The Effect of Mindfulness-Based Cognitive Therapy on Burnout of Healthcare Professionals in Japan

Tetsuji Ietsugu[1, 2]
Ryuta Katsumata[2]
Shiho Hayashi[2]
Makoto Ikawa[3]

Abstract

Background

Burnout is one of the major problems among healthcare professionals. Although evidence suggests that mindfulness interventions, such as Mindfulness-Based Cognitive Therapy (MBCT), can reduce the symptoms of burnout, there is very little research which examines the effectiveness of MBCT on burnout of healthcare professionals in Japan. This study aimed to investigate the feasibility and effectiveness of MBCT for reduction of the burnout of healthcare professionals.

Methods

Participants (n=13) attended an 8-week MBCT program and responded to the Maslach Burnout Inventory (MBI), the Patient Health Questionnaire (PHQ-9), the Five Facet Mindfulness Questionnaire (FFMQ) at the beginning of the program (Time 1), the end of the program (Time 2), and the follow-up session implemented 3 months later of the program (Time 3).

Results

All participants completed the 8-week MBCT program (two participants did not attend the follow up session). MBI and FFMQ scores significantly improved from Time 1 to Time 2. PHQ-9 score was kept at a low level from Time 1 to Time 3.

Conclusion

Results suggest that MBCT was feasible and a cost-effective approach in reducing burnout of healthcare professionals.

Keywords：Mindfulness-Based Cognitive Therapy (MBCT), Healthcare professionals, Mindfulness, Burnout

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1　Faculty of Human Life Science, Nagoya Keizai University (Nagoya University of Economics)
2　Holy Cross Hospital
3　Tomigaoka Clinic

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1. Introduction

Most of the interests of healthcare professionals have been directed to treatment of their patients, and their own care has not been emphasized. However, burnout among health care professionals has been reported repeatedly (Rotenstein, Torre, Ramos, Rosales, Guille, Sen, & Mata, 2018). According to World Health Organization (2018), burnout is a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions; 1) feelings of energy depletion or exhaustion, 2) increased mental distance from one's job, or feelings of negativism or cynicism related to one's job, 3) reduced professional efficacy. There are many studies about the burnout in healthcare professionals. For example, burnout is linked to inadequacy of work satisfaction, anxiety, and depression among healthcare professionals (Yilmaz, 2018). Burnout makes them consider resignation (Shanafelt, Sloan, Satele, & Balch, 2011). It relates to lower patient care (Rathert, Williams, & Linhart, 2018). Moreover, it can result in medical errors (Shanafelt et al., 2010).

In response to these burnout related problems, a number of studies have examined the effectiveness of Mindfulness-Based Cognitive Therapy (MBCT) (de Zoysa, Ruths, Walsh, & Hutton, 2012; Hamilton-West, Pellatt-Higgins, & Pillai, 2018; Marx, Strauss, Williamson, Karunavira & Taravajra, 2014). MBCT is an 8-week group intervention (Segal, Williams, &Teasdale, 2002). The program has a variety of mindfulness practices which are classified in formal practice and informal practice. Although MBCT program was originally for the prevention of depressive relapse, it has been applied for many populations even for healthcare professionals and a meta-analysis suggested that Mindfulness-Based Interventions,such as MBCT, have the potential to significantly improve stress among them (Burton, Burgess, Dean, Koutsopoulou, & Hugh-Jones, 2016). As far as we know, there is very little research which examines the effect of MBCT on burnout of healthcare professionals in Japan. The purpose of this study was to examine the feasibility of an 8-week MBCT for them and its effect on burnout.

2. Methods

Participants

We announced the MBCT program for the staff in a psychiatric hospital in Japan. The eligibility criteria to attend the program were 1) caring for patients as professionals, 2) having no psychiatric disorders and 3) willingness to attend all 8 sessions. 13 medical staff including 3 doctors, 4 nurses, 4 psychotherapists, 1 pharmacist, 1 occupational therapist (mean age=39.6, SD=10.2) showed interest in attending. One month before the MBCT program started, all participants attended a pre-session meeting which consisted of two components; explanation about MBCT program and the study protocol. All of them understood and agreed with the aim of the study, and then they completed the consent form. The ethical committee of the hospital had approved this study protocol before recruiting participants.

Intervention

MBCT was a standardized group intervention originally developed as a relapse prevention approach for patients who are in remission (Segal et al., 2002). The MBCT program consists of 8 weekly group sessions (2 hours for each), consisting of a variety of meditations, mindful movements, psychoeducation and group discussion. Participants were instructed to do daily homework (around 45 minutes) during the program. In order to make attending the program as convenient as possible, it was held in a large hall of the hospital at night time. The follow-up session was held three months after the 8-week program.

