REVIEW ARTICLE

BENTHAM
SCIENCECurrent Psychiatry
Reviews

Mental Health Disorder Therapeutic Modalities Modified for the GMS

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Abstract: Background: Mental health disorders can affect physical and psychological behaviors. The people of the Greater Mekong Subregion (GMS) have a high risk of mental health disorders, such as depression, stress, and substance abuse because the people in this region are trafficked for forced sex work and various forms of forced labor. In these situations, victims often endure violence and abuse from trafficking recruiters, employers, and other individuals. The purposes of this study were to identify the elements characterizing mental health disorders, especially in terms of depression, stress, and substance abuse, and to identify the treatment modalities for mental health disorders in the GMS.

Methods: The researcher undertook a comparative analysis of the literature, reviews of epidemiological studies and mental disorder therapies, and overviews of previous research studies, were used to generate a synthesis of the existing knowledge of the mental disorder therapeutic modalities. Regarding the search methods, the data from the electronic databases PubMed, PsycINFO, Dynamed and ScienceDirect were supplemented with a manual reference search covering relevant studies from 2005 to 2016.

Results: Thirty-one papers were included in the review of elements characterizing mental health disorders, especially in terms of depression, stress, and substance abuse, and to identify the treatment modalities for mental health disorders in the GMS. Nine papers defined characterizing mental health disorders, in terms of depression, stress, and substance abuse. Twenty-two papers showed the treatment modalities for mental health disorders that the treatment was effective, these included pharmacological treatments and psychological treatments, such as mindfulness-based cognitive therapy, biofeedback, and music therapy. Useful guidance can be provided for the prevention and treatment of mental health disorders, and for the care of people in the Greater Mekong Subregion.

Conclusion: The finding of this review confirms the therapeutic modalities can provide useful guidance for the prevention and treatment of mental health disorders and the care of the people in the Greater Mekong Subregion. In addition, the effective interventions should be tested regarding their suitability for the socio-cultural context in the Greater Mekong Subregion.

Keywords: Greater mekong subregion, mental disorder therapeutic modalities, mindfulness-based cognitive therapy, biofeedback, music therapy.

1. INTRODUCTION

The Greater Mekong Subregion has a high incidence of individuals involved in forced labor. Significant human trafficking affects the GMS countries of Cambodia, Laos, Myanmar, Thailand, and Vietnam. The people in the Greater Mekong Subregion are victims of human trafficking for forced sex work and various forms of forced labor. In these

situations, victims often suffer violence and abuse from trafficking recruiters, companies, and other individuals [1].

Therefore, the victims in this area confront a higher risk of mental health disorders, such as depression, stress, and substance abuse. The American Psychological Association [2] has reported that more than half of the people in the world record stress as a source of personal health problems (53 percent), roughly the same level (52 percent) as in 2010, but higher than in 2009 (47 percent) comparatively.

Most of the people believe that stress can contribute to the development of major diseases such as heart disease and cancer; and the increasing feeling of chronic stress can cause depression, which may influence suicidal acts later on [3].

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Stress is a common psychological and physiological response and adaptation by our bodies to the real or perceived changes and challenges in our lives. Stress occurs when a person confronts a situation that cannot be managed effectively.

When persons cannot manage a stressful situation or feel that they cannot meet the demands of that situation, their bodies go into a fight-or-flight response, which triggers muscle tension, increases blood pressure and heart rate, and releases stress hormones. These responses increase the demands placed on the organs of the body and reduce the efficiency of the immune system, especially when the body is constantly presented with stress in their life. Stress responds to physical and psychological behaviors. According to Glanz (2008) stated the following: “A stressor is any real or perceived physical, social, or psychological event or stimulus that causes our bodies to react or respond” [4]. A variety of chronic physical disorders present the risk of developing chronic stress, such as heart attack, stroke, heart failure, diabetes, and cancer [5]. This shows that the consequences of stress can be dangerous for heart disease patients. First, there are physical problems such as increasing blood pressure and high cholesterol levels, affecting the blood clotting system by making the blood clot and thicken more easily, and increasing the levels of stress hormones in the body (cortisol and adrenalin). The second issue concerns the problem of mental health, since increasing feelings of chronic stress can cause depression, which may influence suicidal acts later on [5].

