ISSN: 0976-3031

Available Online at http://www.recentscientific.com

CODEN: IJRSFP (USA)

International Journal of Recent Scientific Research
Vol. 15, Issue, 02, pp.4563-4573, February, 2024

International Journal of Recent Scientific Research

DOI: 10.24327/IJRSR

Research Article

EXPLORING THE EFFECT OF MUSIC (GAYATRI MANTRA) ON STRESS, ANXIETY AND DEPRESSION AMONG YOUNG ADULTS

Ashutosh Upadhyay and Prem Chandra Mishra

University of Lucknow, Uttar Pradesh

DOI: http://dx.doi.org/10.24327/ijrsr.20241502.0857

ARTICLE INFO

Article History:

Received 13th January, 2023
Received in revised form 24rd January, 2023
Accepted 16th February, 2024
Published online 28th February, 2023

Keywords:

Music, Gayatri Mantra , stress, anxiety and depression.

ABSTRACT

This study examined the effect of Music (Gayatri Mantra) on stress, anxiety and depression among young adults. The nature of the research was action research and the design used for this study was quasi experimental pre- test post- test design. A sample of 30 young adults (19-40years, M = 30 years) completed measures of the above constructs and data were analysed via paired sample t- test to test the hypotheses. The result revealed that there was a significant difference in the level of stress, anxiety and depression before and after intervention. Music listening mainly served as a 'source of pleasure and enjoyment' and which 'calms, motivates, or reminds of past events'. Hence, the study concluded that music (Gayatri mantra) is found to be an effective intervention in reducing the level of stress, anxiety and depression.

INTRODUCTION

Gayatrimantra is highly potential mantra which is mentioned in Rigveda. Gayatriis the meter in which the mantra composed by brahmarñi viçvämitra. It is also called savitra mantra because it consist the deity sun or Savita. Gayatrimantra can be interpreted to invoke the Savita deity so it is called as savitra mantra (Harshananda, 2010). Gayatrimantra consist twenty four letters. Every letters of this mantra provide subtle conscious energy field and magnetic field around our body. Gayatri is kämadhenu that means which gives nectar like milk to everyone so it is called as kalpatarü which fulfills the desire of devotee(Acharya, 2000). The super natural impact of gayatrimantrais in the physical life due to the specific syllables of mantra. The mantrastimulates the subliminal power centers in the subtle body. The pressure on tongue, lips, vocal cords, palate and connecting region in the brain generated by continuous recitation of the 24 syllables of gayatrimantracreates a resonance in the nerve and nadisin the body. It creates the magnetic force or electromagnetic wave around the body that attracts the vital current of deity SUN(Acharya, 1998). Mantra becomes effectual upon yoga in samädhi because they direct and focus power through the individual mind and prana. Mantra is a Sanskrit word which is the combination of two roots. One roots means repetition, the other means freedom; repetition and freedom is the meaning of word mantra (Muktibodhananda, 2009).The word mantra which implies a specific structure of syllables and vowels and which work as an excellent spiritual tool to liberate the mind from ignorance, illusion, delusion. The sädhanä of mantra yoga is a special part of spiritual experiments on awakening of kundalini and realization of ultimate brahmaë through omkära(Pandya, 2009).The resonance sound of mantra operates as total energy system and mantra have the vibration pattern of their own. The some pattern of mantra stimulates a certain effect on the psychic nature of an individual. Every letter brings resonance in distinct part of the body, reciting the whole mantra generates a particular resonance pattern, the resonant wave from part to part in the body. This resonance pattern in the physical body produces very special effect on the body (Pradhan & Derle, 2012). The science of mantra is very ancient and was practiced in all parts of the world; the mantra science was developed by ancient scientist (åñi) across the globe. Mantra vijnana is the science of cosmic powers of sound. Chanting of mantra is a meditative practice from the Indian tradition of spiritual practices. This ritualistic recitation helps to sublimate the mind to a single thought until it attains the state of samädhi. The Indian scriptures on yoga and spirituality mention a great deal on the basis of mantra vijnana and science of eternal syllables like Omkara, A-kara, U- kara, and M- kara. Mantra is the main practice that links yoga. Apart from the physical nervous system, our ancient scientist says that there are 72000 näòés (bundle of tubular vessels) as the part of psychic nervous system. Once the mantra is chanted, sound energy is generated and the vibration resonance of that energy is diffused and distributed into the nervous system. The yogic tradition states that through use of mantra one does can awaken the chakras and kundalini that is serpent power. Mantra is a

Corresponding author:* **Ashutosh Upadhyay
University of Lucknow, Uttar Pradesh

word power which can be used for spiritual realization and desires(Acharya, 2008).

