

Mindfulness Therapy for Anxiety and Depression: Systematic Review

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ABSTRACT

Introduction

Anxiety disorder and depression are two of the most common mental disorder in the world. Commonly, depression and anxiety have been treated with psychotherapy, antidepressant, and anti-anxiety medications. However, adding other approaches can be beneficial. The novel approach has shown significant success in increasing mood and reducing stress is mindfulness. The aim of this systematic review was to explore the effect of mindfulness therapy on anxiety disorder and depression.

Methods

The systematic review was conducted by searching and analyzing all eligible studies from electronic database (PubMed, Science Direct and ProQuest) including original research, randomized control trial, adult participants (≥ 15 years of age), music therapy and yoga as comparison therapy.

Results

Eight studies with the span of time between 2008-2018 were analyzed. These studies were examined and investigated regarding the effect of mindfulness therapy implementation on anxiety disorder and depression. The result proved strong evidence that the mindfulness therapy could improve anxiety disorder and depression with specific mindfulness approach. Mindfulness also had a relation to cortisol level as a biomarker anxiety and depression. Clinically, it is important for nurses and other healthcare professionals to be able to handle anxiety and depression during providing care in hospital

Conclusion

For future research, mindfulness should be used to treat anxiety and depression by measuring cortisol level in general individuals or groups with specific mindfulness approach.

Keywords

Mindfulness, Anxiety, Depression

BACKGROUND

Anxiety disorders and depression are two of the most common mental disorders in the world. The World Health Organization (WHO) estimates that depression is currently the third leading etiology of disease burden in the world and that depression will become the leading etiology of disability in the year 2030³³. Depression and anxiety are common in the United States, and more than one-third of the population is significantly affected at some point while their lifetime^{3,19}. According

to Anxiety and Depression Association of America ¹, an approximated 1 in 10 U.S. adults reports depression and anxiety disorders influence 18% of the U.S. population (40 million adults age 18 and older). The prevalence of anxiety and depression are more prevalent in women than men ³¹. Depression and anxiety part a common cause in chronic stress, and maybe not surprising that approximately one-third of Americans report high levels of stress with that they feel, they cannot adequately resolve ^{2,19}. The economic burden of depression increased from US\$83 billion in 2000 to US\$210 billion in 2010 in the United States ¹⁵. According to ADAA, the expense of anxiety disorders in the United States is approximately \$42 billion per year ¹. Similar findings have been reported in the European Union with depression-associated costs totaling €617 billion per year ⁷. Commonly, depression and anxiety have been treated with psychotherapy, antidepressant, and anti-anxiety medications. However, during such medications have been treated symptoms of anxiety and depression, adding other approaches can be beneficial. The novel approach has shown significant success in increasing mood and reducing stress is mindfulness ^{20,24,25}.

Mindfulness was explained as “giving attention in a particular way, on purpose, in the present moment, and non-judgmentally” ⁵. Mindfulness, described as purposefully giving notice to the present with nonjudgmental awareness, is one novel therapeutic approach that has been increasingly applied in clinical settings to treat physical, behavioral, and emotional illnesses. Mindfulness is much related to Buddhist roots, but forms of mindfulness are used in almost all world religions, including Hinduism, Judaism, Christianity, and Islam ¹⁴. However, mindfulness cannot be associated with any particular philosophical or religious tradition and can be used independently of these structures. Mindfulness is a widely used technique due to its positive physical and psychological health benefits ^{4, 16, 26, 30}. Some recent research describes that mindfulness training can enhance positive emotions and decrease negative affects, such as anxiety, depression, distress, stress, and mood disturbance ^{12, 17, 27}. This enhanced well-being perhaps associated to neurological and psychological results of mindfulness, such as the regulation of limbic system and sympathetic nervous system activity and enhanced executive functioning in the brain, promoting emotional stability and mental flexibility ⁴. Variants of mindfulness meditation have been affiliated with Western psychology and have referred evidence of increasing mental health ¹³. For example, mindfulness-based stress reduction (MBSR) programs have been effective in reducing anxiety, depression, and chronic pain ^{32,34}. MBSR can also reduce stress, increase the quality of life and compassion, and reduce burn-out and increase the health of healthcare professionals ¹⁰. Although MBSR has been referred to decrease psychological symptoms and encourage greater empathy and compassion in nursing, outside of the MBSR framework, studies of mindfulness meditation as a practice alone or as a brief program were limited ²⁹.

