

## **The Effects of an MBCT Course on College Students During the Pandemic**

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### **Abstract**

Research showed that one in six of college students in Taiwan suffered from depression. In addition, the World Health Organization also pointed out that global anxiety and depression cases increased by 25% in the first year (2020) of the COVID-19 pandemic. The purpose of this study was to assess if the Mindfulness-Based Cognitive Therapy (MBCT) course could help students improve concentration, reduce stress, manage emotions, and change cellphone habits. The methodology of this study was using a questionnaire survey, which included qualitative and quantitative questions, a five-point scale questionnaire (from “*Not at all improved*” to “*Extremely improved*”). In addition, the Chinese version of Mindful Attention Awareness Scale (CMAAS) measurements were taken before and after the MBCT course. The results of this study showed that nearly 60% of the students expressed that the MBCT course could effectively improve their concentration, 83% of the students thought that it significantly reduced their stress, and 86% of students’ feedback showed that it improved their emotional management. However, most students expressed that this course did not help them much in the change of cellphone habits. Therefore, this study suggests that universities in Taiwan should offer more mindfulness-based courses, including online mindfulness courses to help students learn more effectively and improve their physical and mental health, especially during the pandemic.

**Keywords:** concentration, COVID-19 pandemic, emotion management, mindfulness, stress reduction

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## Introduction

The World Health Organization (2022) has pointed out that global anxiety and depression cases increased by 25% in the first year (2020) of the COVID-19 pandemic. Besides, research showed that one in six of college students in Taiwan suffered from depression (Chen, 2016; John Tung Foundation, 2012). Many studies have shown that excessive stress can cause emotional disorders, among which anxiety and depression are two of the most common ones. On the other hand, many studies have proved that mindfulness healing courses, through the mindful practice of concentration and awareness, can effectively reduce stress, treat emotional disorders, improve concentration, reduce cellphone addiction, and further enhance learning effectiveness.

Mindfulness healing courses include Mindfulness-Based Cognitive Therapy (MBCT) and Mindfulness-Based Stress Reduction (MBSR). Numerous scientific evidence and clinical research showed that an eight-week mindfulness-based healing course, especially the MBCT is effective in treating depression (Assumpcao et al., 2019; Cladder-Micus et al., 2018; Tajik et al., 2020). In addition, research also shows that mindful-

ness-based healing courses are effective for managing emotions, reducing stress, improving concentration and improve cellphone addiction (Assumpcao et al., 2019; Cheng et al., 2020; Strauss et al., 2021; Yüksel & Bahadır-Yılmaz, 2020).

The MBCT program was originally developed by Professor Mark Williams at Oxford, John Teasdale at Cambridge and Zindel Segal of the University of Toronto in 1993. They combined the training of Cognitive Behavior Therapy (CBT), and the concept of Mindfulness-Based Stress Reduction (MBSR) developed by Jon Kabat-Zinn at the UMass Medical Center in America in 1979. The MBCT program was designed to help people who had serious depression, and clinical trials showed that it worked. In fact, it is now one of the preferred treatments recommended by the UK's National Institute for Health and Clinical Excellence (Segal et al., 2013).

According to Kabat-Zinn's definition, mindfulness is the awareness that arises through paying attention, on purpose, to the present moment nonjudgmentally (Kabat-Zinn, 2011). Based on this definition, an MBCT program is usually comprised of many practices on mindful concentration and awareness, which include both formal practices, such as sitting meditation and mindful walking,

and informal practices in daily life, such as mindful eating. Numerous studies have proved that MBCT has remarkable contribution to the improvement of concentration and enhancement of learning effects.

During the COVID-19 pandemic, a formal eight-week MBCT course was conducted at Chi Nan University in the first and second semesters in 2021. This study aims to explore if the effects of the MBCT course on college students in Taiwan are consistent with or different from previous studies in regard to the improvement of concentration, reduction of stress, management of emotions, and change of cellphone habits, especially during the COVID-19 pandemic.