Stress is a prevalent concern in healthcare personnel such as medicos and psychologists because it affects both noetic and physical state of an individual.

The effect of music on stress has been kenned to philosophers and ruminators such as Aristotle from antediluvian times; however, its psychological effects on modern day medicine were first proposed by Sigmund Freud. Music therapy avails to treat stress in a variety of ways; namely it can ameliorate mood, vitality, self-esteem and personality. Adscititiously, studies have shown that when people are deeply involved in activities that are frolicsome, physiological factors such as heart rate (HR), blood pressure (BP) and respiration rate are decremented. Factors such as the type of musical activity, time allocated to it and ancillary activities such as exercise are all factors shown to be efficacious in lowering the caliber of stress.

Attention to music may adscititiously provide placidity of mind and this may play a role in clinical practice. While music has long been apperceived as an efficacious form of therapy to provide an outlet for emotions, the notion of utilizing musical composition, sound frequencies and rhythm to treat physical ailments is a relatively incipient domain. Heedfully aurally perceiving music was withal found to be more efficacious than prescription drugs in reducing solicitousness afore surgery.

Stress

In psychology, stress is a feeling of strain and pressure or any unpleasant emotion and feeling.Small amounts of stress may be desired, salutary, and even salubrious. Positive stress avails amend athletic performance. It adscititiously plays a factor in motivation, adaptation, and reaction to the environment. Extortionate amounts of stress, however, may lead to bodily harm. Stress can increment the jeopardy of strokes, heart attacks, ulcers, dwarfism, and phrenic illnesses such as despondence.

The stress replication is the body's way of bulwarking you. When working opportunely, it avails you stay focused, energetic, and alert. Through the relinquishment of hormones such as adrenaline, cortisol and norepinephrine, the caveman gained a rush of energy, which prepared him to either fight the tiger or absquatulate. That heart pounding, expeditious breathing sensation is the adrenaline; as well as a boost of energy, it enables us to focus our attention so we can expeditiously respond to the situation.

Over the last few decades, a elevating tide of studies has demonstrated the value of customarily engaging in activities that blunt the stress replication, from rumination to yoga to strenuous physical activity. Since the stress replication commences in the encephalon with the perception of stress, researchers are now looking into what may be a most fundamental, and efficacious, way to defuse stress by transmuting perception of certain types of situations so that they are not visually perceived as stressful in the first place. Studies show that availing people optically discern certain experiences such as final exams as injuctively authorizing rather than dire, forfends them from the negative effects of stress while distributing its positive effects, especially focused attention and more expeditious information processing. Transmuting the stress mind set not only minimizes the effects of stress, studies show, it enhances performance and productivity.Signs And Symptoms

Cognitive symptoms: Inability to concentrate, Poor judgment, Seeing only the negative, Anxious or racing thoughts, Constant worrying.

Emotional symptoms: Depression or general unhappiness, Anxiety and agitation, Moodiness, irritability, or anger, Feeling overwhelmed, Loneliness and isolation, other mental or emotional health problems.

Physical Symptoms: Aches and pains, Diarrhea or constipation, Nausea, dizziness, Chest pain, rapid heart rate, Loss of sex drive, Frequent colds or flu.

Behavioural Symptoms:Victualing more or less, Slumbering an extravagant amount of or too minute, Withdrawing from others, Procrastinating or neglecting responsibilities, Utilizing alcohol, cigarettes, or drugs to relax, Nervous habits (e.g. nail biting, pacing)

Causes of Stress

Prevalent external causes are major life changes, work of school, relationship difficulties, financial quandaries, being too diligent, children and family and mundane internal causes includes pessimism, inability to accept skepticality, rigid cerebrating, lack of flexibility, negative self-verbalize, fictitious prospects / perfectionism, all-or-nothing posture.

