

Efficacy of Mindfulness Yoga on Subjective Happiness, Mood, Fatigue, and Mindful Attention Awareness of Parents Raising Preschool Children

Michiyo Ando¹, Sayoko Ito², Yukio Matsuo³, Hiroko Kukihara⁴

¹Faculty of Psychology Counseling, Department of Child, Nishikyusyu University, Saga, Japan

²Kyoto Seizan Junior College, Kyoto, Japan

³Kodomo Culture Education Japan, Fukuoka, Japan

⁴Faculty of Nursing, Department of Medicine, Fukuoka University, Fukuoka, Japan

Email: andom@nisikyu-u.ac.jp

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Abstract

Background: At COVID-19 pandemic period, parents raising preschool children felt sever stress because they were required to stay home with children. **Purpose:** The present study aimed to investigate the effect of mindfulness yoga on mood, fatigue, mindfulness attention awareness, and subjective happiness of parents raising preschool children, and the effective factor on subjective happiness of these factors. **Method:** Participants were 31 females who were raising preschool children. They practiced mindfulness yoga total 3 times once a week about 60 minutes by online. Participants completed the Profile of Mood Scale, the Fatigue checklist, the Japanese version of the Mindful Attention Awareness scale (Awareness), and Subjective Happiness scale pre and post mindfulness yoga. This study was approved from an ethical board. **Results:** The Mood score showed psychological distress or stress significantly decreased ($t = 3.9, p < .001$). The Fatigue score also significantly decreased ($t = 4.39, p < .001$). The Awareness score significantly increased ($t = -4.0, p < .001$), and the Subjective Happiness score significantly increased after mindfulness yoga ($t = -3.09, p < .01$). A multiple regression analysis showed that the Awareness was the most effective on Happiness. **Conclusion:** These results suggest that mindfulness yoga on line decreases stress and promotes well-being of parents raising preschool children at COVID-19 pandemic, and importance of mindful attention awareness for subjective happiness.

Keywords

Mindfulness Yoga, Parents, Fatigue, Happiness, Mindful Attention

Awareness

1. Introduction

Parents often feel stress in raising preschool children. Parents with high levels of parent stress and parenting stress are at heightened risk for maladaptive family environments and negative child outcome (Chaplin et al. 2021). Especially in COVID-19 spread from 2020 to 2021, people were required to stay home and felt severe stress in home. In Japan, the rate of maladaptive has been increasing in these days (Ministry of Health Labour and Welfare, 2020). Mindfulness is one of the most effective interventions to reduce parents' stress.

Mindfulness is defined as "the practice of focusing full attention of the present moment intentionally and without judgment" by Kabat-Zin (1990). Mindfulness-based intervention like Mindfulness-Based Stress Reduction [MBSR] (Kabat-Zin et al., 1992) or Mindfulness-Based Cognitive therapy (Sipe & Eisen-drath, 2012) showed the reduction of stress of people. Kabat-Zin & Kabat-Zin (1997) applied mindfulness to parenting. Mindfulness parenting is defined as parenting as paying non-judgmental, non-reactive attention to each moment and interaction with the child, such that the parent is aware of the child's needs in any moment. Bazzano, Wolfe, Zylowska, et al. (2015) offered MBSR for 8 weeks to parents who experience high levels of stress, anxiety, or depression, because children had developmental disabilities. Mindfulness-based interventions to breast feeding mothers reduced levels of stress and mood disorders by Perez-Blasco, Viquer, and Rodrigo (2013). Recently Corthorn (2018) examined the effects of mindfulness for parenting in mothers of preschoolers from 2 to 5 years in Chili. The intervention group of mindfulness showed a significant reduction in general and parental stress, and an increase in mindful parenting and general mindfulness variables. However, there was not significance on depression and anxiety. Townshend, Jordan, and Stephensen, et al. (2016) conducted a systematic review and showed that mindful parenting program reduced parents' emotional dismissal of their adolescents and preschoolers. However, they say there is insufficient evidence to conclude that mindful parenting programs can improve parents' well-being and children's. Burgdorf, Szabo, & Abbott (2019) also conducted systematic reviews about mindfulness for parents on parenting stress. However, since the range of age of youth seemed to be large in that systematic review, it seems to be not clear of efficacy of mindfulness for each age. From these previous studies, it was not clear if the mindfulness yoga is effective on stress like psychological disorder of parents raising preschool children, physical aspect and well-being from a view point of Positive Psychology. Few studies have investigated effects on physical and well-being aspects of parents.

Then the present study investigated effects of mindfulness yoga on mood as

psychological distress and fatigue as physical stress. We also included mindful awareness and attention level because we used mindfulness yoga. Moreover, we included subjective happiness from a view point of Positive Psychology.

2. Method

2.1. Participants

Participants were 33 parents who were raising preschool children in Western Japan (Table 1).