A review of the literature on the effectiveness of mindfulness-based healing programs as follows:

### **Concentration Improvement**

Regarding the effects of MBCT courses in college student, the study by Yüksel and Bahadır-Yılmaz (2020) pointed out that a group of MBCT program conducted with nursing students had an effect on students' mindful attention awareness, the post-test mean scores of MAAS of the experimental group were statistically higher than the controlled group. In addition, de Bruin

et al. (2015) noted that awareness and attention in university students increased during and after participating in a mindfulness curriculum course. Besides, a study by Semple (2010) pointed out that mindfulness meditation could enhance attention. Moore and Malinowski (2009) also pointed out that the performance of concentration is positively correlated with the degree of meditation practice, and the performance of meditators' concentration performance is significantly better than that of non-meditators.

### **Stress Reduction**

A study by Strauss et al. (2021) showed that participants in the experimental group improved stress reduction after participating in the MBCT for Life primary course. Another study by Yüksel and Bahadır-Yılmaz (2020) also indicated that MBCT program can be used to reduce the levels of stress in nursing students.

Besides, Chiodelli et al. (2018) found a decrease in the level of stress with medium effect sizes in their study on the effects of a brief mindfulness-based intervention on depression, anxiety, and stress in senior students. On the other hand, Bamber and Schneider's study showed that mindfulness-based meditation significantly decreased the participants' levels of stress (Bamber & Schneider, 2016).

## Emotion Management

Tajik et al. (2020) noted that MBCT is effective in improving the adaptive behaviors, quality of life and self-efficiency of students with mild depression. In addition, a research of MBCT for University students with depression, anxiety, and stress symptoms, which was conducted by Assumpcao et al. (2019), has showed that the MBCT could help college students learn how to manage adverse emotional states, especially, depression, and it also helps improving their quality of life.

A study by Chiodelli et al. (2018) on the effects of a brief mindfulness-based intervention on depression, anxiety, and stress in senior students showed a significant decrease in the level of depression with a large effect size, and a decrease in anxiety levels with medium effect sizes. Additionally, Bamber and Schneider (2016) also noted that mindfulness meditation showed promise in reducing stress and anxiety in college students.

## Cellphone Addiction

Due to the convenience of cellphones, most students access the Internet through cellphones. Studies have found that 20.3% of college students in Taiwan had Internet addiction problem, and that stress, depression, and social anxiety had signif-

icant positive correlations with Internet addiction (Yang, 2014). Besides, a study of cellphone addiction and psychological distress among Chinese adolescents by Lian et al. (2020), showed that cellphone addiction was significantly and positively associated with psychological distress. Woodlief (2017) also found that excessive cellphone use was significantly associated with lower mindfulness. On the other hand, according to the research by Cheng et al. (2020), mindfulness training could improve self-control, reduce rumination, and cellphone addiction.

## Research Methods and Curriculum Design

### Research Methods

This study used a questionnaire survey which included qualitative and quantitative questions. A five-point scale questionnaire (from “*Not at all improved*” to “*Extremely improved*”) was taken after the MBCT course. In addition, there was a special test on concentration along with the Chinese version of Mindful Attention Awareness Scale (CMAAS) taken before and after the MBCT course. This study would like to know whether the results of concentration test in the five-point scale questionnaire are consistent with the results of the CMAAS.



The Mindful Attention Awareness Scale (MAAS) is the most widely used measurement of mindfulness. The scale (MAAS) was developed by Brown and Ryan in 2003, with a total of 15 questions and a single-factor structure. It mainly tests the participants' state of self-awareness to understand whether an individual can accept and perceive all current experiences as a measure of mindfulness. The scale has been developed into a Chinese version (CMAAS) by Chang et al. in 2011. The number of items and item content are the same as the original scale. Research shows that the CMAAS also has good reliability and validity (Chang et al., 2011).