Ways to Manage Stress

Customary exercise is one of the best ways to manage stress. Ambulating is a great way to get commenced. Even everyday activities such as housecleaning or yard work can reduce stress. Stretching can additionally assuage muscle tension. For more information about becoming more active, visually perceive the topic fitness. Breathing exercises, muscle relaxation, and yoga can avail assuage stress. These include roll breathing, a type of deep breathing. Progressive muscle relaxation. This technique reduces muscle tension. You do it by relaxing separate groups of muscles piecemeal.

Yoga, Tai chi and Qi gong. These techniques coalesce exercise and cogitation. It may need some training at first to learn them. Books and videos are withal subsidiary. One can do all of these techniques at home. In additament to practicing these skills, we might additionally endeavour some and other techniques to reduce stress, such as message or music therapy.

Anxiety

When an individual faces potentially harmful or worrying triggers, feelings of anxiety are not only normal but necessary for survival. The American Psychological Association (APA) defines anxiety as "an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure." Since the earliest days of humanity, the approach of predators and incoming danger sets off alarms in the body and allows evasive action. These alarms become noticeable in the form of a raised heartbeat, sweating, and increased sensitivity to surroundings. The danger causes a rush of adrenalin, a hormone and chemical messenger in the brain, which in turn triggers these anxious reactions in a process called the "fight-or-flight' response. This prepares humans to physically confront or flee any potential threats to safety. For many people, running from larger animals and imminent danger is a less pressing concern than it would have been for

early humans. Anxieties now revolve around work, money, family life, health, and other crucial issues that demand a person's attention without necessarily requiring the 'fight-or-flight' reaction.The nervous feeling before an important life event or during a difficult situation is a natural echo of the original 'fight-or-flight' reaction. It can still be essential to survival – anxiety about being hit by a car when crossing the street, for example, means that a person will instinctively look both ways to avoid danger. However the duration or severity of an anxious feeling can sometimes be out of proportion to the original trigger, or stressor. Physical symptoms, such as increased blood pressure and nausea, may also develop. These responses move beyond anxiety into an anxiety disorder. The APA describes a person with anxiety disorder as "having recurring intrusive thoughts or concerns." Once anxiety reaches the stage of a disorder, it can interfere with daily function.
Common anxiety signs and symptoms include:

- Feeling nervous, restless or tense
- Having a sense of impending danger, panic or doom
- Having an increased heart rate
- Breathing rapidly (hyperventilation)
- Sweating
- Trembling
- Feeling weak or tired
- Trouble concentrating or thinking about anything other than the present worry
- Having trouble sleeping
- Experiencing gastrointestinal (GI) problems
- Having difficulty controlling worry
- Having the urge to avoid things that trigger anxiety
- Several types of anxiety disorders:

Agoraphobia is a type of anxiety disorder in which you fear and often avoid places or situations that might cause you to panic and make you feel trapped, helpless or embarrassed.

Anxiety disorder due to a medical condition includes symptoms of intense anxiety or panic that are directly caused by a physical health problem.

Generalized anxiety disorder includes persistent and excessive anxiety and worry about activities or events — even ordinary, routine issues. The worry is out of proportion to the actual circumstance, is difficult to control and affects how you feel physically. It often occurs along with other anxiety disorders or depression.

Panic disorder involves repeated episodes of sudden feelings of intense anxiety and fear or terror that reach a peak within minutes (panic attacks). You may have feelings of impending doom, shortness of breath, chest pain, or a rapid, fluttering or pounding heart (heart palpitations). These panic attacks may lead to worrying about them happening again or avoiding situations in which they've occurred.

Selective mutism is a consistent failure of children to speak in certain situations, such as school, even when they can speak in other situations, such as at home with close family members. This can interfere with school, work and social functioning.

Separation anxiety disorder is a childhood disorder characterized by anxiety that's excessive for the child's developmental level and related to separation from parents or others who have parental roles.

Social anxiety disorder (social phobia) involves high levels of anxiety, fear and avoidance of social situations due to feelings of embarrassment, self-consciousness and concern about being judged or viewed negatively by others.

