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The Effect of Mindfulness-Based Interventions as Therapy from Buddhist Perspective on Clinical Psychotherapy of Depression

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ABSTRACT
The incidence of depression is increasing rapidly, and clinicians and psychologists are constantly searching for effective clinical interventions. Although mindfulness originated in eastern Buddhism traditions, previous clinical studies suggested that mindfulness-based intervention (MBI) could be effectively applied in the West, especially for the treatment of depression. We wrote this article with four purposes: (1) to review how Buddhism is connected with depression treatment in clinical application; (2) to explore the impact of mindfulness-based intervention on depression's cognitive function; （3）to review the current successful cases and difficulties in the clinical application of MBI between the East and the West; (4) to provide suggestion for future clinical research and application based on current difficulties.

Keywords: *Mindfulness-based intervention, Buddhist psychology, Depression, Psychotherapy, Cross-culture*

1. INTRODUCTION

According to data from the World Health Organization (WHO), depression is one of the most common mental disorders in the 21st century. In 2009, nearly 20% of the American population was experiencing clinical depression.[1] Additionally, the incidence of depression has increased rapidly in the past ten years. Depression has also been listed as the most serious mental disorder by the World Health Organization. Human experiencing depression often feel sad and feel that their lives are worthless, and then leading to the extreme suicidal tendencies.[2] The onset of depression is usually accompanied by the occurrence of other mental disorders. Particularly, being with the anxiety disorder.[3] In the meantime, depression can also seriously affect the patient's daily life. Especially, affecting on the interpersonal relationships around them, including the relationship with friends, spouses and even children. Furthermore, human experiencing depression who are more likely to lose the enthusiasm for life.[4] Therefore, the clinical treatment of depression disorder has become a topic of urgent concern for clinical psychiatrists and psychologists. They also have been searching for the effective clinical interventions. In recent years, mindfulness interventions developed from Buddhism are believed to be effective in reducing depression disorder [5] and have been widely used in the clinical treatment of depression. However, because Buddhism originated in the East, the clinical application of mindfulness intervention in the West also faces many difficulties. Therefore, this article will be from the perspective of Buddhism, by reviewing how Buddhism and clinical depression treatment are connected, analysing previous successful cases and difficulties in clinical application, and exploring the impact of mindfulness-based intervention (MBI) on neural functions of brain, and then providing effective suggestions for future clinical intervention applications and research directions.

2. ABOUT BUDDHISM

2.1. A Brief Summary of Buddhism

Buddhism originated in India 2500 years ago, and from a man named Siddhartha Gautama. After that, Indians took Buddhism as a training in religion, philosophy and thought. Siddhartha Gautama was also known as the Buddha. It was believed that the Buddha had escaped suffering and completed the ultimate

spiritual liberation. People were also attracted to this path of liberation. In other words, Buddhist sect guide practitioners towards a higher and ideal spiritual life. The process of achieving this goal is to reduce and eliminate suffering and pain, increase ideological awareness, and truly own spiritual process. In the Buddha's eight lofty paths, mindfulness as an important element among them, which is used to be the training of intelligence and morality. Additionally, mindfulness is also a key element to help people achieve spiritual liberation. Furthermore, mindfulness as a concept and practice, which also occupies a major position in Buddhist meditation. In Buddhist theory, mindfulness also has certain prefix restrictions. The implementation process of mindfulness must be considered correct and moral. That is to say, when we doing mindfulness, Buddhism does not advocate the moral neutrality. It must be considered as moral, healthy, and beneficial. Therefore, a certain degree of moral restriction is the key to practicing mindfulness training in Buddhist theory. The Buddhist concept of "true happiness" does not refer to emotional pleasure and enjoyment, but refers to correct morality, ideological maturity and spiritual liberation.[6]

In a broad sense, Buddhism today has formed three major schools: Theravada, Mahayana and Vajrayana. Theravada is mainly dominant in Southeast Asian countries such as Thailand, Myanmar and Cambodia. Mahayana occupies a dominant position in Southeast Asia such as Japan, China, and Tibet. However, for the systematic concepts, there is also huge diversity of Buddhism within each country. Buddhism has gradually developed not only in Asia, but also in many Western countries.[7] It is worth noting that even if there are different schools of Buddhism, or there are great differences in many countries, but their ultimate goal is consistent with the Western psychology, which is to reduce the pain.[8]

