

# Efficacy of Mindfulness Yoga on Mood and Self-compassion of Person with Mental Illness Living in a Community as a Pilot Study

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## Abstract

Persons with mental illness feel symptoms like depression, anxiety, or fatigue. It is important for them to decrease symptoms and increase well-being. The present study investigated efficacy of mindfulness yoga on mood and self-compassion of persons with mental illness. Participants were persons with mental illness who lived in a community. Thirteen participants received once mindfulness yoga practice for 60 hours in a welfare facility. They completed POMS 2 (Profile of Mood Scale) and Self-Compassion Scale. Anger-Hostility, Confusion-Bewilderment, Fatigue-Lethargy, Tension-Anxiety significantly decreased. Self-kindness of Self-Compassion Scale significantly increased. Impression for participating for this program were “Refreshed both mentally and physically” or “Relaxed” and so on. These results suggest that the Mindfulness Yoga may be useful to maintain mood comfortable and increase self-compassion partially of persons with mental illness living in community.

**Keywords:** person with mental illness, community, mood, self-compassion

## 1. Introduction

In Japan, there are very serious problems with mental healthcare. The number of beds and length of stay connected with mental illness in Japan is extremely high, compared to other countries (OECD, 2023). The Mental Health and Medical Welfare Measures in Japan have a policy from medicine in a hospital to returning to community life. To live in a community and employment is very important.

Persons with mental illness experience mood disorder like depression or anxiety. Mood disorder affects activity of persons with mental illness. To control of mood disorder is important for them to live in community to continue relationships with others and spend daily life with high quality of life. One of the interventions is Yoga. De Manincor, Bensoussan, Smith, et al. (2016) demonstrated yoga reduced depression by randomized control study. However, participants were not limited for persons with mental illness. Govindaraj, Naik, Manjunath, et al. (2018) showed that yoga therapy for schizophrenias for 6 weeks reduced clinical symptoms: negative and positive symptoms and social disability. Result showed reducing clinical symptoms. Although clinical symptoms seems to be similar with mood disorder, it may be different in details. Then effects of yoga on mood were not clear in that study. In Japan, Inoue, Shinba, Miyashita, et al. (2019) showed a case study and suggested yoga promoted mindfulness with awareness of bodily senses and changes. However, this study was a case study. Totally, though these previous studies used yoga, they did not include mindfulness.

Mindfulness is defined as “the practice of focusing full attention of the present moment intentionally and without judgement” by Kabat-Zin (1990). Mindfulness-based intervention like Mindfulness-Based Stress Reduction [MBSR] (Kabat-Zin, Massion, Kristeller, et al., 1992) showed the reduction of stress of people. So we use Mindfulness Yoga which include both yoga and mindfulness components.

On the other hand, self-compassion is another important concept for well-being. Neff (2003) says that self-compassion refers to a personal attitude that is characterized by being open to one’s own suffering, taking an understanding and non-judgmental attitude toward one’s failure. Self-compassion comprises three interacting components: self-kindness versus self-judgment, a sense of common humanity versus isolation, and mindfulness

versus over-identification when confronting painful self-relevant thoughts and emotions (Neff & Germer, 2013). A meta-analysis for general population (MacBeth, & Gumley, 2012) showed a large effect size for the relations between self-compassion and psychological symptom. However, studies about self-compassion of persons with mental illness are very few and we needed to investigate effects about self-compassion of them.

The purpose of this study was to investigate the effects of Mindfulness Yoga on mood and self-compassion of persons with mental illness.

## 2. Method

### 2.1 Participants

Participants were persons with mental illness who lived in a community. They used a welfare facility in the community. We recruited them. They participated in the present research voluntarily after seeing a poster of recruit. Table 1 shows the background of participants.