### **Curriculum Design**

The participants in this study were Chi Nan University students who completed an eight-week MBCT course in the first or second semester in 2021. The same standard eight-week MBCT course was offered each semester, and a total of 55 students had taken the MBCT course during 2021.

Most of the classes are face-to-face instruction, except for three weeks conducted online due to the COVID-19 pandemic. There were 55 students who participated in this course, among whom 48 students, including 14 male students and 34 female

students, were valid samples.

The standard MBCT curriculum is a continuous eight-week course, generally two and a half hours to three hours once a week, in addition to two hours of pre-class participant interview and six hours of one-day mindful practice. The total hours of the MBCT course is 28 to 32 hours (Jiang & Yang, 2021).

In this study, the curriculum was designed based on the standard MBCT course. As shown in Table 1, there was a theme each week, and each theme covered 2-3 formal practice items which were instructed in the class. After the practice, group discussions, sharing, and inquiry were conducted. Finally, by the end of the class, a learning feedback sheet was written, and homework was assigned, which included formal practices such as sitting and walking meditation, and an informal practice in daily life, such as eating, bathing, etc.

In this MBCT course, a session of mindful movement meditation and yoga stretching was included, though only for one week. In addition, Tai Chi stretching was also added into this course every week so as to enhance students' interest in learning and practicing concentration, especially during the pandemic, and was shown to be very popular among students.

**Table 1***MBCT Eight-Week Program*

<b>Session: Theme</b>	<b>Practices for the Week</b>
Session 1 - Awareness and automatic pilot	The Raisin meditation. Mindful awareness of a routine daily activity. Mindfulness of the Body and Breath meditation. Habit Releaser.
Session 2 - Living in our heads	Body Scan practice. Carry out another routine activity mindfully. Habit Releaser.
Session 3 - Gathering the scattered mind	Eight minutes of Mindful Movement meditation followed by an eight-minute Breath and Body meditation. A Three-Minute Breathing Space meditation. A Habit Releaser.
Session 4 - Recognizing aversion	An eight-minute Breath and Body meditation. An eight-minute Sounds and Thoughts meditation. A Three-Minute Breathing Space meditation.
Session 5 - Allowing and letting be	The eight-minute Breath and Body meditation. The eight-minute Sounds and Thoughts meditation. The ten-minute Exploring Difficulty meditation. Breathing Space meditation. Habit Releaser.
Session 6 - Thoughts are not facts	Ten-minute new Befriending meditation. Continue with the Three-Minute Breathing Space meditation. Try to carry out one of the Habit Releasers.
A day mindful practice (6 hours)	Practice under conditions of silence and simplicity.
Session 7 - How can I best take care of myself?	Over the coming week, we suggest you carry out three meditations on six days out of the next seven. Write the two meditations you plan to do here. Three-Minute Breathing Space meditation.

Session 8 - Maintaining and extending new learning	Giving yourself a reason for sustaining the practice. Decide your regular pattern of practice in the future. Daily Mindfulness.
Formal practice & Informal practice	Formal practice: Sitting meditation/Mindful walking/Body Scan practice/Mindful movement. Informal practice: practice in daily life, pay attention to each activity, such as Eating, Bathing etc.

*Note.* Excerpted from Williams, M., & Penman, D. (2012), and Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2013).

## Findings and Discussion

The following is the findings based on the results of the five-point scale questionnaire after the eight-week MBCT course, and a special test of concentration with the CMAAS. This study found the results of the five-point scale questionnaire test on concentration are consistent with the results of the CMAAS test.

### Concentration Improvement 1

According to the results of the five-point scale questionnaire, as demonstrated in Figure 1, after taking the eight-week MBCT course, the students described that mindfulness practice had helped their concentration in their daily lives such as walking, eating, and reading. According to the results shown here, approximate 56% of the participants expressed that their concentration had extremely improved or improved very much.

