

Yoga and Its Benefits on Mental Illness

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Movement has played a steady and important role in my life. I have considered movement, whether dance or yoga, as my personal therapy and healing process. In my own experience of life and health, I have seen what disordered eating can do to myself and to others around me. In my own perspective I view eating disorders as an uncontrollable behavior caused by many factors including chemical imbalances within the brain and environmental factors. Humans' need for order, balance, and control within our lives may put us into situations that may cause us to start disordered habits. However, once that disordered eating becomes a habit, the uncontrollable factor of this disease steps in and is often enhanced by our brain imbalances and environment. One may find this uncontrollable nature of eating disorders may be caused by the split between the mind and body. One way to reconnect the mind and body can be through mental and certain asana practices. Yoga is a great way to reconnect the mind and body. Many people view yoga as a form of exercise that improves muscle tone, weight, and occasionally anxiety. When one looks at the deeper roots and understanding of yoga, one may find that yoga can help aid a variety of panacea whether they are mental or physical conditions. Understanding yoga through a treatment lens, my question is how yoga can affect or even mitigate negative symptoms of eating disorders and what ways or practices are the most useful. We can utilize the many practices of yoga to help reduce the effects of mental illness including eating disorders, depression, and anxiety.

In order to start this research and study one must identify and discuss the problems and challenges of eating disorders. One of the most important topics and the most challenging issues among eating disorders is treatment. It is common for eating disorders to be co-morbid, meaning that another diagnosis or diagnoses are made along with the diagnosis of eating disorders

(Koman, 2). A very common co-morbid diagnosis with eating disorders is depression. One common treatment for anorexia nervosa (AN) through a biological approach is anti-depressants. In order to understand how anti-depressants can aid in treatment for AN, one must look at the connection between AN and depression. In a study by Halmi, patients with anorexia nervosa were studied and they were treated with the anti-depressant cyproheptadine and recorded their weight gain and self-evaluated depression scales. On the 28<sup>th</sup> day of treatment they found that “for every increase on kilogram of a patient’s weight, there was a corresponding decrease of 0.191 in the self-reported depression scale score” (Halmi, 1986). One can see through this study there is a clear connection between AN and depression. The connection between these two diagnoses is the area of the brain in which both these illnesses affect, the hypothalamus. The hypothalamic-pituitary-adrenal (HPA) axis then plays a big role in the treatment of anorexia and depression. Antidepressants tend to reduce the hyperactivity within the HPA axis, causing an increase in production of corticotropin releasing hormone which decreases the functioning of feeding. By reducing hyperactivity with anti-depressants, along with additional therapy, there may be increases in weight gain and behavior change in regard to diet. Although it is effective to treat AN with anti-depressants, it can be hard to first decide if a patient’s eating disorder is co-morbid, which diagnosis is needed to be made, and finally which treatment would work the best for the patient.

Another problem among eating disorders is how to financially cover the disorder. One of the most commonly known reasons for this difficulty is the explanation that eating disorders affect different people in different ways, nor is treatment as effective for one person as it is for another. The article *A Continuum of Care Approach To Eating Disorders* lists several different roadblocks within treatment and care, and one such roadblock is that “medical definitions of

eating disorders often are restrictive, so many needing treatment fail to qualify for coverage” (Koman, 2). It is very common for patients to be denied insurance coverage for eating disorder treatment. There are certain restrictions that prevent people from getting proper care. For example, the National Eating Disorders Association explains that “insurance companies have mental health benefits under a separate umbrella from their physical health benefits... and behavioral health coverage may even be contracted out to a separate company under the supervision of the insurer” (National Eating Disorders Association). This in turn makes it incredibly difficult for people to have good access to proper treatment. People may not be in inpatient therapy for the amount of time that they need to be or may not be able to financially cover treatment at all. Finding alternate options that are available to everyone while also reducing symptoms of eating disorders and aid treatment is extremely important in the effort to help those in need of treatment.

