to answer the following questions:
1. Will mindfulness sessions be successful on the campus of Arkansas State University?
2. Will the level of mindfulness of participants be increased as a result of attending at least 5 sessions involving journaling and various mindfulness techniques described below?
3. What would be additional benefits of attending the sessions?
4. Which aspects of the sessions and techniques used would be considered as most beneficial?

Our preliminary answers to the first two questions were affirmative. We expected that the sessions would be somewhat successful as measured by the attendance of the participants and their positive evaluation of the sessions, and that there would be a moderate increase in their mindfulness. Questions 3 and 4 were largely open-ended.

3. METHOD

3.1. PARTICIPANTS

Forty seven participants attended at least one of the twenty five mindfulness sessions conducted during the fall semester of 2009. The majority of them learned about these sessions from their psychology instructors. Additionally, recruitment was conducted through electronic announcements in the ASU Daily Digest and through flyers displayed on the university campus. The sessions were advertised as a positive psychology research project involving mindfulness, journaling, and the use of biofeedback devices. Participation was not limited to students only – faculty and staff of the university were invited to the sessions as well. In spite of the extensive advertisement of the sessions, the majority of the participants were students in one of the author’s classes who received extra credit if they attended at least 5 sessions.

Out of the 47 participants who came to sessions at least once, less than half (N = 20) were able to come to 5 sessions or more and to fill out both pre- and post-test surveys. The most common reasons for drop-out were related to conflicts in schedules and limited time for attending the sessions. Thus, only 20 participants’ responses were included in the final analysis of the results. Most of them were females (N = 14), Caucasian (N = 14), seniors and juniors (N = 18) majoring in education (N = 14) with an average age of 27.63. All of them were students.

3.2. APPARATUS, MATERIALS, AND MEASURES

Biofeedback Devices

The most commonly used biofeedback device was Biodot Skin Thermometers (Biodot Skin Thermometers, 2008) that represent small self-adhesive circles of micro-encapsulated liquid crystals of a thermal range, gauged to the variance of
skin temperature. These devices monitor skin temperature and change color accordingly. When we are stressed, blood is directed more to internal organs leaving our hands cold. When we are relaxed, the blood is redirected to the extremities causing the hands to become warmer. Biodots are very easy to use and provide a visual indicator of one’s degree of stress or relaxation.

During the initial sessions we attempted to use a more sophisticated and sensitive device that produces a more reliable measure of relaxation. EmWave Personal Stress Reliever (EmWave Personal Stress Reliever, 2010) is a handheld device that shows the effects of stress and/or relaxation on one’s body by measuring and displaying subtle changes in one’s heart rhythms and breathing patterns, which are visible on a colorful LED display. Because of its sophistication, it required more extensive training, which we could not provide to all participants, than the use of a biodot. It was fully mastered only by one person who consistently used it during the sessions.

**Materials**

At the beginning of the study each participant received 3 one-page documents through electronic mail: General Instructions for the session, Topics for Journaling, and a file explaining what mindfulness is about. The first file described each of the 3 parts of the sessions: journaling, mindfulness, and discussion. It also explained to the participants that they would be expected to sign an informed consent if they were willing to participate in the study and to fill out a pre-and post-test. The second file recommended two topics for journaling, that is, gratitude and forgiveness, and suggested a set of questions to respond to for each of the topics. It was recommended that on an average day when a participant was in a neutral or positive mood, it would be appropriate to write about experiences for which he/she felt grateful. On a day when one was upset, the recommendation was to describe the situation the way it was, and if possible, to change one’s perception of it and look at it as a difficult lesson to learn. Finally, the last document briefly introduced the participants to the main principles and components of mindfulness.

**Measures**

At the beginning of the study all participants filled out a questionnaire on mindfulness called MAAS (Brown & Ryan, 2003) and completed a section on demographics. The MAAS (Mindful Attention Awareness Scale) is a 15-item measure of one’s ability to pay attention to present-moment experiences. The respondents indicate how frequently they have the experience described in each statement using a Likert scale ranging from 1 (*almost always*) to 6 (*almost never*). It consists of such items as “I find it difficult to stay focused on what’s happening in the present.” The internal consistency (alpha) of the scale is .82. The pre-test surveys were sealed in envelopes and the name of the participant was written on each envelope so that pre-test could be later matched with the post-test surveys. The envelopes were then stored in a secure cabinet in the office of one of the authors.
After having attended their last session (or at least five sessions) the participants filled out the MAAS scale again and responded to additional questions about the effects of the sessions. Then each participant opened his/her own envelope that contained the pre-test, destroyed the envelope, and stapled both surveys together. This procedure ensured the anonymity of the data.