### Concentration Improvement 2 - Result of CMAAS Test

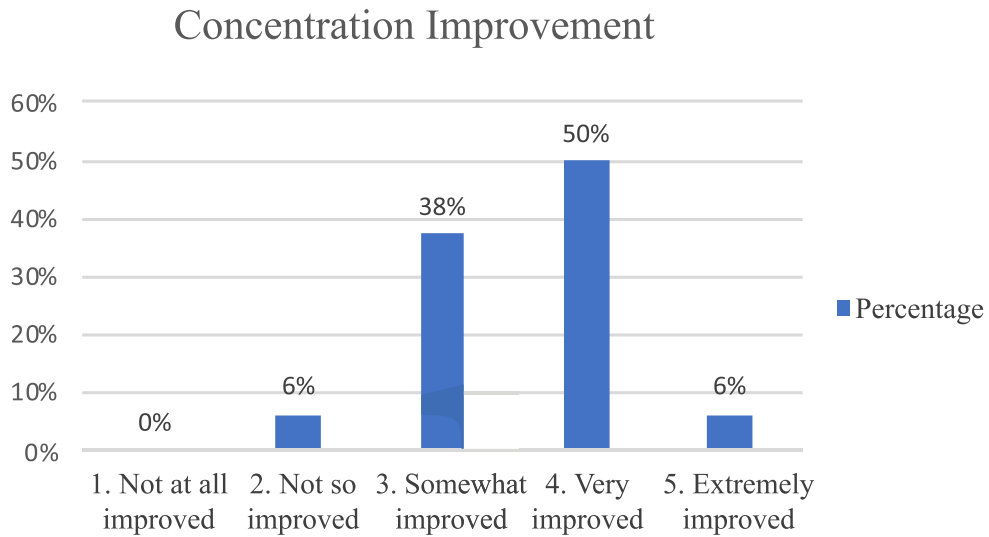
Regarding the concentration test, in addition to the five-point scale questionnaire, the CMAAS test was added for a comparison between the results of two different ways of testing.

A total of 48 participants in this study completed the CMAAS test before and after the course. As shown in Figure 2, a total of 28 participants (58%) had higher scores in the post-test compared with the pre-test, 4 participants (8%) with the same score, and 16 participants (34%) with lower scores.

By comparing the results of two surveys, as concluded in Figure 1 and Figure 2, the result of the CMAAS test showed the proportion of improved concentration was 58%, which was quite close to the proportion (56%) students described above about their improvement.

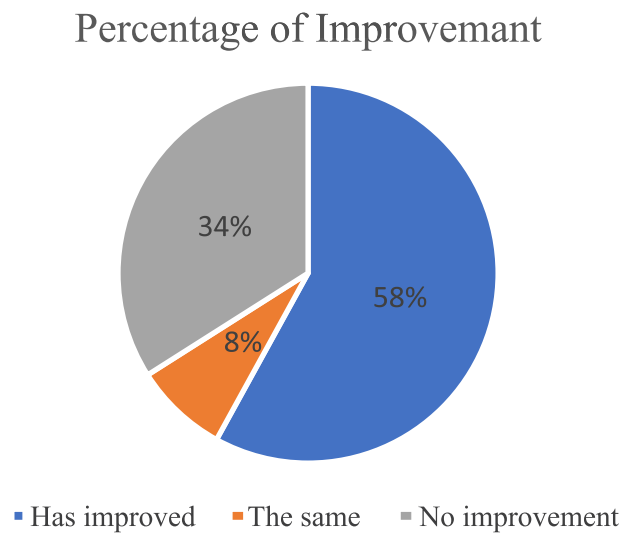
**Figure 1**

*The Effect of MBCT on Concentration Improvement*



**Figure 2**

*The Result of the CMAAS Test*



The findings of concentration improvement in this study are in line with previous research conducted by other scholars, which pointed out that MBCT curriculum and mindfulness practice could enhance concentration (de Bruin et al., 2015; Moore & Malinowski, 2009; Semple, 2010; Yüksel & Bahadır-Yılmaz, 2020).