Brief mindfulness such as mindfulness meditation is one of specific mindfulness which comes from a part of MBSR. Mindfulness meditation and MBSR was different at the time of intervention. Mindfulness meditation was shorter than MBSR. Although there are a different time in this intervention, expected results both of them were effectively decreased anxiety and depression.

According to results both of them, mindfulness meditation is brief mindfulness that decreasing anxiety and depression and shorter duration of the intervention. However, mindfulness meditation still has conducted especially the procedural intervention and specific condition that can apply. Finally, mindfulness meditation has potential intervention in anxiety and depression for future research.

METHODS

Systematic searches of the international literature consist of search strategy and study selection.

Search Strategy

A search of the scientific literature was conducted in 2008 to 2018 using computerized database PubMed, Science Direct and ProQuest. The keyword “anxiety”, “depression”, randomized controlled trial” and “mindfulness” were used. Subsequently, we evaluated the studies found a base on the following inclusion that consists of original research, adult participants (≥ 15 years of age), randomized controlled trial, music therapy or yoga as a comparison this study and the effect of the intervention was measured between after intervention to 6 months after intervention. The inclusion of only randomized controlled trial type studies was necessary because of the possibility of bias that may arise in observational studies. We used inclusion time of measuring the effect of intervention because we would like to explore the shorter effect mindfulness and we used music therapy or yoga as comparison therapy because music therapy and yoga especially yoga meditation were same kinds of mindfulness as a mind-body relaxation.

RESULTS

The initial search identified 40 articles, which were evaluated for relevance. 20 articles were considered as potentially relevant and evaluated in full text. Ultimately, 8 articles were selected.

