Using Music as Therapy for Stress Disorders, Clinical Disorder, and Sleep Disorders

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Music has been utilized for centuries as a way to express the world’s variances of cultural and social norms. Throughout time, music has continuously evolved in order to express emotion and creativity. Now that music can be recorded, the field has become expansive. The characteristics of music depend largely on the genre selected, each genre containing different elements of sound that can elicit certain emotions. Relaxing and classical music can be very beneficial for the mind. Listening to music and allowing one’s body and mind to relax, while still having the ability to express emotions is important for daily functioning. There are implications that listening to relaxing music can have certain health benefits. A study conducted by Sandstrom and Russo (2010) found that music that was low in arousal and high in valence produced lower heart rates and decreases in skin conductance. Because of these results, their research indicated that low arousal, positive music, such as classical music, could have positive health benefits for those exposed to, or undergoing a life stressor. Low arousal music implies relaxation as it refers to the low arousal of one’s mood (Thompson, Schellenberg, and Husain 2001). Certain music promotes relaxation within an individual, which helps maintain wellness during an individual’s day-to-day functioning. Individuals that suffer from chronic stress, clinical disorders, and sleep disorders can all benefit from listening to low arousal music during their daily lives.

Stress is the body’s natural response to a threatening situation or environmental stressor. Every individual may experience some form of stress, however, the level of severity of the stress can impact one’s daily functioning. Chronic stress is a level of stress that is linked to anxiety and depression (Baum and Polsusnzy, 1999). Chronic can affect
different hormones within the body, which can ultimately trigger other disorders if left untreated. High levels of stress can also weaken the immune system, which prevents the body from properly fighting off infections (Scartelli, 1992). Stress can also inhibit an individual’s ability to function normally during their daily lives. There are different methods of treatment for stress, but music could be considered an inexpensive, unobtrusive method that could benefit individuals suffering from different levels of stress, due to the relaxing elements associated with music. Stress can be the underlying cause for certain clinical and sleep disorders, so it is important that stress is evaluated and treated before it develops into another disorder.

Listening to relaxing music can benefit those diagnosed with clinical disorders, as well. Because the effects of listening to music can reduce stress, the decrease in the presentation of stress can have positive effects on the symptoms associated with clinical disorders. Certain clinical disorders such as mood disorders, personality disorders, and age-degenerative disorders can impact an individual’s ability to operate. Some symptoms commonly associated with mood disorders are irritability, depressed mood, decrease in efficiency while functioning, and lack of energy (DSM-V, 2013). These symptoms are important to treat early so the disorder does not become more severe. Some of the symptoms associated with personality disorders are psychotic episodes, delusions, and mood swings (DSM-V, 2013). Personality disorders are important to treat because these disorders are more serious because they impose more of a threat to other people. Some of the symptoms associated with age-degenerative disorders are memory loss, severe impairments in cognitive abilities, and a decrease in overall physical abilities (DSM-V, 2013). Although age-degenerative disorders are difficult to treat, certain methods of
treatment can enhance an older individual’s quality of life. Clinical disorders are important to treat, and music can be a successful noninvasive method of treatment.

Sleep disorders can also be positively affected by listening to low arousal, relaxing music. Sleep is extremely important for every individual, and a lack of sleep can inhibit a person’s ability to function normally. Some of the symptoms associated with sleep disorders, or lack of sleep are memory loss, impairments in cognitive abilities, irritability, and depression (DSM-V, 2013). Each one of these symptoms can have detrimental effects on an individual’s daily functioning. Sleep affects overall cognitive functioning, and if cognitive functioning is lacking, it begins to function different areas of the brain. A sufficient amount of sleep each night is necessary in order for the brain to function at its maximum potential (Fraize et al. 2016). Sleep allows the brain to be in an anabolic state, which allows the brain to rest, process information, and heal. It is important to treat an individual who is suffering from a sleep disorder or lack of sleep because of the influence that sleep has on overall functioning.

The purpose of this literature review is to examine the different benefits that listening to low arousal, relaxing music can have throughout one’s daily life. Listening to music is an inexpensive, unobtrusive method of therapy that can be used in order to promote relaxation. Research suggests that music can have significant beneficial effects on a wide range of different disorders. Music can be considered a beneficial method of treatment for certain stress disorders, clinical disorders, and sleep disorders because of the impact that listening to music has on the brain. Research suggests that music can influence different chemicals and neurotransmitters within the body, which can influence the symptoms associated with stress, clinical disorders, and sleep disorders.
Listening to music can promote relaxation and wellness, which can significantly reduce stress levels throughout one’s daily life. The symptoms of stress can affect a person’s mood, physiology, and overall behavior (DSM-V, 2013). Stress changes hormones in your body, which leads to the presentation of different symptoms. Some of the symptoms that are more commonly associated with stress include anxiety, irritability, fatigue, and restlessness. Stress must be treated early on in order to ensure that the symptoms do not get worse. Although there are different methods of treatment for stress, existing research implies that music could be a very beneficial method of treatment in order to address the physiological changes and mood symptoms accompanying stress.