3.3. PROCEDURE

The mindfulness sessions took place during the fall semester of 2009 (from early September to the last day of classes on December 7) in one of the rooms of the Student Union of Arkansas State University. They were offered twice a week around noon time. The participants could attend any of the sessions offered but they only received extra credit if they attended at least 5 sessions. Each session lasted 30 minutes and consisted of 10 minutes of journaling, 10 minutes of mindfulness, and 10 minutes of group discussion of the results including sharing biofeedback data received from biodots and emWave. The sessions were usually conducted by both authors: Kramtsova was responsible for distributing the surveys, collecting data, and introducing the topics for journaling whereas Glascock, who is a licensed counselor, distributed the biofeedback devices and led the participants in the 10-minute mindfulness exercises. Most of the sessions had to start with a short introduction because new participants joined the group during the whole semester.

3.4. INTERVENTION

Participants were introduced to and instructed in the use of a variety of exercises as tools to assist with mindfulness practice so that they could find some activities that worked better for them in learning to practice mindfulness (Charlesworth & Nathan, 1982; Davis, Robbins-Eshelman & McKay, 2000; Henderson, 1983). During the first sessions, participants were taught to become aware of their breathing and how to use breathing as a focus of their mindfulness. Diaphragmic or abdominal breathing (i.e., using the diaphragm to breathe deeply) was one of the foundational skills taught because many of the other activities built on it. Controlled breathing or inhaling and exhaling to a certain count were taught to help participants learn to pace their breathing. Another foundational technique taught was body scanning, that is, using inner awareness to direct attention to various parts of the body to check for stress or muscle tension in order to relax and let go of the tension. Body scanning and abdominal breathing were used as part of the mindfulness or relaxation activities during each session.

Other techniques introduced at certain sessions were Progressive Muscle Relaxation, Self-Hypnosis “Warm Blanket Visualization”, Visualization, Guided Imagery, Autogenics, and Silent Meditation. “Progressive Muscle Relaxation” required participants to purposely first tense muscle groups and then relax them noticing the difference between the tension and relaxation. “Self-hypnosis” was the process of
offering oneself suggestions describing positive emotions, feelings or sensations (e.g., imagining one’s body covered by a warm blanket). “Autogenic” was a similar process where participants practiced concentrating on verbal commands leading to calmness of mind and physical relaxation. “Visualization” and “Guided Imagery” involved creating positive mental pictures to help refocus the mind and relax the body. “Silent Meditation” was explained as assuming a nonjudgmental, neutral, passive approach to oneself and one’s environment by focusing on one sensory input, word, thought, feeling, sound or symbol (e.g., focusing on a candle flame).

4. RESULTS

The first research question about how successful the mindfulness project would be on a university campus can be answered in the affirmative. It was moderately successful: 47 participants attended the sessions at least one time and 20 students stayed for at least 5 sessions (M = 6.7 sessions, SD = 3.57) with 30% continuing for more than 5 sessions.

The hypothesis about the positive effect of the project on students’ mindfulness as measured by the MAAS was confirmed: there was a statistically significant increase in mindfulness between pretest (M = 3.55, SD = .83) and posttest (M = 3.95, SD = .96), t(19) = –2.19, p = .04 (two-tailed).

As for other benefits of the sessions, qualitative analysis of verbal responses revealed that all participants evaluated both journaling and mindfulness as positive experiences. All participants found them enjoyable and helpful for relaxation, peace of mind, better focusing and concentration, getting rid of negative thoughts and for increasing positive thoughts and emotions. Some of the typical comments were: “I usually came to the sessions very stressed about school. It was my time to block all of that out of my mind and just relax”. One student wrote that he/she did not initially expect these sessions to be helpful but went only to get an extra credit, yet the sessions were so helpful that the student continued attending even after the 5 required sessions. Another student shared that he/she would share about the sessions with his/her family because they were so helpful.

The majority of the students reported that they practiced mindfulness outside of the regular sessions – on average two or three times a week. Six participants indicated that they mostly practiced mindfulness in their daily living when they were especially stressed and anxious, for example, when they had tests and quizzes. Two wrote that they did it mostly before bedtime to relax. Two admitted that they would like to practice it more but could not find time.