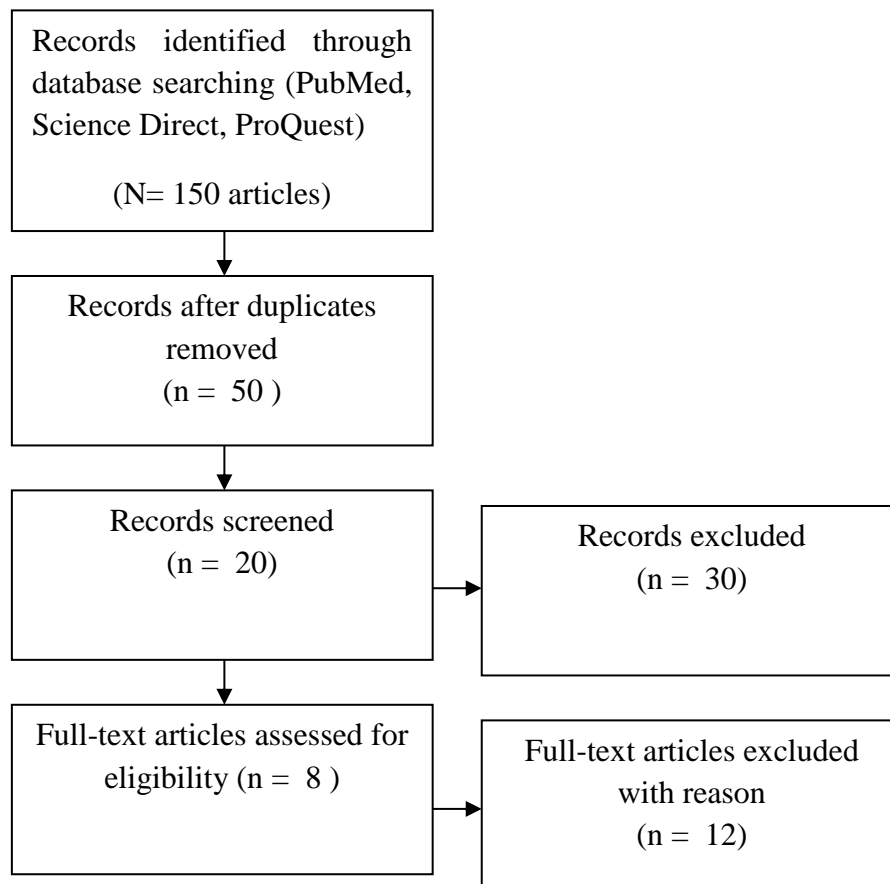


Figure 1. Flowchart of literature research and study selection

A study was conducted by Schultz & Arnau in 2017 years that this aim of the study examined effects of a mindfulness induction on proximal and distal defense response to mortality salience and negative affect. The sample sizes in this study were 77 people and used Word fragment task, Multidimensional social transgression scale (MSTS), Positive affect negative affect schedule (PANAS), Philadelphia mindfulness scale (PHLMS), Kentucky inventory of mindfulness scale (KIMS) and Cognitive and affective mindfulness scale-revised (CAMS-R) to measure variables. The result described fewer proximal responses in the mindfulness and mind wandering group, compared with the worrying group than that no differences in distal responses. Mindfulness group was lower negative affect in the than in the worrying group following mortality salience. Results recommended that mindfulness exercises effectively buffer resist negative affect and some responses to mortality salience, despite these effects are not different from those of mind-wandering²⁷.

Another study showed a similar result. Falsafi & Lepoard in 2015 years conducted research that the aim of the study was examined to determine the effectiveness of mindfulness practices, including self-compassion and yoga, on depression and/or anxiety in uninsured and/or low-income

patients. The sample sizes in this study were 20 people and used Beck Depression Inventory, Hamilton Anxiety Scale, Self-Compassion Scale, Perceived Wellness Survey to measure variables. The result described mindfulness, self-compassion, and yoga practices were effective in supporting uninsured and low-income patients cope with anxiety and/or depression. Practicing these modalities on a regular basis is important. Individuals who practice mindfulness modalities on a regular basis care to thoughtfully respond to situations rather than simply reacting to them. This study has benefits for a cost-effective treatment for these disorders ⁹.

Falsafi has also conducted the similar research in 2016 years. The aim of the study to compare the effectiveness of two different types of intervention practices (mindfulness vs. yoga) and a noninterventional control group in reducing the effects of anxiety and/or depression in college students. The sample sizes in this study were 90 students and used Beck Depression Inventory, Hamilton Anxiety Scale, Student-Life Stress Inventory, Self-compassion Scale and Cognitive and Affective Mindfulness Scale-Revised to measure variables. The result described anxiety, stress and Depressive symptoms reduced significantly ($p < .01$) from baseline to follow-up conditions in both the mindfulness and yoga intervention groups. The alterations in mindfulness scores were also significant in both groups. However, the alterations in self-compassion scores were significant only in the mindfulness intervention group. No significant changes in self-compassion scores in the control group were demonstrated ⁸.

Garland et al has also conducted the similar research in 2013 years. The aim of the study examined the effect of participation in an MBSR program on levels of mindfulness in a heterogeneous sample of individuals with cancer, and if these alterations were engaged to improvements in stress and mood outcomes. The sample sizes were 268 people and used Mindful Attention Awareness Scale, Five Facet Mindfulness Questionnaire, Calgary Symptoms of Stress Inventory, Profile of the Mood States and Mindfulness-Based Stress Reduction program to measure variables. The result described levels of mindfulness on both measures improved significantly over the course of the program. These were followed by significant reductions in symptoms of stress (29%) and mood disturbance (55%). Improve in mindfulness reported for a significant percentage of the reductions in symptoms of stress (14%) and mood disturbance (21%). Moreover, specific mindfulness skills may be important in providing these improvements ¹¹.

Lo, Man Ng & Chan have also conducted the similar research in 2014 years. The aim of the study to evaluate the effects of compassion–mindfulness therapy (C-MT) that an adapted version of mindfulness-based cognitive therapy that integrates compassion training. The sample sizes were 88 people and used Hospital Anxiety Depression Scale-Anxiety Subscale (HADS-A), Beck Depression Inventory (BDI-II) and Body–Mind–Spirit Well-Being Inventory (BMSWBI) to measure variables. The result described significant development in all measures in the treatment group. The effect sizes for anxiety and depression were 1.11 and 1.10, respectively, and those for daily functioning, physical distress, positive affect, and negative affect scoped from 0.71 to 1.04.

All improvements were continued at the 3-month follow-up. The results provide preliminary support for C-MT as a continues treatment option for individuals with recurring anxiety and depression symptoms. Fast treatments such as C-MT might be promoted in social work practice ²¹.