### Stress Reduction

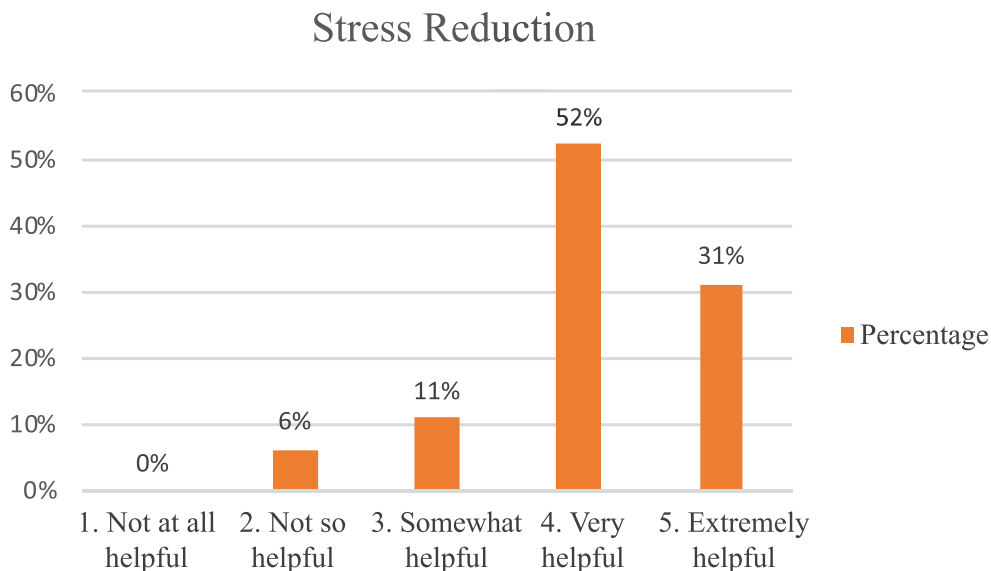
As shown in Figure 3, the results of the five-point scale questionnaire indicate

that after taking the eight-week MBCT course, approximately 83%, including extremely helpful and very helpful, of the participants expressed that learning through MBCT course could help them reduce stress.

The findings of this study are consistent with previous studies which showed that mindfulness practice could reduce stress (Bamber & Schneider, 2016; Chiocelli et al., 2018; Strauss et al., 2021; Yüksel & Bahadır-Yılmaz, 2020).

**Figure 3**

*The Effect of MBCT on Stress Reduction*



## Emotion Management

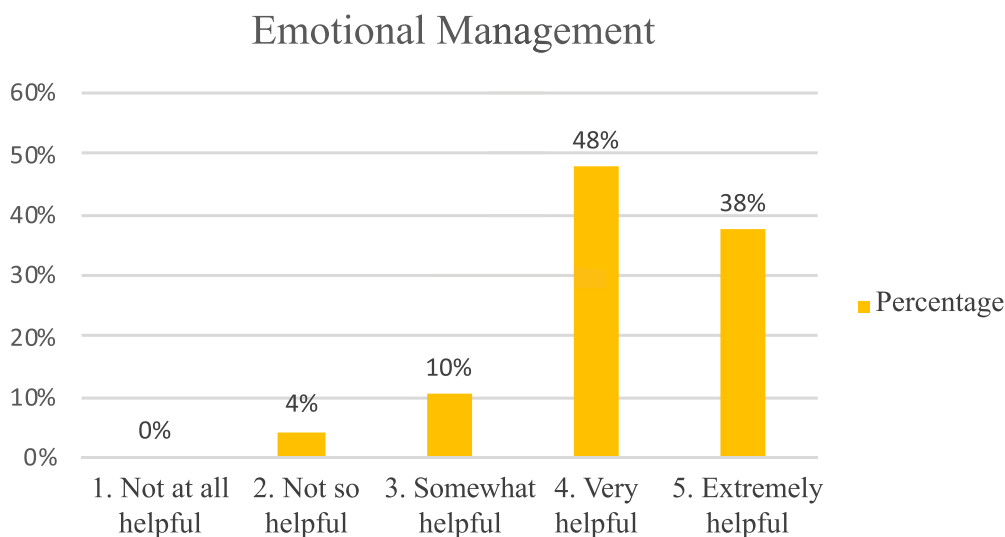
After taking the eight-week MBCT course, the students described whether mindfulness practice could help them reduce stress. The results of the five-point scale questionnaire in Figure 4 show that a total of 86% of the participants, including extremely helpful and very helpful, expressed that MBCT

course could help them manage emotions.