Although we find many challenges within eating disorders and the treatment of them, one can also learn from clinical studies and trials. Through examining these challenges and testing solutions, knowledge of how to produce affordable and accessible aid for treatment to everyone paves a way for a treatable future. A study done by Pacanowski et. al. examined pre-meal negative effect of participants in a residential program after an hour yoga practice prior to dinner for five days. In their findings they recorded “significantly lower negative affect before dinner when taking a yoga class designed to target disorder symptomatology as compared to usual care” and that “This effect was attenuated throughout the meal” (47). The journal article *Effectiveness of yoga in eating disorder- A case report* offered a unique example of research done with yoga and eating disorders. The authors of this article described a case study where they explained the detailed interview with an eating disorder patient. They noted how the patient “reported that

attitudes have changed in relation to her stomach” and that “She could now respect this part of her body” (Osternmann et. al., 146). The patient also mentioned that of all holistic modes of movement therapy, yoga was the only one that seemed to be quite as effective. Although she would still face moments of trauma during certain yoga exercises, breathing exercises re-centered her and allowed her to finish the practice (147). These studies prove a connection between yoga and potential positive effects within eating disorders. One thing in common with both of these studies is the underlying knowledge that yoga has the ability to build up a stronger mind-body connection for people whose connection is weaker.

In the studies examined above, we noticed a micro introduction of the mind-body connection practice of yoga in the aid of eating disorder treatment. To better understand the connection of yoga with eating disorders, one must understand the mind-body connection. According to the article *Measuring Dimensions of Body Connection: Body Awareness and Bodily Dissociation*, “psychophysical awareness is linked to the conscious internal processes of self-knowledge and regulation that facilitate human growth and well-being” (Price & Thompson, 946). In today’s society so much of our stimuli come from our outside world. Technology has added convenience, knowledge, and advancement in our world, but we can also credit technology to our misunderstanding and lack of awareness of what our body is somatically telling us. Price and Thompson also go on to explain how gaining this inner body knowledge involves being in-tune with the subtle changes and information that our body provides us every day and trying not to avoid internal experiences we face (946). So often we find that we have to feel a certain way or feel in the “normal” way. One of the things I inquire within my research is what is yoga’s role in how we notice internal feelings and sensations to essentially be ok with them. I believe that yoga provides many positive roles. The first being the accentuation of breath

and using it as a calming and coping method. Secondly, using certain poses to manipulate the body in refreshing blood supply or releasing tension within our body. Finally, practicing patience with our bodies and our minds.

Eating disorders have affected my life in a personal way, and I know that in some shape or form it affects the majority of our population. Eating disorders have the highest rate of mortality within mental health illnesses. Therefore, my first research question was how can we bring awareness to eating disorders? How can we bring accessible and affordable aid to those in need of it? Bringing awareness to this topic and getting the conversation started was my first priority. I talked to my advisor about different people to meet with about potentially creating workshops and discussions about yoga and mental health. After meeting Holly Davis, a counselor whom integrates mindfulness and holistic wellness in her therapy process within Ohio State's Counseling and Consultation Service, I became involved with leaders of the RECESS program. This program allows mental health advocates to offer activities and education about mental health, stigma reduction, and wellness during National Mental Health Awareness Week. I was then approved a spot within RECESS to host mini yoga workshops that aid in mental health illnesses including depression, anxiety, and eating disorders. With this approval I began to research and develop a sequence of yoga asana poses to aid in mental health.

While creating a mental health sequence, I wanted to find poses that are accessible for everyone at any time and could be used without the use of yoga props. All of the "props" suggested in my sequence are available for everyone and could be found within one's home or dorm. Most of my research came from the books "Light on Yoga; Yoga Daipikaa" by B.K.S. Iyengar and "The Breathing Book: Good Health and Vitality through Essential Breath Work" by Donna Farhi and Bruce Young. From these resources I selected two pranayama practices,

Kapalabhati and Alternate Nostril Breathing. Kapalabhati is a breathing exercise that emphasizes forceful exhales and gradually increases in speed. The main benefits of Kapalabhati breathing is decreasing feeling of lethargy and expels carbon dioxide from the body hence bringing in more oxygen. The second pranayama practice was Alternate Nostril Breathing. This practice is as its name suggests. Using your fingers to block one airway path of your nose, you exhale and inhale through one nostril and then close that nostril to exhale and inhale through the other nostril. Alternate Nostril Breathing is used to bring one to a mentally alert state as well as help bring relaxation and calmness (Farhi & Young).