2.2. Mindfulness Yoga Program for Parents Raising Preschool Children

Certified yoga instructor who experienced more than 20 years about yoga practice and teaching made the program (Table 2). We made the program based on Mindfulness Based Stress Reduction.

2.3. Questionnaires

We used the following four kinds of questionnaires. Both validity and reliability of these questionnaires are confirmed.

1) Subjective Happiness Scale (Kawano & Emori, 2021): it is visual analog scale from 0 point to 100 point. A high score shows high level of happiness.

Table 1. The background of participants (n = 31).

	Number for each item
Age	30 years old: 16, 40 years old: 14, 50 years old: 1
Gender	Male: 0 Female: 31
The number of children	One person: 13 Two persons: 9 Three persons: 8 Six persons: 1
Experience of yoga	Yes: 24 No: 7

Table 2. Contents of mindfulness program.

Details of contents
1) Pray of compassion for themselves
2) Ice breaking
3) Awareness of breathing (focusing attention on breathing)
4) Telling today's exercise
5) Mindfulness exercise of figures (focusing attention on figure)
6) Feeling body (touch my body)
7) Feeling trunk (sitting mindfully)
8) Mindfulness exercise of limbs (moving body mindfully)
9) Relaxation
10) Release relaxation
11) Looking back today's exercise

2) POMS 2 (Profile of Mood States 2nd Edition (Yokoyama, 2015): there were 35 question items about mood disorder. Participants answered from 0 point (no disorder) to 4 (very strong disorder). A high score shows high level of disorder.

3) The Self-diagnosis fatigue checklist (Fatigue Science Laboratory Inc., 2022): It includes 10 question items about fatigue, participants answered from 1 (no fatigue) to 4 (very strong fatigue). A high score shows high level of fatigue.

4) Japanese version of Mindfulness Attention Awareness scale (Fujino, Kajimura, & Nomura, 2015): it is translated from the original version (Brown & Ryan, 2003). It included 15 question items. Participants answered from 1 (no apply) to 6 (very apply). A high score shows high level of mindful awareness and attention.

2.4. Procedure

We recruited parents raising preschool children through child culture center in Western Japan. Participants got documents of explanation of this research and questionnaires. The researcher explained about this research and got informed consent. They practiced mindfulness yoga program on line once a week about 60 minutes, total 3 times. They completed questionnaires pre and post mindfulness yoga. After practicing mindfulness yoga, they sent back questionnaires to the researcher by mail.

2.5. Data Analysis

We calculated basic statistic and mean score about each questionnaire. First, we conducted *t*-test to examine the difference between pre and post the intervention. Next, we conducted a correlation analysis among Subjective Happiness, Mood, Fatigue, and Mindful Attention Awareness. Lastly, we conducted a multiple regression analysis: a dependent variable was Subjective Happiness, and independent variables were Mood, Fatigue, and Mindful Attention Awareness.

2.6. Ethics

This study was approved from the ethical board of Daiichi University of Pharmacy, No.R03-0005). Researcher got informed consent from participants and was performed accordance with the Declaration of Helsinki.

3. Result

Since there were some lacks in questionnaires, we deleted two answer sheets. Then 31 parents participated in this research. **Table 3** showed effects of mindfulness yoga pre and post. The Mood score which showed the mood disorder significantly decreased ($p = .000$), the Fatigue significantly decreased ($p = .000$), the Mindful Attention Awareness significantly increased ($p = .000$), and the Subjective Happiness significantly increased ($p = .004$).

Next, we show the results of the correlation analysis (**Table 4**). The Subjective Happiness score significantly correlated with the Mindful Attention Awareness

Table 3. The result of *t*-test on scores of pre and post.

Questionnaire	Pre	Post	<i>t</i> -value	<i>p</i> -value
Subjective Happiness	75.4 (14.5)	83.6 (11.0)	-3.10	<i>p</i> = .004
Mood	23.8 (17.9)	10.2 (16.1)	3.93	<i>p</i> = .000
Fatigue	7.6 (4.6)	4.6 (4.1)	4.39	<i>p</i> = .000
Mindful Attention Awareness	55.9 (10.3)	63.6 (8.9)	-4.0	<i>p</i> = .000

Table 4. Correlation coefficients among variables after invention.

Questionnaire	Happiness	Mood	Fatigue	Awareness
Happiness	-			
Mood	-.47**	-		
Fatigue	-.57***	.61***	-	
Awareness	.60***	-.35*	-.33*	-

Awareness: Mindful Attention Awareness. Happiness: Subjective Happiness, ****p* < .001, ***p* < .01, **p* < .05.

Table 5. Result of a multiple regression analysis when subjective happiness score was an independent variable.