The findings are in accord with the results of the previous studies which showed that mindfulness practice could help participants manage emotions (Assumpcao et al., 2019; Bamber & Schneider, 2016; Chiodelli et al., 2018; Tajik et al., 2020).

**Figure 4**

*The Effect of MBCT on Emotional Management*



## The Habits of Using Cellphones

Cellphone addiction is a serious problem among college students. This study explored if the MBCT course could help students change cellphone habits. As shown in Figure 5, the results of the five-point scale questionnaire indicate that after taking the eight-week course, only 19%, including moderate change and major change, of the participants expressed that the practice of mindfulness helped them change cellphone habits. However, most of them did not change habits of using cellphones.

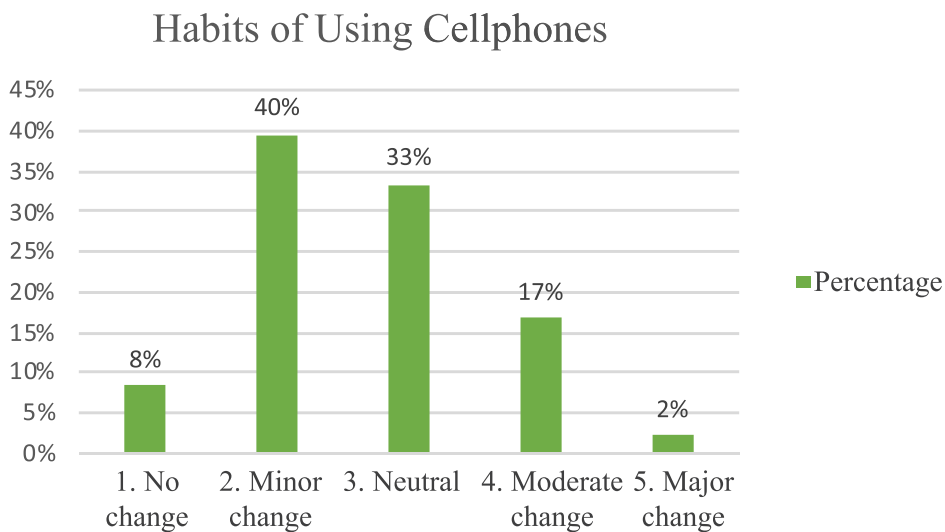
Lian et al. (2020) has noted in his study that cellphone addiction was significantly and positively associated with psycholog-

ical distress, and other studies, including Cheng et al. (2020) and Woodlief (2017), have shown that mindfulness practice could help reduce cellphone addiction. However, in contrast to these studies, the results of my study showed the help was very limited.

As to why students showed little improvement after taking the MBCT courses, one possible reason may be that many students wanted to get more instant messages about the COVID-19 pandemic through their cellphones, or wanted to use cellphones to divert their attention away from their anxiety or depression caused by the pandemic.

**Figure 5**

*The Effect of MBCT on Cellphone Habits*





## Conclusion and Suggestion

### Conclusion

As discussed in the previous literature review, many studies suggested that the eight-week MBCT course could effectively improve concentration, emotional management, and reduce stress. This study also came to the same conclusion.

In line with many studies which showed that mindfulness practice could enhance participants' concentration, this study showed that nearly 60% of the students expressed that the MBCT course could effectively improve their concentration.

Regarding stress reduction, the result of this study showed that 83% of the students thought that the MBCT course significantly reduce their stress, which is also consistent with previous studies that mindfulness practice could reduce stress.