Specific phobias are characterized by major anxiety when you're exposed to a specific object or situation and a desire to avoid it. Phobias provoke panic attacks in some people.

Substance-induced anxiety disorder is characterized by symptoms of intense anxiety or panic that are a direct result of misusing drugs, taking medications, being exposed to a toxic substance or withdrawal from drugs.

Other specified anxiety disorder and unspecified anxiety disorder are terms for anxiety or phobias that don't meet the exact criteria for any other anxiety disorders but are significant enough to be distressing and disruptive.

There are several exercises and actions to help a person cope with milder, more focused, or shorter-term anxiety disorders, including:

Stress management: Learning to manage stress can help limit potential triggers. Organize any upcoming pressures and deadlines, compile lists to make daunting tasks more manageable, and commit to taking time off from study or work.

Relaxation techniques: Simple activities can help soothe the mental and physical signs of anxiety. These techniques include meditation, deep breathing exercises, long baths, resting in the dark, and yoga.

Exercises to replace negative thoughts with positive ones: Make a list of the negative thoughts that might be cycling as a result of anxiety, and write down another list next to it containing positive, believable thoughts to replace them. Creating a mental image of successfully facing and conquering a specific fear can also provide benefits if anxiety symptoms relate to a specific cause, such as in a phobia.

Support network: Talk with familiar people who are supportive, such as a family member or friend. Support group services may also be available in the local area and online.

Exercise: Physical exertion can improve self-image and release chemicals in the brain that trigger positive feelings.

Depression

Depression is a mood disorder that causes a persistent feeling of sadness and loss of interest. Also called major depressive disorder or clinical depression, it affects how you feel, think and behave and can lead to a variety of emotional and physical problems. You may have trouble doing normal day-to-day activities, and sometimes you may feel as if life isn't worth living. More than just a bout of the blues, depression isn't a weakness and you can't simply "snap out" of it. Depression may require long-term treatment. But don't get discouraged. Most people with depression feel better with medication, psychotherapy or both.

Although depression may occur only once during your life, people typically have multiple episodes. During these episodes, symptoms occur most of the day, nearly every day and may include:

- Feelings of sadness, tearfulness, emptiness or hopelessness

- Angry outbursts, irritability or frustration, even over small matters
- Loss of interest or pleasure in most or all normal activities, such as sex, hobbies or sports
- Sleep disturbances, including insomnia or sleeping too much
- Tiredness and lack of energy, so even small tasks take extra effort
- Reduced appetite and weight loss or increased cravings for food and weight gain
- Anxiety, agitation or restlessness
- Slowed thinking, speaking or body movements
- Feelings of worthlessness or guilt, fixating on past failures or self-blame
- Trouble thinking, concentrating, making decisions and remembering things
- Frequent or recurrent thoughts of death, suicidal thoughts, suicide attempts or suicide
- Unexplained physical problems, such as back pain or headaches

For many people with depression, symptoms usually are severe enough to cause noticeable problems in day-to-day activities, such as work, school, social activities or relationships with others. Some people may feel generally miserable or unhappy without really knowing why.

Causes

It's not known exactly what causes depression. As with many mental disorders, a variety of factors may be involved, such as:

Biological differences. People with depression appear to have physical changes in their brains. The significance of these changes is still uncertain, but may eventually help pinpoint causes.

Brain chemistry: Neurotransmitters are naturally occurring brain chemicals that likely play a role in depression. Recent research indicates that changes in the function and effect of these neurotransmitters and how they interact with neurocircuits involved in maintaining mood stability may play a significant role in depression and its treatment.

Hormones: Changes in the body's balance of hormones may be involved in causing or triggering depression. Hormone changes can result with pregnancy and during the weeks or months after delivery (postpartum) and from thyroid problems, menopause or a number of other conditions.

Inherited traits: Depression is more common in people whose blood relatives also have this condition. Researchers are trying to find genes that may be involved in causing depression.

Prevention

There's no sure way to prevent depression. However, these strategies may help.