Moreover, by the year 2020, the WHO projects that depression will be the second leading cause of the disease burden worldwide. In Asia, 5% of the population have depressive disorders and 15% of this population suffer from depressive symptoms [6]. In research into health and human trafficking in the Greater Mekong Subregion, the findings from a survey of the people in Cambodia, Thailand, and Vietnam showed that among the common mental health disorders that were measured, depressive symptoms were found to have the highest rate, with 59.75% of the participants in the study showing clinical depression. The prevalence of depression at symptom levels associated with a depressive disorder was higher in females (61.8%) [1]. There are many risk factors associated with depression, such as low income, low education, serious problems in a person's life, and low self-esteem [7]. One of the most important symptoms of depression is suicidal ideation. Suicidal ideation is the most extreme expression of depression. Moreover, depression can have serious effects on physical health such as aches and pains, weight changes, appetite changes, fatigue, lack of energy, or changes in sleeping patterns [1]. Kiss, Yun, Pocock, and Zimmerman [8] conducted a study on the exploitation, violence, and suicide risk among child and adolescent survivors of human trafficking in the Greater Mekong Subregion, involving 387 children and adolescents aged 10 to 17 years in post-trafficking services in Cambodia, Thailand, and Vietnam, along with Laos, Myanmar, and Yunnan Province in China. In addition, 56% depression, 33% anxiety disorder, and 26% post-traumatic stress disorder were found in this study's participants [8].

Regarding the problem of substance abuse, evidence from a survey on the heroin trafficking in the northern areas

of the Greater Mekong Subregion included northeastern Myanmar, the north of Laos and Vietnam, as well as the northernmost part of Thailand [9]. A study by the UN Office on Drugs and Crime (UNODC) showed that the prevalence of all three drugs—opium, heroin, and ATS—was higher in 2013 than in 2012, and estimated that there are between 300,000 to 400,000 drug users in the country, especially in the Golden Triangle, composed of Laos, Myanmar, and Thailand. The negative effects of substance abuse were sleep disorders, the inability to perform daily activities, and the exposure to infectious diseases such as HIV or hepatitis [9].

For the reasons stated, there is a strong need to help improve the psychological care of the people living in this area in order to address such problems as depression, stress, and substance abuse. If we can identify the risk factors regarding mental health disorders, health professionals can collaborate in developing health practices and minimize the prevalence of these conditions, and this will help us develop effective treatment strategies for daily clinical practice and promote a better quality of life for the people, allowing them to begin enjoying their lives again.

2. OBJECTIVES

1. To identify the elements characterizing mental health disorders, especially in terms of depression, stress, and substance abuse.
2. To identify treatment modalities for mental disorders in the GMS.

3. METHODS

A comparative analysis of the literature, comprising reviews of epidemiological and mental disorder therapeutic modalities and overviews of previous research studies, was used in the present study to generate a synthesis of the existing knowledge of mental disorder therapeutic modalities. Therefore, the methods used in this review article were as follows: 1) the collection of data from articles, texts, and related studies, and from the institutions involved, including the determinants discussed in epidemiological studies and data related to the burden of diseases and the risk factors concerning mental health disorders, especially in terms of depression, stress, and substance abuse of the people in the GMS countries; and 2) analysis and synthesis of previous therapeutic modalities with mental health disorders concerning the determinants of the mental health disorders of the people in the GMS in order to provide recommendations. Regarding the search methods, the data from the electronic databases PubMed, PsycINFO, Dynamed and ScienceDirect were supplemented with a manual reference search covering relevant studies from 2005 to 2016. Inclusion criteria comprised articles from international sources written in the English language which focused on mental disorder therapeutics.

4. DISCUSSION

There are many treatment forms of mental health disorders that have empirical support, indicating that treatment is effective for mental health disorders, including both pharmacological treatments and psychological treatments [10].