Moreover, 86% of students' feedbacks in this study showed that the MBCT course could improve their emotional management, which, again, is in accord with previous studies that mindfulness practice could improve emotional distress.

In addition, this study also showed that the MBCT courses contributed more to emotional management (86%) than to the improvement in stress reduction (83%) and concentration (60%).

Although previous studies showed that

mindfulness practice could reduce cellphone addiction, only one in five students in this study expressed that the MBCT course helped them change cellphone habits. This result indicated that cellphone addiction is indeed a serious problem among college students. Whether the result is related to the pandemic or not requires further research.

### Suggestion

According to research, the impact of the pandemic has become another source of stress and has caused many students to experience heightened anxiety and depression. Like many studies which showed that an eight-week MBCT course is effective in improving concentration, reducing stress, and managing emotion, this study also found the same result.

Many universities such as Oxford University in the United Kingdom and the University of Massachusetts in the United States have established mindfulness center, and promoted mindfulness teaching as a method of reducing stress and treating depression. Therefore, this study suggests that universities in Taiwan should offer more mindfulness-based courses, including online mindfulness courses, to help students learn more effectively and improve their physical and mental health, especially during the pandemic.

## References

- Assumpcao, A., Pena, C., Neufeld, C., & Teodoro, M. (2019). Mindfulness-based cognitive therapy for university students with depression, anxiety, and stress symptoms: A randomized controlled trial. *Asia Pacific Journal of Clinical Trials: Nervous System Diseases*, 4(3), 51–59.
- Bamber, M. D., & Schneider, J. K. (2016). Mindfulness-based meditation to decrease stress and anxiety in college students: A narrative synthesis of the research. *Educational Research Review*, 18, 1–32. <https://doi.org/10.1016/j.edurev.2015.12.004>
- Chang, J.-H., Lin, Y.-C., & Huang, C.-L. (2011). 中文版「止觀覺察注意量表」之信效度分析 [Psychometric properties of the Chinese translation of mindful attention awareness scale (CMAAS)]. *Psychological Testing*, 58(Special Issue), 235–260. <http://doi.org/10.7108/PT.201104.0090>
- Chen, T.-J. (2016). 大學生正念、壓力及憂鬱之相關性研究 [The relationship among mindfulness, stress, and depression in university students] [Master's thesis, Taiwan Normal University]. Taiwan Normal University Electronic Theses & Dissertations. <http://doi.org/10.6345/NTNU202205033>
- Cheng, S. S., Zhang, C. Q., & Wu, J. Q. (2020). Mindfulness and smartphone addiction before going to sleep among college students: The mediating roles of self-control and rumination. *Clocks & Sleep*, 2(3), 354–363. <https://doi.org/10.3390/clockssleep2030026>
- Chiodelli, R., Mello, L. T. N., Jesus, S. N., & Andretta, I. (2018). Effects of a brief mindfulness-based intervention on emotional regulation and levels of mindfulness in senior students. *Psicologia: Reflexão e Crítica*, 31(1), Article 21. <https://doi.org/10.1186/s41155-018-0099-7>
- Cladder-Micus, M. B., van Aalderen, J., Donders, A. R. T., Spijker, J., Vrijssen, J. N., & Speckens, A. E. M. (2018). Cognitive reactivity as outcome and working mechanism of mindfulness-based cognitive therapy for recurrently depressed patients in remission. *Cognition and Emotion*, 32(2), 371–378. <http://doi.org/10.1080/02699931.2017.1285753>
- de Bruin, E. I., Meppelink, R. & Bögels, S. M. (2015). Mindfulness in higher education: Awareness and attention in university students increase during and after participa-