Table 1. Background of participants

| Item                | Number or kind  |
|---------------------|---|
| Age                 | 30years:3, 40years:7, 70years:3   |
| Gender              | Male: 1, Female:12  |
| Kind of disease     | Schizophrenia, Mood Disorder<br>Obsessive-compulsive neurosis<br>Developmental disorder |
| Duration of disease | Mean: 17 years  |
| Medication          | Yes:7, No:6   |
| Subjective wellness | Very well:7, Well:6   |

### 2.2 Questionnaire

To measure level of mood, we used the Profile of Mood of Scale 2 Short version (Yokoyama, 2020). It consisted of seven factors: Anger-Hostility, Confusion-Bewilderment, Depression-Decline, Fatigue-Lethargy, Vitality-Activity, and Friendly. There are 35 questions and participants answered to them from 0 (not at all) to 4 (very often). To measure self-compassion, we used the Self-Compassion Scale-Japanese Short Form (SCS-J-SF) (Arimitsu, et al., 2016). It included six factors: self-kindness, self-judgment, common humanity, isolation, mindfulness, and over identification. There were 35 questions. Participants answered to them from 0 (not at all) to 4 (very often). Participants also described about impression of the program freely.

### 2.3 Program

Mindfulness yoga program consisted of two parts. A recovery from fatigue and Cheering up parts. Special components of the program had integrated activities for fatigue like breathing, meditation, or feeling sense of body. Persons with mental illness often feel fatigue because of medication of low activities, thus this program included both recovery from fatigue and cheering up parts. This program based on MBSR included both yoga and mindfulness factors (Table 2).

### 2.4 Procedure

A Yoga instructor with certification and an assistant conducted the program. A participant practiced the program about 60 minutes and completed the POMS 2 and the Self-Compassion Scale pre and post. We prepared three courses of this program because of time availability. Some participated overlapped.

### 2.5 Analysis

We conducted a non-parametric test between pre and post on mean score of each scale. The number of description for impression was small, then we showed simple summary.

### 2.6 Ethics

The ethical committee in a university of the author approved this study.

Table 2 Sample of contents of Mindfulness yoga program

| Parts                       | Sample of the program  |
|-----------------------------|--|
| Recovery from fatigue parts | 1.Nazal breathing (focusing attention on breathing)                            |
|                             | 2.Blading shoulder (Feeling relaxed)   |
|                             | 3.Bending hips and touch legs (Feeling sense of legs)                          |
|                             | 4.Bending torso the right (Feeling stretch of body side)                       |
|                             | 5. Putting hands crossing to shoulder and breathing<br>(Giving thanks to life) |
| Cheering up parts           | 1. Breathing hands up (feeling relaxed)  |
|                             | 2. Standing on one leg and tough hands (Keeping balance)                       |
|                             | 3. Jogging pose (activation of body)   |
|                             | 4. Stretch body lifting hands (Feeling sense of body)                          |
|                             | 5. Nasal breathing (observation of breathing)                                  |

### 3. Results

We conducted nonparametric statistic test pre and post scores of POMS Anger-Hostility, Confusion-Bewilderment, Fatigue-Lethargy, and Tension-Anxiety significantly decreased (Table 3).

Table 3. Scores of POMS 2 pre and post of intervention and results of non-parametric statistic

|                        | Pre  | Post  | <i>P</i> value |
|------------------------|------|-------|----------------|
| Anger-Hostility        | 3.15 | 0.62  | <i>p</i> <.05  |
| Confusion-Bewilderment | 2.77 | 1.23  | <i>p</i> <.05  |
| Depression –Decline    | 2.38 | 1.08  | ns             |
| Fatigue-Lethargy       | 4.15 | 2.15  | <i>p</i> <.05  |
| Tention-Anxiety        | 6.62 | 2.92  | <i>p</i> <.05  |
| Vitality-Activity      | 11.8 | 11.8  | ns             |
| Total Mood             | 7.31 | -3.77 | <i>p</i> <.05  |

ns: no significance

About self-compassion, Self-kindness factor significantly increased (Table 4).

Table 4. Scores of Self-Compassion Scale pre and post intervention

| Factors of self-compassion | Pre  | Post | <i>p</i> value |
|----------------------------|------|------|----------------|
| Self-kindness              | 6.38 | 7.54 | <i>p</i> <.05  |
| Self-judgment              | 3.54 | 3.15 | ns             |
| Common humanity            | 5.15 | 5.62 | ns             |
| Isolation                  | 3.38 | 3.31 | ns             |
| Mindfulness                | 7.08 | 3.38 | ns             |
| Over-identification        | 4.23 | 3.54 | ns             |

Table 5 shows a simple summary of impression for the program. From contents of impression, we categorized them into three categories, impression about mood, impression about physical, and impression about the program. Mainly, impressions showed that “they could refresh,” “body was neat after the program,” “mindfulness yoga is better than mindfulness only.”