Many studies have shown that stress can significantly enhance bodily functioning for those with chronic stress. Linnemann, Beate, Jana, Johanna, & Urs (2015) conducted research in order to observe stress reduction by listening to music throughout one’s daily life. They did this by measuring subjective and physiological stress levels of the participants used in this study. When observing the participant’s physiological stress levels after exposed to relaxing music, they found a decrease in salivary alpha amylase activity within their participants, which indicates lower stress levels. Salivary alpha amylase is stress sensitive, meaning the production of this enzyme increases when an individual endures a certain stressful situation. Participants also reported a decrease in stress. Because of the physiological and subjective evidence found in this study, their results suggested that low arousal music significantly decreases the prevalence of stress. Robert Krout (2007) observed the neurological effects that exposure to low arousal music has on the brain. The results indicated that low arousal music lowered levels of
Acytocholine and cortisol are two neurotransmitters that play a role in the physiology of stress. Reducing these neurotransmitters allows the body to function normally, and maintain a relaxed state. This study also found that listening to relaxing music throughout daily life promotes wellness and relaxation, and drastically reduced the reported stress levels of the participants used in this study. Thoma et al. (2013) observed the biological mechanisms of stress, and the effect that music had on the levels of cortisol of their participants. This analysis compared different genres of music, such as low arousal music and self-selected music, and measured the levels of cortisol in their participants before, and after exposure to music. They found that relaxing genres of music significantly decreased levels of cortisol within their participants which means that listening to relaxing music has many beneficial effects on human physiology and brain maintenance and development.

Listening to music also had significant effects on the different mood symptoms associated with stress. Strahler and Nater (2016) used calming music as a means for stress reduction during a social setting. They found that the presence of music while in a social situation drastically decreased anxiety and stress. Their results found that using calming music can be used in a social setting to decrease stress and anxiety, but also throughout daily life in order to decrease the other symptoms that may be caused by stress. Jiang, Rickson, and Jiang (2016) conducted a study in order to examine certain subtypes of stress, and the effects of relaxing music on those subtypes. The subtypes were based on the participant’s reported anxiety levels. They found that the type of music, whether relaxing or self-selected, and the degree of self-reported stress levels had a strong correlation. They found that certain types of relaxing music lowered levels of
tension, anxiety, and stress. Labbe, Schmidt, Babin, and Pharr (2007) conducted a study in which they observed relaxing music as a means of stress reduction throughout daily life. Their participants consisted of college students, and each participant’s stress levels were measured before and after listening to different types of music. The different types of music used in this study were low arousal, relaxing genres of music. They found that music has a significant effect on stress reduction. They found that individuals who were exposed to relaxing music had significantly lower stress levels than those who did not listen to music on a regular basis.

Research shows that music can significantly lower certain mood, behavior, and physiological symptoms associated with stress. Treatment methods for stress, such as medication or therapy can be beneficial, but also costly. Therapy takes time and money, and drugs can affect other areas of the brain, which may promote side effects, or inhibit other areas of functioning. Music can be considered a very inexpensive method of treatment for patients with high levels of stress.

*Music and Clinical Disorders*

Listening to relaxing music can have many positive effects on an array of different clinical disorders. Because relaxing and low arousal music can decrease stress and anxiety levels, music can also decrease some of the more severe symptoms caused by other clinical disorders. Many studies have been conducted in order to research the effects of music on the symptoms associated with clinical disorders. The relaxation effects of calming, self-selected music can be very beneficial during the treatment of as mood disorders, personality disorders, and age-degenerative disorders.
Mood disorders such as depression can be treated using music therapy. Music therapy can play a large role in the decrease of certain physiological changes that depression can have on the body. Chan, Wong, Onishi, and Thayala (2011) observed the positive effects of low arousal music on depression levels in older adults. Their findings indicated that self-reported depression levels reduced significantly on a weekly basis in the participants exposed to music therapy. Physiological effects of depression, such as blood pressure, heart rate, and respiratory rates also decreased in those who listened to music. Chan, Chan, Mok and Tse (2009) conducted a study to observe the effects of relaxing music on depression levels and the physiological responses in the body that have been linked to depression. The participant’s respiratory rate, heart rate, and blood pressure, as well as self-reported anxiety and depression levels decreased when exposed to relaxing music. This means that relaxing music can be an effective treatment method for the underlying physiological mechanisms associated with depression. Atiwannapat, Thaipisuttikil, Poopityastaporn, and Katekaew (2016) conducted a study to observe the effects of music therapy on major-depressive disorder (MDD). They found that all of the participants exposed to music therapy after one, three, and six months all, which consisted of different components of low arousal music, showed a significant decrease in major-depressive disorder symptoms. This means that participants saw overall improvement in physical functioning, mental health, and social functioning. Erkkila et al. (2011) conducted a study in which they used music as a means for therapy in those suffering from symptoms of mild, moderate, and severe depression. They found that participants with depression who received music therapy showed greater improvements in overall symptoms than the participants who did not receive music therapy. This study
showed that music therapy added to standard care helps people with depressive episodes to improve their levels of depression, anxiety, and overall functioning. The response rate was significantly greater in music therapy, compared to those who only received standard care for depressive symptoms. Chan, Chan, and Mok (2010) conducted a study to determine the effect that calming music has on sleep quality and depression levels. They found that soft music drastically improves depressive symptoms and sleep quality in elderly adults.