- tion in a mindfulness curriculum course. *Mindfulness*, 6(5), 1137–1142. <https://doi.org/10.1007/s12671-014-0364-5>
- Jiang, Y.-S., & Yang, C.-S. (2021). 正念靜心運用於通識教育之研究 – 以 MBCT 与 MBSR 融入課程為例 [The application of mindfulness meditation in general education: Take the integration of MBCT & MBSR as an example]. *Taiwan Journal of General Education*, (28), 37–76. [https://doi.org/10.6360/TJGE.202112\\_\(28\).0002](https://doi.org/10.6360/TJGE.202112_(28).0002)
- John Tung Foundation. (2013, February 18). 2012 年臺灣大學生憂鬱情緒與運動習慣之相關性調查 [A survey of the correlation between depression and exercise habits among college students in 2012]. [https://www.etmh.org/Depression/show\\_more?id=a367234e84604969ace0558fc5f09349](https://www.etmh.org/Depression/show_more?id=a367234e84604969ace0558fc5f09349)
- Kabat-Zinn, J. (2011). Some reflections on the origins of MBSR, skillful means, and the trouble with maps. *Contemporary Buddhism*, 12(1), 281–306. <https://doi.org/10.1080/14639947.2011.564844>
- Lian, S. L., Sun, X. J., Niu, G. F., Yang, X. J., Zhou, Z. K., & Yang, C. (2020). Mobile phone addiction and psychological distress among Chinese adolescents: The mediating role of rumination and moderating role of the capacity to be alone. *Journal of Affective Disorders*, 279, 701–710. <http://doi.org/10.1016/j.jad.2020.10.005>
- Moore, A., & Malinowski, P. (2009). Meditation, mindfulness and cognitive flexibility. *Consciousness and Cognition*, 18(1), 176–186. <https://doi.org/10.1016/j.concog.2008.12.008>.
- Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2013). *Mindfulness-based cognitive therapy for depression* (2nd ed.). Guilford Press.
- Semple, R. J. (2010). Does mindfulness meditation enhance attention? A randomized controlled trial. *Mindfulness*, 1(2), 121–130. <https://doi.org/10.1007/s12671-010-0017-2>
- Strauss, C., Gu, J., Montero-Marin, J., Whittington, A., Chapman, C., & Kuyken, W. (2021). Reducing stress and promoting well-being in healthcare workers using mindfulness-based cognitive therapy for life. *International Journal of Clinical and Health Psychology*, 21(2), Article 100227. <https://doi.org/10.1016/j.ijchp.2021.100227>
- Tajik, R., Shahed hagh ghadam, H., & Rahnejat, A. M. (2020). The effectiveness of mindfulness-based cognitive therapy in improving adaptive behaviors, quality of life, and self-efficiency of students with mild depression. *International Journal of Behavioral Sciences*, 13(4), 142–146. <https://doi.org/10.30491/ijbs.2020.104085>

- Williams, M., & Penman, D. (2012). *Mindfulness: An eight-week plan for finding peace in a frantic world*. Rodale Books.
- Woodlief, D. T. (2017). *Smartphone use and mindfulness: Empirical tests of a hypothesized connection* [Doctoral dissertation, University of South Carolina]. Scholar Commons. <https://scholarcommons.sc.edu/etd/4241>
- World Health Organization. (2022, March 2). *COVID-19 pandemic triggers 25% increase in prevalence of anxiety and depression worldwide*. <https://www.who.int/news/item/02-03-2022-covid-19-pandemic-triggers-25-increase-in-prevalence-of-anxiety-and-depression-worldwide>
- Yang, C.-F. (2014). 臺灣大學生網路成癮盛行率與心理性危險因子之調查研究 [The prevalence and psychological risk factors of Internet addiction of college students in Taiwan]. *Journal of General Education*, (3), 113–136. [https://doi.org/10.7052/JGE.201412\\_\(3\).0006](https://doi.org/10.7052/JGE.201412_(3).0006)
- Yüksel, A., & Bahadır-Yılmaz, E. (2020). The effects of group mindfulness-based cognitive therapy in nursing students: A quasi-experimental study. *Nurse Education Today*, 85, Article 104268. <https://doi.org/10.1016/j.nedt.2019.104268>