My next area of focus was to find and research asana poses that aided mental health treatment. From the book “Light on Yoga: Yoga Daipikaa” I organized a series of poses that directly benefit depression, anxiety, and disordered eating. One of the numerous poses that I included was Tadasana (Mountain Pose) which combats depression, anxiety, provides energy, and improves balance. Other poses such as child’s pose, Sun Salutation A, Pashimottanasana, Kurmasana, and Sarvāngasana were included in this sequence. Sarvāngasana is a specifically unique pose in terms of eating disorders as it has shown to solve digestive problems and boost appetite, an incredibly useful pose for people suffering eating disorders (Iyengar). However, Sarvāngasana can be a challenging pose for many people. As a way to build up confidence and skill to properly execute the pose, I suggest starting out in waterfall pose. Once one feels confident enough, they can place a yoga block underneath their pelvis to elevate it off the floor, and they can increase the height to whatever comfort they are at. People may add two blocks under their pelvis, then begin to practice resting their pelvis on the seat of a chair, and then practice supporting their pelvis with their arms for Sarvāngasana. One main theme among most of these poses is that they are a type of inversion. Inversions bring the head below the heart, and

therefore bring more blood to the brain. As stated previously, among depression and eating disorders there has been shown to be a correlation of a hyperactive HPA axis and hypothalamus. Bringing blood to the brain acts as a refresher and temporarily aids the brain in that imbalance. Although physical movement is not recommended within the treatment of eating disorders as it is common for people with an eating disorder to excessively exercise, which highlights the compulsiveness of eating disorders. I do feel that simple asana poses such as these can create more benefits than drawbacks. For example, a main lesson of yoga is finding peace and stillness within both the body and mind. Simple asana poses are excellent practices to still people with eating disorders. Through better knowledge and careful consideration of how we introduce yoga practice to patients with eating disorders, it can be a beneficial tool to help with the treatment of eating disorders.

While participating in RECESS, I learned more about how to generalize my study to benefit more people. My part within RECESS was to offer 10-minute yoga and mental health sessions to students who were interested. One of the challenges was to get people to participate. Many people stigmatize yoga to being flexible and that they cannot participate because they cannot touch their toes. Part of my program was to also bring about awareness that yoga is accessible to everyone, even if one isn't flexible. When I did get people to join in a session, I noticed how they reacted towards the end. Many would say how they needed to meditate more or set more time for themselves. Another thing that I noticed was their willingness to participate among the different activities of RECESS after completing my workshop; they seemed to want to spend more time and participate in more activities. Although I did observe this, it may have been a matter of personality over the effects of my workshop. Through this experience I also came to another important observation. Most of my process during the early stages of this project



centered around eating disorders and how to help those suffering from it. Rather than focusing only on eating disorders, yoga can benefit many other aspects of mental health as well. Many of the participants shared stories of how they have known someone, or have been that person, who has had learning disabilities, ADHD, autism, etc. and benefited from yoga and meditation.

My next step was to gather data to support my argument that yoga has a positive effect on mental health. After discussing some options with my project advisor, we discovered an interest in the potential direct effect of yoga on eating. In both the previously mentioned Pacanowski et al. study and my own study, there was an interest in pre and post mental processes observed by patients of participating in yoga before a meal. The importance of my study was to strengthen the validity of the Pacanowski et al. study and the results they gathered as the length of time studied was 5 days longer in my data collection. To begin my study, I needed to complete a questionnaire or survey that verified the internal validity of my hypothesis while not giving away what data I needed to collect. The survey used can be found in appendix A. I handed out the Pre-Survey to the Freshman class of the OSU Dance Department and had them fill it out and turn it in. I then taught a section of the mental illness inspired yoga sequence. I then instructed the participants to perform this sequence once a day right before they ate a meal and I had them do this for 10 days. After 10 days the participants filled out a post-survey, in which the survey had the exact same questions as the pre-survey.