2.2. Mindfulness: The Core of Buddhism

Mindfulness is an important way to achieve Buddhist goals, reducing the pain. What as the core of Buddhist meditation, is now widely spread in Western countries and is welcomed by many Westerners. [9] Mindfulness is considered as "The experience of paying full attention to the moment based on the instance".[10] Additionally, mindfulness is described as being with purpose. It is worth discussing that the premise of mindfulness is "correct morality" in traditional Buddhist concepts, but the practice of it emphasizes "non-judgmental" in the contemporary era, which has become a generally accepted concept. In layman's terms, when people enter personal consciousness during the mindfulness practice, all phenomena and behaviors in the process will be observed. For instance, perception, cognition, and emotion. However, according to "non-judgment" concept, all phenomena and behaviors will not be evaluated as good or bad, right or wrong, positive or negative. In the process of mindfulness, "full attention" is a very critical state. Practitioners can achieve this attention state through meditation. And because mindfulness from the perspective of Buddhism originated in the East, mindfulness is a relatively unfamiliar concept in many cultures. However, some researchers have suggested that applying mindfulness exercises to the clinical treatments in Western societies can be very effective, even if these patients do not understand Buddhism and Buddhist relative terms .[11] In addition, in the past few decades, mindfulness has also been widely used by psychotherapists in behavioral cognitive therapy. The most extensive treatments include reducing stress based on mindfulness,[12] dialectical behavior therapy,[13] acceptance and commitment therapy[14] and Mindfulness-based cognitive therapy.[15] Except for the ACT accident, the other three mindfulness treatments are clearly believed to be originated in Buddhism. In previous studies, many studies have shown that clinical interventions based on mindfulness training have a very effective effect on many mental illnesses, especially for the treatment of depression.[16] [17]

3. THE RELATIONSHIP OF MBI AND BUDDHISM

3.1. The Improvement of Brain Functions Based on MBI Therapy

In clinical intervention, it is necessary to classify the mechanism of cognitive function in emotion regulation more clearly and systematically. In other words, combining the biological basis of depression with research theories in psychology is critically important for improving the clinical interventions for depression.

The brain structures involved in depression include the amygdala, the limbic system including the hippocampus and the anterior cingulate cortex, as well as the part of the dorsolateral prefrontal cortex that participates in the mood regulation.[18] In the research of Johnstone et al. (2007), people experiencing depression (but not anxiety) were characterized by increased activation of the dorsolateral prefrontal cortex and decreased activation of the amygdala, indicating that depression-related recruitment is involved in emotional cognitive control of the brain area has difficulties. Similarly, the research of Eugene et al. (2009) emphasized the importance of evaluating activation in the frontal cingulate gyrus.

Many previous studies have also observed that there are large improvements in brain areas for depression patient after they were given the mindfulness-based intervention (MBI). In a study by means of EEG, based on EEG recording the brain through electrodes on the scalp spontaneous activity of neurons, the results showed that patients could be observed positive treatment results

after receiving MBI. Furthermore, this effectives are very stable, and the recording method of EEG was far better than the self-report of patients.[19] Additionally, in a study among the adults, it was also found that MBI can cause significant changes in the brain regions associated with depression in these participants. For instance, the research of Moynihan et al. (2013) showed that after MBI intervention in the elderly, the alpha asymmetry of their right frontal lobe was significantly reduced. Similarly, after MBI intervention for young adults, the same effectives were observed. The difference was that the intervention effect of MDI on young adults was better than that on the elderly.[20] Recent experiments among children between 7 and 10 years of age had also shown that mindfulness interventions based on Buddhist concepts may be an effective way to reduce mood disorders at the neurophysiological level. Research[21] showed that after MBI, the α-coherence of EEG in children's cerebral cortex was significantly enhanced, especially in the frontal and central regions. Unlike adults, changes in alpha asymmetry between the frontal and posterior lobes were not found in children. However, their depression scores in their self-reports decreased. This showed that after MBI, the children's cognitive level was changed.

Furthermore, like the research of Shanok et al. (2019), mindfulness practice may lead to the changes in the way of thinking or attitude towards one's own thoughts. For instance, giving non-judgmental observations to people experiencing depression may lead them to understand it as "correct thinking", but the fact is that those so-called judgments do not truly reflect the truth and reality. Thus, these thoughts and behaviours when experiencing depression do not need to be rejected or avoided.[22] Similarly, the description of a person's thoughts or emotions does not truly reflect reality. In layman's terms, what you think of as subjective ideas does not reflect objective facts. For example, people subjectively think "I am a selfish person", but the fact may be, "I am always willing to help people in need" .[17] Mindfulness training encourages people to be aware of unreasonable thoughts and judgments, so that they can shift their attention to other aspects, such as the rhythm of breathing, feeling the sound of the environment, feeling the movement of the body, etc., so as to avoid falling into the former irrational thinking.