The instructor of the MBCT program, one of our research team members, had stayed and been trained to

teach MBCT at Oxford Mindfulness Centre for one year before this research.

Measures

Participants completed a battery of scales before the program started (Time 1: T1), immediately after the program (Time 2: T2), and three months after the program (Time 3: T3).

1) Maslach Burnout Inventory (MBI)

MBI was developed by Maslach & Jackson (1981) and translated into Japanese by Nishibori, & Moroi (2000). It has 3 factors (Emotional Exhaustion, Depersonalization, and Decreased Sense of Personal Accomplishment), and it is a 22-item scale which measures the frequency of burnout symptoms on a-7-point Likert-type scale ranging from 0 for never to 6 for every day.

2) Patient Health Questionnaire (PHQ-9)

PHQ-9 was developed by Kroenke, Spitzer, & Williams (2001) and translated into Japanese by Muramatsu et al. (2007). It measures the severity of depression with 9 items which measures the frequency of depression on a 4-point Likert-type scale ranging from 0 (not at all) to 3 (nearly every day). The score can range from 0 to 27 (none for 0-4 points, mild for 5-9 points, moderate to severe for more than 10 points).

3) Five Facet Mindfulness Questionnaire (FFMQ)

FFMQ was developed by Baer, Smith, Hopkins, Krietemeyer, & Toney (2006) and translated into Japanese by Sugiura, Sato, Ito, & Murakami (2012). It has 5 factors (Observe, Describe, Act with Awareness, Nonjudge, Nonreact), and it is a 39-item scale with measures the degree of mindfulness on a-5-point Likert-type scale ranging from 1 for never or very (or rarely true) to 5 for very often (or always true).

Data analysis

We performed a repeated measure ANOVAs and used post-hoc tests with Bonferroni corrections to compare the means at each time. Effect sizes were also calculated. All data were analyzed by SPSS 24.0 package.

3. Results

All 13 participants completed the 8-week MBCT program, attending at least 6 sessions. Two participants, however, did not attend the follow-up session and failed to respond to the scales at T3. The data of the two participants was removed from the overall analysis (Table 1).

3.1 MBI

As for the total score of MBI, one-way ANOVA revealed a significant decrease ($F(2, 20)=6.114$, $p=.008$, $\eta p^2=.379$). A post hoc analysis using the Bonferroni correction revealed a significant difference between T1 and T2 ($p=.011$). However, there were not significant differences between T1 and T3 ($p=.162$), T2 and T3 ($p=1.000$) (Figure 1).

Emotional exhaustion showed a significant change ($F(2,20)=5.166$, $p=.016$, $\eta p^2=.341$). A post hoc analysis using the Bonferroni correction revealed a significant difference between T1 and T2 ($p=.037$) and there was a close to significant change between T1 and T3 ($p=.072$). However, there was no significant difference between T2 and T3 ($p=1.000$).The other two subscales of MBI did not show any significant changes. Depersonalization did not show significant change ($F(2,20)=1.713$, $p=.206$, $\eta p^2=.146$).Decreased Sense of Personal Accomplishment did not show significant change ($F(2,20)=1.296$, $p=.296$, $\eta p^2=.115$).
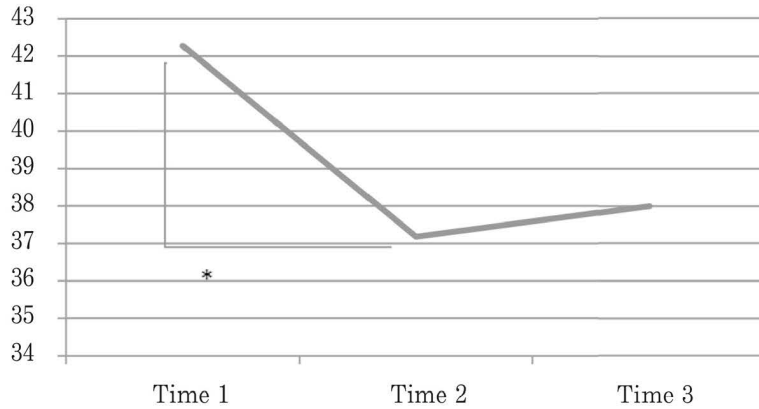
Figure 1. Change in burnout as measured by Maslach Burnout Inventory from preintervention (Time 1) to postintervention (Time 2) to 3-month follow-up (Time 3). *p<.05

3.2 PHQ-9

PHQ-9 did not show any significant changes during this study ($F_{(2,20)}$=1.601, p=.227, ηp^2=.138).