There was almost nothing that the students disliked about the sessions: the most typical complaints were about difficulty staying focused and not being distracted by one’s negative thoughts, and about occasional distracting sounds in and outside the room. Two participants suggested allowing more time for journaling, yet one wrote that we allocated too much time for this activity.
The most popular topics for journaling were appreciation of positive events (chosen as the most common or common by 15 participants) and writing about negative events (N = 10). On average participants wrote more than a page on weekly basis (M = 1.79, SD = 1.66) and the majority engaged in journaling 1–3 times a week outside of the sessions.

All of the mindfulness exercises were found to be helpful, especially focusing on breathing and visualization (each was named as the top two choices by 13 people), and muscle relaxation (named by 9).

5. DISCUSSION

Limitations of the study and future directions

The present study was limited in several ways. Because our study involved a relatively small and homogeneous sample consisting mostly of Caucasian women majoring in education, the results of the study may not generalize to other groups of population. There was no control group involved and because this was an exploratory study, we formally measured only one characteristic and how it changed from pre- to post-test, by administering the MAAS scale. The other results were derived by the answers to open-ended questions.

Several problems were encountered with the use of biofeedback devices related to lack of time for appropriate training of the participants. Initially we had planned to allow all participants to use emWave devices because they provide more accurate feedback than the biodots. However, later we had to switch to the biodots, which are easier to use and provide more easily interpreted feedback. We found the emWave machines to be more distracting than helpful to the participants who were not sufficiently trained in using them and who could not always turn off the beeping sound produced by the machines as a form of reinforcement for achieving a certain level of relaxation. Even though we initially planned to collect data from the biofeedback devices, as we proceeded with the study, we realized that we could not keep track of the data from emWave and biodots because of the lack of time. Thus, the limitation that can be addressed by the future studies is keeping record of the biofeedback data from the biodots and emWave machines, which was not consistently conducted by the current research, and thus, could not be included into our analysis.

6. CONCLUSIONS

The results of the study support our hypothesis that journaling and mindfulness techniques can be successfully incorporated into college life. These activities increase psychological well-being of student population, reduce stress, and improve overall college atmosphere, which confirms findings from previous studies (Oman, Shapiro, Thorese, Plante & Flinders, 2008).
Additional evidence for the success of the project comes from the fact that the majority of the students continued practicing skills learned during the sessions in their daily living and that some of them (30%) attended more sessions that was required for extra credit.

Also, our informal talks with the participants of our study during the discussion time or outside of sessions confirmed that the sessions helped them reduce stress and feel better (e.g., one student stated that she wished she had been exposed to these techniques years ago because they helped her to perform better academically and to feel better).

Although we did not consistently record data from the biofeedback devices used in the study the majority of the participants reported during the discussion time that the color of the biodot changed and indicated higher level of relaxation after the session.

The student who attended 19 sessions and regularly used the emWave machine to monitor his success learned to increase the coherence between this breathing and heart rhythm as a result of the sessions. He believes that it was “clearly a learned skill”, which is consistent with previous research which demonstrated that mindfulness can be cultivated (Shapiro, Oman, Thoresen, Plante & Flinders, 2008). However, the student was not convinced that it was due to the use of this device. In his own words:

I have no real way to measure any benefits of using the device. Clearly I was able, with practice, to improve my ability to accomplish the task, but whether or not that translates into any psychological or physiological benefits, I am unable to say. I believe I am somewhat more aware of tension and find myself stopping and taking a few deep breaths periodically to relax and I believe that has been beneficial. To the extent the emWave has contributed to this (vs. the general training I received by coming to the sessions), I can’t say.

To conclude, in spite of all of the methodological limitations discussed above, the study findings support the efficacy of mindfulness and journaling training for psychological well-being on a university campus.

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REFERENCES

1. American College Health Association and National College Health Assessment (Fall, 2009), Reference group data report, Retrieved April 7, 2010 from http://www.achancha.org/.

REZUMAT

Scopul prezentului studiu a fost implementarea și investigarea unui program de psihologie pozitivă bazată pe jurnalizare și introspecție/grijă într-un campus american. Ca rezultat al acestui program a reieșit o creștere semnificativă statistică în ceea ce privește grijă/atenția printre participanți. Analiza calitativă a răspunsurilor verbale a relevat că toți participanții au perceput sesiunile ca fiind un beneficiu pentru relaxare, ținut și minte și că se înregistrează o creștere în ceea ce privește gândurile pozitive și emoțiile. De aceea, tehnicile de jurnalizare și de grijă/atenție pot fi incorporate cu succes în viața de colegiu pentru sporirea stării psihologice de bine a populației de studenți, pentru reducerea stresului și îmbunătățirea atmosferei generale din colegiu.