	Standardized partial regression coefficient (β)	<i>t</i> -value	<i>p</i> -value
Mood	-.08	-.48	<i>p</i> = .63
Fatigue	-.37	-2.17	<i>p</i> = .04
Mindful Attention Awareness	.45	3.10	<i>p</i> = .005

(*r* = .60), the Fatigue (*r* = -.57), and the Mood (*r* = -.47). Mood also significantly correlated with Fatigue (*r* = .61) and Mindful Attention Awareness (*r* = -.35). And the Fatigue significantly related with the Awareness (*r* = -.33).

Lastly, we show the results of multiple regression analysis (Table 5). From the standardization partial regression coefficient, the Awareness (β = .45) was the most effective on the Subjective Happiness, and following the Fatigue (β = -.37). Although mood is similar to fatigue, there was not a problem by the multicollinearity analysis.

4. Discussion

4.1. Effects of Mindfulness Yoga

The Mindfulness Yoga significantly increases the Subjective Happiness and the Mindful Attention Awareness, and decreases the Mood and the Fatigue. About happiness, there are very few studies. Although Kawano & Emori (2021) showed

the relationships between subjective happiness and mental health measured by General Health Questionnaire, this study was not intervention study. Thus, the results of positive effects of mindfulness yoga on happiness of parents raising preschool children at COVID-19 pandemic may be greatly important.

As for effects of mood, mindfulness yoga might be effective on mood disorder like anxiety or depression in this research. In mindfulness parenting, parents might accept their present situation and themselves and may be released their thoughts like “must be good parents,” and their mood disorder might reduce. This result supports the previous studies such that through participating in mindfulness-based interventions parents can reduce level of stress and mood disorders from [Perez-Blasco et al. \(2013\)](#) or [Chaplin et al. \(2021\)](#).

About mindful attention and awareness, increase of this score showed that parents paid attention and were aware of child and parents themselves much more than before after mindfulness yoga. It supports with theory that practice in meditation and informal mindfulness should increase present-centered awareness and attention by [Shapiro, Carlson, & Astine, al. \(2006\)](#). This result is also similar to [Chaplin et al., \(2021\)](#) in which they examined the effects of parenting-focused mindfulness intervention for mothers of adolescents. Although the age of children is different, they used the same scale of the Mindfulness Attention Awareness Scale (MAAS) and showed significant increase. Thus, mindfulness may be effective on mindful attitude of parents of both preschool and adolescents.

As for Fatigue, there are very few studies which show the efficacy of mindfulness for parents raising preschool children on fatigue. Parents are often tired for parenting children, and particularly at home stay at COVID-19 pandemic. From other field, [Zimmaro, Carson, Olsen et al. \(2020\)](#) showed the positive effect on fatigue of breast cancer patients. [Maley \(2018\)](#) also showed the effects of mindfulness on compassion mental fatigue of elementary or high school instructors. Thus in our knowledge, our evidence about fatigue for parents raising children may be originally and useful. Mindfulness yoga by online may be useful for parents in stay home at COVID-19 pandemic particularly.

4.2. Correlation among Variables and the Most Effective Factor on Happiness

Subjective happiness negatively correlated with Mood disorder or Fatigue. This result is similar with previous study by [Kawano and Emori \(2021\)](#) in which they show the negative relationships between subjective happiness and parenting stress measured by Mother’s Children Stress Scale or mental health measured by General Health Questionnaire.

About mood and fatigue, there was high correlation ($r = .61$). Parents with high fatigue feel mood distress. This strong correlation was found from research for cancer patients with multiple Myeloma ([Coleman, Goodwin, Coon, et al., 2011](#)). [Elavsky & Gold \(2009\)](#) examined the relationships among depressed mood, fatigue, physical activity and perceived stress in middle-aged women.

They showed that depressed mood mediated the relationships between physical activity and perceived stress. Thus, in future, we need to examine causal relationships in further.

Mindfulness Attention Awareness was the most effective factor on Subjective Happiness. When parents pay attention to their thoughts or emotion, are aware of them, they may accept themselves. They could take distance between children and themselves. Then they change their behavior to children such that they try to listen to their children and accept them without judgement. Then parents release their burden of parenting and their happiness would increase. **Corthorn (2018)** showed that there was significant effect of mindfulness “Observe” and “Non-Judge” subscale. “Non-judgment,” that is, “Non-judgmental acceptance of self as a mother, empathy, and acceptance for the child” were the ones with higher size effects. The present study supports **Corthorn (2018)** partly, awareness attitude contribute non-judgment, and increase happiness. Moreover, we included “pray of compassion for themselves” in the program, and parents in the present study had compassion for themselves and might felt happy.

4.3. Limitation of the Study

There are some limitations. Half of participants had experience of yoga and their experience might affect present results. We need to consider this experience effects. And all of participants were female. To generalize these effects, we need to include male.

5. Conclusion

Mood disorder and fatigue of parents raising preschool children decreased and subjective mindful attention and awareness and happiness increased through our Mindfulness yoga program. It suggests that Mindfulness yoga is effective to decrease stress and increase well-being of them at COVID-19 pandemic.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper. We do not any funding supports.

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