5. PHARMACOLOGICAL TREATMENTS

Medicines are very important and very much needed for psychiatric patients. Medicines are necessary for the treatment of symptoms of mental health disorders, reduce disability, and prevent future relapse [11]. For example, antidepressants are used to control patients' moods and are used in the treatment of patients with depression, bipolar disorder, and anxiety disorders such as panic disorder, obsessive-compulsive disorder, and social phobias. This medicine has the effect of increasing the levels of serotonin and norepinephrine in the brain. Meanwhile, effective medications for the treatment of substance abuse include methadone, buprenorphine, and naltrexone. Methadone and buprenorphine suppress withdrawal symptoms and relieve cravings. In addition, naltrexone acts by inhibiting the action of heroin or other opioids at their receptor sites. It is used when patients have been detoxified successfully. Because of this limit, naltrexone is not as broadly used as the other medications [12].

5.1. Psychological Treatments

There are many interventions for mental health disorders and they can cover the treatment of depression, stress, and substance abuse, as discussed below.

5.1.1. Mindfulness-based Cognitive Therapy (MBCT)

Mindfulness-based cognitive therapy (MBCT) is a treatment program that was specifically designed to address the latent vulnerability in mental health disorders, especially depression, stress, and substance abuse. The components of MBCT derived from meditation practice and focus on the nonjudgmental awareness of present moment experiences and cognitive restructuring for relieving stress and depressive symptoms. This MBCT was delivered in a group therapy format [12]. The randomized controlled trial (RCT) revealed that the MBCT was effective in improving the skills and providing new skills to combat the adverse effects of depression. It attempts to teach a greater awareness of thoughts, feelings, and emotions, and to view them as mental situations rather than as necessarily truthful rejections of reality. Additionally, the purpose of the therapy was to help patients understand the changes in their thoughts that caused the depressive symptoms [13].

The research itself showed the effects of mindfulness-based cognitive therapy in psychological cases, such as mindfulness-based cognitive therapy for residual depressive symptoms. The purpose of this study was to assess the effectiveness of MBCT in decreasing the depressive symptoms among psychiatric outpatients with repeating depression, and particularly to explore the effects of mindfulness techniques on cognitive restructuring and relieving depressive symptoms. The results showed significant reductions in the depressive symptoms at the end of the MBCT treatment programs [14]. According to a study by Geschwind, Peeters, Drukker, and van Wichers [15] on mindfulness training, this treatment can increase the positive thoughts and emotions of adults with emotional disorders, and decrease the symptoms of their emotional disorders. The aim of the study was to examine whether MBCT increases temporary positive thought and emotion and the competence to make use of

natural rewards in daily life. The results showed that MBCT, compared with control group, was associated with significant increases in the appraisals of positive thought, emotion, and enjoyable activity, as well as the enhanced ability to boost temporary positive thought and emotion by engaging in pleasant activities. This means that MBCT is associated with the increased experience of temporary positive thought and emotion, and the greater appreciation of, and enhanced responsiveness to, pleasant daily life activities.

A further study examining mindfulness meditation and substance abuse in incarcerated populations investigated the effectiveness of a Vipassana meditation (VM) course on substance abuse and psychosocial outcomes in an incarcerated population. The results showed that VM can reduce alcohol-related problems and psychiatric symptoms as well as increase positive psychosocial outcomes [16].

5.1.2. Biofeedback

Biofeedback is a treatment technique in which people are trained to improve their health by using signals from their own bodies and to adjust the abnormal changes from stress in their bodies to normal changes [17]. Biofeedback is aimed at combating stress through relaxation techniques. Biofeedback also helps to make people aware of the thoughts, perceptions, feelings, and behaviors related to their physiology. Over time, they can learn to self-regulate without feedback screens in front of them. Patients that are suffering from illness that has a severe stress component may also be assisted by biofeedback. [18].

Regarding the research itself, it showed the effects of biofeedback in psychological cases, as in a study about the effects of a biofeedback training and relaxation technique program on the health status and levels of stress among heart disease patients by Ruchiwit [19]. The objectives of this study were to study the effects of a biofeedback training program and relaxation techniques on the health status and stress levels of heart disease patients, and to study heart disease patients' satisfaction regarding participating in the programs. The results showed statistically-significant differences at the $p < 0.05$ level between the mean scores of patients' health status and stress levels in the experimental group and the control group. At the $p < 0.01$ and 0.05 levels, there were also statistically-significant differences between the mean scores in the experimental group and the control group according to a laboratory stress test. Eighty-seven percent of the patients felt very satisfied with the biofeedback training program and relaxation techniques. Ninety percent of patients gained benefits from applying the relaxation techniques at home. The work by Peniston and Kulcosky [20] reported on a study of adult chronic treatment-resistant alcoholics treated with alpha-theta electroencephalogram (EEG) biofeedback. In comparison with a traditionally-treated alcoholic control group ($n = 10$) and nonalcoholic controls ($n = 10$), the alcoholics that received brain wave and temperature biofeedback ($n = 10$) showed significant improvements in the Beck Depression Inventory scores compared with the control groups. In a study examining the effects of an EEG biofeedback protocol on a mixed substance-abusing population, the aim was to examine the effects of EEG biofeedback training on improving outcome measures in inpatients with substance use disorders [20]. In this case,