Personality disorders can also be positively affected by relaxing music. Morgan et al. (2010) conducted a study in which they compared differences in the quantified electroencephalogram (qEEG) between two conditions of subjects during acute psychotic episodes. Their findings indicated that calming music and low arousal music decreased the high levels of slow wave activity, commonly seen in schizophrenia. The results also indicated that listening to music would decrease beta wave activity in patients with acute psychosis. Listening to music decreased beta, delta, and alpha wave activity in the brain, which promoted relaxation during a psychotic episode. Chan, Wong, Onishi, and Thayala (2011) observed the effects of relaxing music on depression levels in older adults. The results indicated that self-reported depression levels reduced significantly on a weekly basis in participants exposed to music listening. Physiological effects of depression, such as blood pressure, heart rate, and respiratory rates also decreased.

Certain age degenerative disorders can use music therapy as a form of treatment. Pacchetti, Mancini, and Aglieri (2004) conducted a study to observe music therapy in those suffering from Parkinson’s disease. The results of this study indicate that music therapy facilitated overall improvement in emotional and motor functioning, activities of
daily living, and overall self-reported quality of life. Sarah Ashida (2000) used music therapy in order to reduce certain depressive symptoms in elderly people with dementia. Over the daily sessions of music therapy, this study found decrease in depressive symptoms such as mental health and physical pain. The overall cognition of the participants suffering from dementia increases according to the different tasks performed during the study. Purdie, Hamilton, and Baldwin (1997) conducted a study in which they observed music therapy as a means to lower the behavioral and psychological changes in participants who have had a stroke. The results indicated that positive trends in communication skills, and behavior and psychological state improved. Communication skills such as pointing, speaking, and certain hand gestures improved. Kim Jeong (2007) conducted a study to observe theory-driven music as a means of treatment in participants who were stroke survivors. This study found that music therapy using soothing music improved the mood states and interpersonal relationships of the participants, their flexibility, and their range of joint motion.

Low arousal music promotes relaxation and stress reduction throughout daily life. Music can largely influence the presence of stress and anxiety throughout daily life. Music works on the autonomic nervous system. This means that listening to music and being relaxed can reduce some of the symptoms associated with clinical disorders. Music can be considered an easy, inexpensive option for treatment for a wide array of clinical disorders.

Music and Sleep

Sleep plays a vital role in a person’s health and well-being. Every individual needs sleep in order to have a high-functioning, clear mind. Sleep disorders can be very
difficult to treat depending on the severity, which has raised many questions in the field of research. Sleep deprivation can affect mood, efficiency in one’s daily life, brain functioning, and overall memory. Many of the symptoms associated with sleep deprivation are very serious, and can hinder one’s cognitive abilities. According to research, music can be considered a successful method of treatment for individuals suffering from sleep disorders. Music can have positive effects on overall sleep quality and sleep longevity for individuals of all ages suffering from different sleep disorders.

Listening to relaxing music can have positive effects on overall sleep patterns. Wang, Sun, and Zang (2014) conducted a study to observe the effects of music therapy on acute and chronic sleep disorders. They found that music could be used to assist in improving overall sleep quality in those suffering from acute and chronic sleep disorders because listening to music increased serotonin levels in the brain. Chang, Lai, Chen, Hsieh, and Lee (2012) conducted a study in order to observe the relationship between music and the sleep quality of adults suffering from chronic insomnia. They found that using music as therapy before sleep had a significant impact on overall sleep patterns. They found that exposure to soothing music before sleep increased the duration of sleep in participants with chronic insomnia. Another study done in order to promote sleep quality was a study done by Niet, Tiemens, Lendemeijer and Hutschemarkers (2009). This study observed the effects of music-assisted relaxation to improve sleep quality. They found that music-assisted relaxation before and during sleep played a significant role in the quality of sleep that the participants reported. Listening to relaxing music allowed the participants to relax, which increases the probability of maintaining sleep without disturbance. Harmat, Takacs, and Bodizs (2007) conducted a study to investigate
the effects of music on sleep quality in participants with self-reported poor sleeping habits. They found that relaxing classical music is an effective intervention for reducing sleeping problems. They found their participants who were exposed to music before bedtime had significantly better sleeping patterns. They also found that depressive symptoms in these individuals exposed to music before sleep decreased. Lai and Good (2004) conducted a study in order to observe the effects of music on overall sleep quality in older adults. They found that exposure to music had a positive, significant effect on sleep quality, sleep disturbance, and sleep duration. As a result of a better night’s rest, the participants reported lower daytime dysfunction. Their findings provide evidence for the use of music to improve overall sleep quality in older adults. Leepeng Tan (2004) observed the effects of music on the quality of sleep in elementary school children. This study found that participants who were exposed to background music before naptime and before bed had a significant improvement in global sleep quality over time. The improvements were based on sleep duration and sleep efficacy.