- ***Take steps to control stress*:** to increase your resilience and boost your self-esteem.
- ***Reach out to family and friends*:** especially in times of crisis, to help you weather rough spells.
- ***Get treatment at the earliest sign of a problem***: to help prevent depression from worsening.
- ***Consider getting long-term maintenance treatment***: to help prevent a relapse of symptoms.

Music And Stress

The impacts of kindness and complement on human deportment have been generally apperceived. In spite of kindness at its optimal level may change beyond any doubt activity, wealth apprehensiveness contributes of the correction from asserting physical sicknesses for instance, hypertension, ulcers, skin issue, cerebral pains, arteriosclerosis undermining diseases.

The calming energy of music is entrenched. It has an exceptional connect to the feelings, so can be a cosmically strong anxiety administration actualize. Mindfully auricularly recognizing music can have an immensely unwinding impact on our psyches and bodies, particularly moderate, calm traditional music. This sort of music can salutarily affect the physiological capacities, moderating the beat and heart rate, bringing down circulatory strain, and decrementing the gauges of hormones. As music can ingest our consideration, it goes about as a preoccupation in the meantime it benefits to investigate feelings. This assigns it can be an extraordinary profit to rumination, benefiting to hinder the mind meandering. Melodic preference shifts broadly between people, so individuals can choose what they like and what is lucky for every state of mind. Be that as it may, regardless of whether they don't ordinarily mindfully auricularly perceive traditional music it might be worth giving it an undertaking while winnowing the most quieting music. At the point when individuals are exceptionally worried, there is an inclination to sidestep effectively mindfully auricularly observing music. Maybe it feels like an exercise in futility, not profiting to accomplish anything. In any case, theroies and looks into have set up that efficiency increments when push is lessened, so this is another region where individuals can increase galactic prizes. It just requires an infinitesimal push to begin with. To join music into a determined life, try playing CDs in the auto, or put the radio on when in the shower or shower. Bring compact music with you while ambulating the canine, or put the stereo on in lieu of the TV. Singing (or yelling) along can withal be an awesome surrender of pressure, and karaoke is exceptionally tasty for a few outgoing individuals! Quieting music in advance of sleep time advances peacefulness and unwinding and profits to incite sleep.

In psychology, stress is a feeling of strain and pressure or any unpleasant emotion and feeling.Small amounts of stress may be desired, beneficial, and even healthy. Positive stress helps improve athletic performance. It also plays a factor in motivation, adaptation, and reaction to the environment. Excessive amounts of stress, however, may lead to bodily harm. Stress can increase the risk of strokes, heart attacks, ulcers, dwarfism, and mental illnesses such as depression.

The stress response is the body’s way of protecting you. When working properly, it helps you stay focused, energetic, and alert. Through the release of hormones such as adrenaline, cortisol and norepinephrine, the caveman gained a rush of energy, which prepared him to either fight the tiger or run away. That heart pounding, fast breathing sensation is the adrenaline; as well as a boost of energy, it enables us to focus our attention so we can quickly respond to the situation.

Over the last few decades, a rising tide of studies has demonstrated the value of regularly engaging in activities that blunt the stress response, from meditation to yoga to strenuous physical activity. Since the stress response begins in

the brain with the perception of stress, researchers are now looking into what may be a most basic, and effective, way to defuse stress by changing perception of certain types of situations so that they are not seen as stressful in the first place. Studies show that helping people see certain experiences such as final exams as demanding rather than dire, protects them from the negative effects of stress while delivering its positive effects, especially focused attention and speedier information processing. Changing the stress mind set not only minimizes the effects of stress, studies show, it enhances performance and productivity.

Music and Anxiety

The effects of anxiety and stress on human behaviour have been widely recognized. Although stress at its optimum level can produce positive action, excess stress contributes to the development of physical ailments such as hypertension, ulcers, skin disorders, headaches, arteriosclerosi ,another life-threatening diseases.