the experimental subjects remained in treatment significantly longer than the control group ($p < 0.05$) [21].

5.1.3. Music Therapy as a Relaxation Technique

Music therapy as a relaxation technique is an easy solution for stress or depression [22]. Many research studies have shown that music has a physiological effect that is quantifiable. This technique can help patients focus on music as an aid to relaxation. Music is also closely linked to emotions. According to numerous results from experimental studies, listening to music can reduce emotional stimuli by changing cardiovascular and respiratory activity [22]. Music is considered to be able to reduce stress and depression and enhance well-being, including distracting patients from unpleasant symptoms [23]. Music has a direct effect on physiological changes through the function of the autonomic nervous system [23]. The effects of relaxing music are reducing stress hormones, metabolic rate, heart rate, blood pressure, free fatty acids, and oxygen consumption through neurophysiological mechanism. These effects include reducing the severity of the disease [24]. Moreover, studies have shown that participants' physiological factors such as heart rate, blood pressure, and respiratory rate were decreased as a result of maintaining pleasant activities in daily life [25].

Previous research study has shown that music affects human responses, such as stress hormones, cognition, and emotion [26]. The results have shown that listening to music has an effect on autonomic nervous system, and to a reduced level of endocrine and psychological stress response [26]. These findings may help to better understand the beneficial effects of music on the human body. The effects of music on anxiety and depression in emerging adults were also investigated in a study which aimed to observe how music affects the mood of those that suffer from anxiety and depression and those that do not. The results of this study indicated that the participants' preference for alternative music and soundtracks/show tunes impacted their positive emotion [27]. A study of individual music therapy for depression used randomized controlled trials to determine the efficacy of music therapy added to routine care and compared this with routine care only in the treatment of depression among people with depression. The results indicated that the participants receiving music therapy plus routine care showed greater improvement than those receiving routine care only in their depression symptoms. These findings support the notion that individual music therapy combined with routine care is effective as a treatment for depression among people with depression [28]. In addition, research has also been conducted to assess whether music therapy can engage patients in group cognitive behavior therapy for substance abuse. The results showed that almost half (46%) would be helped to feel more a part of the group. This means that music therapy is a promising approach to improving engagement in substance abuse treatment groups [29].

CONCLUSION

The people in the Greater Mekong Subregion face a high risk of mental health disorders from various situations; victims often endure violence and abuse from trafficking recruiters, employers, and other individuals [1]. Mental health

disorders can affect physical and psychological behaviors. Mental disorder therapeutic modalities in primary healthcare services comprise effective treatments with common and inexpensive medicines and psychosocial interventions. Although there are therapeutic modalities provided in these countries, there is a barrier that needs to be solved—this barrier is the lack of trained mental health professions to provide support and treatment. Therefore, policy should be revised and include training staff in the community to be able to provide effective interventions. Finally, therapeutic modalities can provide useful guidance for the prevention and treatment of mental health disorders and the care of the people in the Greater Mekong Subregion, while developing effective treatment strategies in daily clinical practice and promoting a better quality of life. In addition, the effective interventions should be tested regarding their suitability for the socio-cultural context in the Greater Mekong Subregion [30, 31].

LIST OF ABBREVIATIONS

GMS	=	The Greater Mekong Subregion
MBCT	=	Mindfulness-Based Cognitive Therapy
VM	=	Vipassana Meditation
EEG	=	Electroencephalogram

CONSENT FOR PUBLICATION

Not applicable.

CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

ACKNOWLEDGEMENTS

This work was supported by the National Research University Projects of the Thailand Office of Higher Education Commission.

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