Table 5. Simple summary of impression for the program

| Field                        | Contents of impression   |
|------------------------------|--|
| Impression about mood        | <ul style="list-style-type: none"> <li>• Mood was refreshed.</li> <li>• I could be relaxed.</li> <li>• Mindfulness yoga is useful to change of set up.</li> </ul>  |
| Impression about physical    | <ul style="list-style-type: none"> <li>• The program was fresh because it included physical activity.</li> <li>• After the program, my body was neat.</li> <li>• I felt like such that I was doing it because of physical load.</li> <li>• I could lift up my leg after the program.</li> </ul>  |
| Impression about the program | <ul style="list-style-type: none"> <li>• I was looking forward to participate the program.</li> <li>• It was better for me to do easily and simply.</li> <li>• I could go deep into meditation.</li> <li>• Touch and return seemed to be good to protect distractions.</li> <li>• I could know mindfulness in yoga.</li> <li>• I thought mindfulness yoga was useful more than only mindfulness.</li> <li>• I feel like I can do it if I continue this program.</li> <li>• I am better to participate in this program.</li> <li>• I could breathe deeply.</li> <li>• The form of group is good, although alone is very waver.</li> <li>• I found goodness of mindfulness again.</li> <li>• I will continue in future.</li> </ul> |

#### 4. Discussion

Anger-Hostility, Confusion-Bewilderment, Fatigue-Lethargy, and Tension-Anxiety significantly decreased. Self-kindness of self-compassion significantly increased

The reason of decrease of Tension-Anxiety and Anger-Hostility may be relaxation of body and mind. Comments of participants showed relaxed. Decrease of anxiety of the present study supports of De Manincor et al. (2016) using Yoga, or Li, Cai, Li, et al. (2021) using mindfulness based therapy.

Decrease of Confusion-Bewilderment score is new findings from the present study. Some of participants had

obsessive-compulsive or developmental disorder, and they may worry about various things or feel confusion in their environments. Then in the Mindfulness Yoga, participants focused the present moment without thinking distractions and could feel or think at present. Thus, Confusion-Bewilderment might decrease.

Decrease of Fatigue-Lethargy score is also a new finding. Since persons with mental illness experience fatigue or tiredness because of side effects of medication, effects of the present program on fatigue may be significant to contribute to their quality of life. The reason of decrease of Fatigue-Lethargy is following. As the present Mindfulness Yoga program included both recovery from fatigue and cheering up parts, both parts might affect fatigue. Although Ikeuchi, Ishiguro, Nakamura et al. (2020) showed decrease of fatigue of cancer patients by mindfulness, it is new finding of effects for persons with mental illness.

About Depression-Diversion and Vitality-Activity did not change between pre and post scores, though Yanagisawa, Fujita, Mizuno, et al. (2017) showed decrease of depression. It is because those participants of Yanagisawa, et al. (2017) were in-patients and 8-week sessions, but participants of the present study were persons who lived in community and one session. Moreover, most of participants in the present study were totally had vitality from the subjective wellbeing data (Table 1). Participants answered such that “they were very well” or “well.” Thus, scores of Depression-Diversion and Vitality-Activity did not change.

About Self-Compassion, Self-kindness score significantly increased. It shows that only one practice has possibility of increase kindness. The program included contents like “putting hands crossing to holder and breathing: giving thanks to life,” these contents might affect to be kind to themselves. The Mindful Self-Compassion (MSC) program increased self-compassion of ordinary people (Neff & Germer, 2013) or decreased compassionate fatigue of caregivers (Delaney, 2018). Concept of mindfulness in the program is similar to the present Mindfulness yoga, however MSC does not include yoga components so much. Thus, it is new finding that Mindfulness yoga might be useful to increase self-compassion of persons with mental illness.

As for limitation, the number of participants was small and it is hard to generalize. In future, we need to include much more participants. Moreover, some participants participated in each session overlapping. To control strictly, it is better that the same person does not participate overlapping. However, the present study is useful to show possibility effects of Mindfulness Yoga on mood and self-compassion of persons with mental illness.

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