Oberle, Reichl, Lawlor, and Thomson have also conducted the related research in 2012 years. The aim of the study examined the relationship between the executive control process of inhibition and self-reported dispositional mindfulness, controlling for gender, grade, and cortisol levels in adolescence. The sample sizes were 99 people and used Mindful Attention Awareness Scale (MAAS), Cortisol salivary and EFs to measure variables. The result described after controlling for gender, grade, and cortisol levels, higher scores on the mindfulness attention awareness estimated significantly predicted greater accuracy the inhibitory control task. This research described to understanding the predictors of EF skills in early adolescents' cognitive development. Especially, it identifies mindfulness a skill that can be developed and trained in intervention programs to promote health and well-being—as significantly engaged in inhibitory processes in early adolescence ²³.

Mahoney, Segal & Coolidge have also conducted the related research in 2015 years. The aim of the study examined age-related differences in anxiety sensitivity (AS), experimental avoidance (EA) and mindfulness among younger adult students and community-dwelling older adults. The sample sizes were 511 people and used Anxiety sensitivity index-3, Acceptance and Action Questionnaire-II, Mindful attention awareness Scale, Kentucky Inventory of Mindfulness Skills, Beck Anxiety Inventory, Geriatric Anxiety Scale and State-Trait Anxiety Inventory to measure variables. The result described younger adults showed significantly higher levels of AS and EA, that older adults showed significantly higher levels of trait mindfulness. AS and EA were significantly associated with each other and with anxiety-related symptoms. However, trait mindfulness was significantly inversely engaged to AS, EA, and to trait and state anxiety. These three factors have yet to be examined simultaneously within the context of age differences, and the present study illuminates these differences as well as their relationships ²².

Diaz has also conducted the related research in 2018 years. This aim of the study was to engage in an initial attempt at investigating these variables among a broad sample of collegiate music. These variables are meditation, perfectionism, mindfulness, and performance anxiety among collegiate music students. The sample sizes were 255 students and used Mindfulness Attention Awareness Scale, Performance Anxiety Index and Multidimensional Perfectionism Scale to measure variables. The result indicated that approximately 48% of the participants sampled had applied in meditation during the past six months and that when mindfulness and perfectionist do constant, participants who meditated at least weekly tended to show less MPA. In addition, higher trait mindfulness described lower performance anxiety whereas higher self-oriented, as well as socially determined perfectionism, was predicted higher MPA score ⁶.

DISCUSSION

This systematic review was explored the benefit mindfulness therapy specifically in persons with anxiety and depression. According to 5 kinds of literature, mindfulness therapy was related and effective significantly to reduce anxiety and depression. Mindfulness also was related to many aspects such as gender, grad, cortisol level, perfectionism, and age. Gender, grade, and cortisol levels, higher scores on the mindfulness attention awareness estimated significantly predicted greater accuracy the inhibitory control task. Younger adults showed significantly higher levels of AS and EA, that older adult showed significantly higher levels of trait mindfulness. AS and EA were significantly associated with each other and with anxiety-related symptoms. However, trait mindfulness was significantly inversely engaged to AS, EA, and to trait and state anxiety. These three factors have yet to be examined simultaneously within the context of age differences, and the present study illuminates these differences as well as their relationships. The kind of mindfulness provided intervention for each individual with according the age and condition. MBSR was effective significantly to reduce anxiety in individuals with cancer and C-MT effective significantly to reduce anxiety in general individuals in any conditions. Mindfulness also related with cortisol that mindfulness was effective to control cortisol as a biomarker in anxiety and depression. For future research, mindfulness should be used to improve anxiety and depression by measuring cortisol level in general individuals or groups with specific mindfulness.

CONCLUSIONS

Clinically, as mindfulness becomes increasingly utilized by the public, it is important to improve anxiety and depression, especially for nurses and other healthcare professionals to be informed about this technique when treating persons in hospital. It will be important to understand differences in responses to mindfulness specific to individuals or group as well as variations in outcomes based on duration and context of interventions. Mindfulness was also related to cortisol level as a biomarker anxiety and depression. For future research, mindfulness should be used to improve anxiety and depression by measuring cortisol level in general individuals or groups with specific mindfulness.

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