3.3 FFMQ

As for the total score of FFMQ, one-way ANOVA revealed a significant increase ($F_{(2,20)}$=53.152, p =.000, ηp^2=.842).A post hoc analysis using the Bonferroni correction revealed significant differences between T1 and T2 (p=.000), T1 and T3 (p=.000). However, there was not significant differences between T2 and T3 (p=1.000)

As to the five subscale of FFMQ, Observing showed a significant increase ($F_{(2,20)}$=49.205, p=.000, ηp^2=.831).A post hoc analysis using the Bonferroni correction revealed significant differences between T1 and T2 (p=.000), T1 and T3 (p=.000). However, there was no significant difference between T2 and T3 (p =.142). Nonreact showed a significant increase ($F_{(2,20)}$=19.881, p=.000, ηp^2=.665).A post hoc analysis using the Bonferroni correction revealed significant differences between T1 and T2 (p=.001), T1 and T3 (p =.000). However, there was no significant difference between T2 and T3 (p=1.000). Nonjudging showed a significant increase ($F_{(2,20)}$=9.003, p=.002, ηp^2=.474). A post hoc analysis using the Bonferroni correction revealed a significant difference between T1 and T3 (p=.009) and there was a close to significant change between T1 and T2 (p=.083). However, there was no significant difference between T2 and T3 (p=.383). Describing showed a significant increase ($F_{(2,20)}$=5.330, p=.014, ηp^2=.348).A post hoc analysis using the Bonferroni correction revealed a significant difference between T1 and T3 (p=.009). However, there were no significant differences between T1 and T2 (p=.103), T2 and T3 (p=1.000). Awareness showed a significant increase ($F_{(2,20)}$=4.978, p=.018, ηp^2=.332).A post hoc analysis using the Bonferroni correction revealed a significant difference between T2 and T3 (p=.002). There was a close to significant change between T1 and T3 (p=.076). However, there was no significant difference between T1 and T2 (p=1.000).

Table 1. Three-time point（Time1, Time2, Time3）comparison of outcome measures (n=11)

	Time 1	Time 2	Time 3	F	p	ηp^2
MBI　total	42.27 (9.26)	37.18 (8.66)	38.00 (8.21)	6.114	.008	.379
Emotional Exhaustion	24.36 (5.50)	21.72 (6.13)	21.54 (4.76)	5.166	.016	.341
Depersonalization	9.55 (2.02)	8.55 (2.02)	9.45 (1.70)	1.713	.206	.146
Decreased Sense of Personal Accomplishment	8.36 (3.50)	6.91 (3.36)	7.00 (4.34)	1.296	.296	.115
PHQ-9	3.91 (3.37)	3.82 (4.04)	2.55 (2.70)	1.601	.227	.138
FFMQ　total	113.45 (12.84)	129.64 (15.19)	131.45 (12.38)	53.152	.000	.842
Observing	20.82 (3.49)	27.82 (4.02)	26.09 (4.30)	49.205	.000	.831
Nonreact	18.45 (2.70)	22.91 (3.51)	22.45 (2.77)	19.881	.000	.665
Nonjudging	24.27 (4.80)	26.64 (5.33)	27.82 (4.77)	9.003	.002	.474
Describing	23.82 (3.84)	26.36 (5.05)	26.36 (4.00)	5.330	.014	.348
Awareness	26.10 (3.27)	25.90 (4.25)	28.73 (3.74)	4.978	.018	.332

MBI= Maslach Burnout Inventory, PHQ=Patient Health Questionnaire, FFMQ= Five Facet Mindfulness Questionnaire

4. Discussion

The aim of this study was to examine the feasibility of an 8-week MBCT for healthcare professionals and its effect on burnout. All participants could complete the MBCT program, which means MBCT is a feasible approach for healthcare professionals. One-way repeated measures ANOVA revealed that the MBI scores decreased after the MBCT program. Although the effect could not be observed after three months, MBCT might have the potential effect on burnout, especially on emotional exhaustion. In addition, the score of FFMQ at T3 was significantly higher than that of T1, suggesting that the MBCT program could improve mindfulness of participants. As some systematic reviews (Lamas, Medina, Ivtzan, Rupprecht, & Eiroa-Orosa, 2017, 2019) concluded, this study could suggest that mindfulness is an important factor in improving the mental health of healthcare professionals.

5. Limitations

There are several limitations to this study. First, this study did not have a control group. Therefore, it may be premature to conclude that MBCT is effective in reducing burnout. Second, the participants of this study were self-selected and healthy enough, keeping the score of PHQ-9 low throughout the period of this study. Third, the sample size was small. Therefore, further research with a larger sample is expected to examine the feasibility of 8-week MBCT for healthcare professionals and its effect on burnout.

6. Conclusion

In summary, the findings of this study provide support that MBCT is a feasible approach for healthcare professionals and is likely effective in reducing their burnout.

7. Acknowledgements

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