Within the pre-survey the mean number for average speed of eating was 6.6. When analyzing the ease while eating 0 participants strongly disagreed, 2 participants disagreed with finding ease in eating, 11 found it to be neutral, 11 agreed with finding ease in eating, and 1 person strongly agreed. Within finding pleasure while eating 0 people strongly disagreed with finding pleasure within eating, 1 person disagreed, 3 people found it to be neutral, 12 people

agreed to finding pleasure in eating, and 9 people strongly agreed. For the post-survey data I found the mean number for average speed of eating to be 6.08. In finding ease when eating 0 people strongly disagreed with finding ease when eating, 0 people disagreed, 4 people found it to be neutral, 16 people agreed that they found ease when eating, and 4 people strongly agreed. In finding pleasure in eating 0 people strongly disagreed, 0 people disagreed, only 4 people found it to be neutral, 14 people agreed to find pleasure in eating, and 6 people strongly agreed. What this data suggests is that when doing yoga before eating a meal the average speed of eating slightly decreases. My hypothesis is that the participants were still in a meditative state while eating, creating a more thoughtful awareness of how they were eating causing a slowing of pace. It also suggests that people found more ease in eating and also found more pleasure while eating when practicing a yoga sequence and then following that with a meal. Tables regarding the specific data of the aforementioned surveys are provided in parts B and C in the Appendix.

The most challenging aspects of this process was the acquisition of participants and attrition rate of beginning research trails. I had previously attempted to gather data from a more generalized sample set. However, people either forgot about it or didn't have the proper materials/ set-up provided by the researcher. This section of data gathering was also presented before a holiday break, meaning for a more complicated structure to perform the testing/ yoga practice. In the future, I would like to be more prepared for data collection. I would also try to be more aware of the timing of data collection in order to ensure the most realistic and accurate set of data. Something that I would like to try in the future is gathering more physical evidence. This round of research provided more introspective and subjective data. I'm wondering what results would come from gathering heart rate data, or even cortisol levels from participants. In the future, I will apply for more funding to be able to try this type of data collection.

As I conclude this research analysis, I find myself wanting to study and research more about this topic. I find that the research and understanding of the benefits of yoga to be completely enthralling. Mental health in some shape or form finds its way into everyone's lives. Holistic health is entering a new era in today's health treatment. People have been practicing yoga for 5,000 years and have used this practice as a form of healing. If we could incorporate the practice of yoga as an aid to mental health treatment and therapy, the life-long benefits could be substantial. My brother went through a period of time where anorexia disconnected his mind from his body. The longer my brother battled anorexia, the more he disconnected to who he truly was, as he lost his carefree, joyful personality. That is something I hope I never have to see again, nor wish upon anyone to witness in a loved one. With this plethora of knowledge I have acquired, my primary goal is to spread this knowledge and give people like my brother the opportunity and accessibility to help recover and grow.

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## Appendix:

A.)

### Meal Yoga Survey

This research will require some amount of physical activity. There may be a minimal risk of injury during this activity. Participants will also be providing information that may be private to the individual and may include triggering phrases. This survey is anonymous, so you will not have to write your name down. All information is kept confidential, and participation is voluntary. Please check for approval or disapproval of consent. Thank you for your participation and time.

Approval for Consent \_\_\_\_\_

Disapproval of Consent \_\_\_\_\_

Answer questions 1-3 by circling the most appropriate answer.

**1. Rate the average speed of your eating during meals.**

1      2      3      4      5      6      7      8      9      10

**2. I am at ease when I am eating.**

Strongly disagree      Disagree      NeutralAgree      Strongly Agree

**3. While eating meals, I find pleasure in eating.**

Strongly disagree      Disagree      NeutralAgree      Strongly Agree

**Additional comments or observations:**

B.)

**Pre-Survey:**

## Average Speed of Eating

Rating scale	1	2	3	4	5	6	7	8	9	10
# of Participants				2	3	8	5	4	3	

## Feeling of Ease While Eating

<b>Strongly Disagree</b>	
<b>Disagree</b>	2
<b>Neutral</b>	11
<b>Agree</b>	11
<b>Strongly Agree</b>	1

## Feeling of Pleasure While Eating

<b>Strongly Disagree</b>	
<b>Disagree</b>	1
<b>Neutral</b>	3
<b>Agree</b>	12
<b>Strongly Agree</b>	9

C.)

**Post-Survey****Average Speed of Eating**

Rating Scale	1	2	3	4	5	6	7	8	9	10
# of Participants					6	8	5	2	1	

**Feeling of Ease While Eating**

<b>Strongly Disagree</b>	
<b>Disagree</b>	
<b>Neutral</b>	4
<b>Agree</b>	16
<b>Strongly Agree</b>	4

**Feeling of Pleasure While Eating**

<b>Strongly Disagree</b>	
<b>Disagree</b>	
<b>Neutral</b>	4
<b>Agree</b>	14
<b>Strongly Agree</b>	6