Music can also have a significant impact on sleep duration. Iwaki, Tanaka, and Hori (2003) conducted a study to examine whether or not listening to music promotes falling asleep more effectively. Each one of their participants selected their own preferred music before falling asleep. They found that listening to music has a significant effect on one’s ability to fall asleep, and decreases anxiety and depressive symptoms. Bonner and Arand (2000) observed the impact of music on sleep. Their findings indicated that music plays a beneficial role in helping to maintain sleep arousal. Their participants who were exposed to music had significantly better sleeping patterns maintained deep sleep for longer periods of time in comparison to those participants who had nothing. Chen et al.
(2014) observed the effects of sedative music on deep sleep in young adults. They found that the participants who were exposed to sedative music for a number of weeks had significantly better sleep. The sleep patterns of the participants were maintained, which has a positive influence on their daily functioning.

Because sleep is vital for health and welfare for every individual, it is important to find successful methods of treatment. Research shows that music therapy and relaxing music can have positive effects on overall sleep quality and duration for both older adults and young children. Medications for sleep disorders can be addictive, and the brain can start to rely on the medication alone in order to sleep. Music can be considered to be an inexpensive method of treatment, and is safer than using medications.

Discussion

The purpose of this literature review was to examine the effects of music on wellness and functioning in one’s daily life. The findings from each study within this paper suggest that listening to music can promote wellness across the different areas of stress, clinical disorders, and sleep disorders. According to the research, listening to low arousal, soothing music as a form of music therapy promotes relaxation. Relaxation influences the production of hormones and neurotransmitters, which can enhance the prevalence of stress. The physiological response of the body while in a state of relaxation can have positive effects on the symptoms associated with stress, clinical disorders, and sleep disorders.

Before writing this critical literature review, I thought that classical music would be utilized more in all of the research as a successful method of treatment. However, in most of the research found, soothing, relaxing, and “low arousal” music was utilized as a
form of music therapy. Low arousal simply refers to a low arousal of the mood, meaning that the mood of an individual is relaxed. Many of the types of music used were a soothing collection of sounds in order to promote relaxation. My initial impression was that classical scores or soundtracks would be used in order to promote relaxation, however, few studies used well-known classical music scores in order to conduct their research.

An interesting theme of all of the research collected was that I had never considered the importance of addressing stress within one’s life. The underlying biological mechanisms of stress can largely affect certain clinical and sleep disorders. The changes that happen within the body when placed in a stressful situation can impact the physiology and chemicals within the body. An increase in acytocholine and cortisol when stressed can increase heart rate and skin conductance. Chronic stress can affect different hormones within the body, which can ultimately trigger other disorders if left untreated. Stress also directly linked to the immune system and the nervous system. High levels of stress can inhibit the nervous and immune system, due to the changes in physiology (Scartelli, 1992). Stress has also been directly linked to clinical disorders. Chronic stress is a level of stress that is linked to anxiety and depression (Baum and Polsusnzy, 1999). Because stress plays an important role in the physiology within the human body, it is an underlying factor when considering clinical disorders and sleep disorders.

Future research should measure the brain activity more closely across the different stress disorders, clinical disorders, and sleep disorders. Having the ability to observe the brain patterns more closely would provide researchers with the information
needed in order to research the affects that music has on the brain. Future studies should also consider the negative affects of chronic stress on physiology, and how treating stress using music therapy could positively impact other disorders. The use of classical music as a form of music therapy would be an interesting element to consider as well because classical music consists of relaxing elements.

Although music is considered to be a possible treatment for stress, clinical disorders, and sleep disorders, other forms of treatment are available. Music can be paired with therapy and medication for the best possible outcomes of treatment. Some medications can be ineffective or addictive, so using music therapy paired with other forms of psychiatric therapy would be most beneficial for the individual before prescription drugs.
References


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