3.2. Clinical Applications of MBI for the Depression Therapy in the East and The West

There have been many previous studies showing that MBI has also been successfully applied clinically, whether in the East or the West. A systematic review showed that MBI is still acceptable in different countries and social and cultural environments in Asia, and effective clinical interventions can be carried out.[23] MBI has been found to improve emotional self-regulation in patients with depression. And after MBI, related symptoms of mental disorders can also be decreased correspondingly. For instance, the effective treatment of depression and anxiety can occur at the same time. Additionally, in a controlled experiment, MBI was found to be significantly better than the other interventions in treating depression symptoms such as "treated with conventional TAU." In the related studies conducted in Western countries, MBI has also been proven to be an effective intervention for depression. dysfunctional cognitive-emotional thinking is considered to be widely present in the group of patients with depression. Dysfunctional thinking reflects a person's state of thinking and is defined as focusing on the negative feelings. Therefore, such people are more likely to experience depressive symptoms. A study conducted 8 weeks of MBI for participants,[24] and explored the effects of mindfulness intervention on affective state dysfunction. The results of this study showed that mindfulness intervention mainly affected the ruminating thinking of participants. In other words, after the intervention of mindfulness, the dysfunctional tendency of the status is significantly reduced. The research of [25] also showed that depressed participants can forget negative things after being given the MBI; this study also showed that short-term MBI treatment for outpatients with severe depression can enhance their cognitive functions and significantly reduce depression-related symptoms.

3.3. Cultural Context of Buddhism and Mindfulness

Mindfulness meditation is considered to be a technique of self-training. In the process of mindfulness, we can cultivate and develop our own subjectivity, thinking, and social cognition. In other words, the mindfulness process is not only non-judgmental, which also contains complex mental structures or models. Therefore, the state of mindfulness is not only based on neuroscience and cognitive activities, but also on the influence of cultural communication on depression intervention.[26]

Although Buddhism originated in Asia, there are various practices in Asian countries. However, in modernization, Western society and culture have gradually received it, and it has emerged in Western popular culture. The widespread promotion of mindfulness exercises reflects this phenomenon. As a phenomenon of Buddhism modernization, it was described by Western culture as a science of mind.[27] People are also working to reshape Buddhism to make it more suitable for internationalization and integration into different cultures. Its purpose is to eliminate religious metaphysical assumptions, provide a special path for personal growth, and focus on the mindfulness process. In such a situation, all contents can be understood, can

effectively intervene, and is acceptable to people from different social moral and cultural systems. [28]

In a large number of works of [29] phenomenology is constantly pursued as a dialogue between Buddhism and cognitive science, hoping that the subjective experience and consciousness of cognition can be integrated. Subsequently, many scholars started a wealth of philosophical and experimental work to explore the consciousness.[30] But in the process of practice, it is also necessary to explore the social framework in which people live. Generally speaking, people are the main body, but it is important to combine people's life experience and environment to explore. It is extremely important to consider culture during the implementation of mindfulness. But in the process of cultural dissemination and adaptation, there are still many issues to be discussed. In clinical health disciplines, the absorption of mindfulness intervention in Buddhism is likely to be affected by the following information: (1) With the process of globalization, more transnational immigration has appeared, and it has also led to cultural and ethnic diversity. Therefore, if the influence of cultural background is to be considered when mindfulness-based intervenes, this diversity has become a very difficult problem to solve .[31] (2) For countries with relatively high acceptance of Buddhism, it may be possible to achieve better intervention effects from philosophical theories.[32] (3) The issue of cultural adaptation should also be considered in the translation process, because Buddhism, as a unique historical culture in Asia, involves too many local cultural elements. If it is explained clearly in the process of disseminating translation, it is also a very critical factor. If there is an error in the translation process, it will lead to misunderstandings and false perceptions, as well as cognitions.[26]

3.4. Cultural Adaptation of MBI

With the increasing acceptance of Buddhism in Western countries, in recent years, people have borrowed heavily from Buddhism's meditation techniques in the "third wave" of cognition[33] In the meantime, Buddhism has been used in many situations. The next also affected new forms of psychological intervention treatment. As for the cultural adaptation problems faced by mindfulness in the dissemination, there are also some previous successful examples that can provide directions for future applications and researches.

Naikan is a mindfulness intervention therapy developed in Japan based on Buddhist concepts. During this process, the psychotherapist encourages the practitioner to meditate for a week. During this period, the practitioner needs to review the positive things that have happened in the past, such as the help received from others. This method allows the practitioner to not only pay attention to themselves, but also to the outside world and the surrounding environment. The purpose is to alleviate the suffering of practitioners. In the process of practice, the practitioner will be conveyed information related to the home environment, such as sound and smell. In this way, the practitioner can recall childhood.[34] Naikan has been successfully practiced in Austria, the United States, the United Kingdom and Germany. Even if it is separated from the Japanese environment and in a new culture, it can still play an effective role in intervening mental disorders such as depression. However, there is little discussion about the main variables of why it can be successfully applied to a new environment out of cultural background. Therefore, for future researches, we can compare various Buddhist-based MBIs and find the main factors, so that more genres of MBI can be applied to different cultural environments.

4. DISCUSSION

The prevalence of MBI based on the Buddhist perspective in clinical psychology and psychiatry reflects that they share the goal of "reducing the pain". From the neuroscience level, there have been many studies showed that MBI can effectively reduce the symptoms of depression, but we still need to combine different cultural backgrounds to adjust more suitable MBIs. Furthermore, some scholars have pointed out that in the process of mindfulness, meditation is a ruthless gaze thinking process that ultimately helps people discover the true state of things. But the form of meditation is disconnected from the outside world, so it is a social media law that destroys interpersonal relationships.[35]In addition, MBI, which originated in traditional Buddhism, has also received many criticisms because they believe that this intervention is an instantaneous state and cannot achieve long-term transformation. In the process of treatment, the psychotherapist excessively requires the practitioners to achieve inner peace, instead of providing a critical communication, just blindly let them passively absorb it. At the same time, they did not understand the mental health model the client desires during the intervention process, but only provided a set of fixed mental models. This is even more challenging for cross-cultural psychotherapists. In other words, as a psychological therapist, you must understand many different cultural and religious backgrounds. Because the clients may come from different cultures and believe in different religions, during the treatment process, you should abandon your original cultural background in order to conform to the mental model that clients need. The practice of mindfulness not only reflects that practitioners follow the same path to the same goal, but also reflects different lifestyles, and each lifestyle has its advantages and disadvantages. Thus, the psychotherapist needs to see this clearly, so as to help the clients get the better treatment.

In addition, most of the current clinical interventions based on MBI have ruled out serious diseases and comorbidities. We know that many serious diseases are

accompanied by depression. Therefore, it is urgent to further explore the effect of MBI intervention in more serious clinical diseases, and adjust systematic intervention measurements that can be used in different degrees of disease. For instance, depression with multiple depression, comorbidities and long-term dysfunction. As mentioned above, the reason why MBI has been criticized is mainly because many scholars believe that it can only serve as a short-term intervention treatment, and the research of [23] also showed that currently in Asia, there was no exploration the role of MBI in the long-term prevention of relapse in patients with depression. Therefore, this is also the direction that future research needs to be explored in depth.

5. CONCLUSION

In summary, although the mindfulness intervention originated from the Buddhism of the East, it could be applied in the West, especially in the clinical applications. Additionally, this article proves it to be an effective intervention for the treatment of depression by reviewing researches relative to neural basis and cognitive process, as using the EEG method and self-report.

However, there are some criticisms during the development of mindfulness-based intervention (MBI), especially in the clinical application. The most common critique is that the mindfulness-based intervention can only be effective temporarily. Actually, this is the limitation for the current research situation, given that there are only a few studies on the long-term intervention of depression. Thus, we encourage researchers to deeply explore this direction in the further study. Additionally, we can also explore the possibility of MBIs' treatment of other mental diseases based on the influence of MBI on the changes of neural functions.

Taken together, although there are currently controversies regarding the clinical intervention of mindfulness-based intervention (MBI) for depression, it is undeniable that from the neurological and cognitive level, there are quite a few research results showing that MBI can significantly decrease the symptoms of depression disorder. In order to better apply it to clinical interventions, future studies can combine more cultural backgrounds and in-depth exploration of the effects of MBI on long-term depression interventions in different cultures.

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