The soothing power of music is well-established. It has a unique link to our emotions, so can be an extremely effective stress management tool. Listening to music can have a tremendously relaxing effect on our minds and bodies, especially slow, quiet classical music. This type of music can have a beneficial effect on our physiological functions, slowing the pulse and heart rate, lowering blood pressure, and decreasing the levels of hormones. As music can absorb our attention, it acts as a distraction at the same time it helps to explore emotions. This means it can be a great aid to meditation, helping to prevent the mind wandering. Musical preference varies widely between individuals, so only you can decide what you like and what is suitable for each mood. But even if you don't usually listen to classical music it may be worth giving it a try when selecting the most calming music. When people are very stressed, there is a tendency to avoid actively listening to music. Perhaps it feels like a waste of time, not helping to achieve anything. But as we know, productivity increases when stress is reduced, so this is another area where you can gain vast rewards. It just takes a small effort to begin with. Calming music before bedtime promotes peace and relaxation and helps to induce sleep.

Music and Depression

Music-based interventions is an important nonpharmacological intervention used in the treatment of psychiatric and behavioral disorders, and the obvious curative effect on depression has been observed. Many researches have highlighted an obvious effect of music therapy on improving depression. On the molecular level, listening to music improves mental well-being and physical health. However, the benefits go far beyond the present moment in that it influences the outcome of our hormones as well as cognitive functioning. Classical, soft, ambient and even instrumental music is known to be an effective antidepressant in people suffering from depression. It should also be noted that listening to heavy metal and rock music is not advised if you suffer from depression as it can have the opposite effect. People who suffer from depression may possibly even benefit from listening to white, pink, and brown noise sounds which ultimately, help to soothe and calm you down especially after a long, hard day at work. According to a 2011 study published in the British Journal of Psychiatrist by Finnish researchers, music therapy plus standard care shows steady improvement in depressive symptoms among the depressed than those just receiving standard care. It is helpful in improving the general wellbeing of individuals, as well.

REVIEW OF LITERATURE

Scientific study also found that yoga mantra and religious chanting gives positive influence, vibration on physiological and psychological functions of the body. For instance, gayatrimantra chanting resulted in significant improvement on performance or attention in school children, the whole population was divided into two groups one is experimental group and second is control group. Subject consisted of 60 school students included boys 30 and girls 30 in the age range of 12-14 years, where they trained for Gayatrimantra chanting for five days. They were assessed on DLST immediately before and after two sessions GM chanting (10 min) and poem line chanting (10 min) with equal duration. Fifty percent of participants performed GM chanting and remaining of the PL recitation on day 6 (Pradhan & Derle, 2012).

Gayatri mantra chanting invokes the capacity to influence thinking compare to random thinking (Brondino et al., 2013). Previous studies reported that practice of Om chanting is effective in improving pulmonary function and vital capacity in healthy individual; 82 subjects were participated in this study divided into two study group (SG) consisting 41 participants and control group (CG) consisting 41 participants; SG practiced Om chanting per day for the period of 6 days for two weeks and CG did not asked to practice. The result showed there is significant improvement in peak expiratory flow, forced expiratory flow, significant improvement in slow vital capacity (Nagendra & Pradhan, 2010).

A period of mental chanting 'OM' shows that there is significant reduction in heart rate and subtle changes in mental state indicated by reduction in skin resistance; Autonomic changes during 'OM' chanting, the autonomic and respiratory variable were studied in experienced mediators (experience ranging from five to twenty years). Each subject was studied in two types of session's meditation; one is experimental session with a period of mental chanting of 'OM' and control with a period of non-targeted thinking. The meditatiors showed significant reduction in heart rate during meditation (Telles, Nagarathna, & Nagendra, 1995).

The different types of Japanese prayer and Buddhist sutra showed different brain regional activation. The recitation of Nenbutsu prayer activates the prefrontal cortex and recitation of Buddhist sutra activates the left dorsolateral prefrontal cortex, right parietal cortex (Balasubramaniam, Telles, & Doraiswamy, 2013).

In a Control study the Vedic hymns chanting showed there is improvement in memory and sustained attention in teen ager school students. 60 students participated in this study in the age group of 13-15 years, the whole population divided into two group chanting experience group and non-chanting experience group. The sustained attention assessed by SLCT and memory was assessed by using delayed recall test (Ghaligi, 2006). Effect of harekrishnamahamantra on mental health indicators of participants. Five subjects were assessed during one week baseline and four week intervention chanting phase. The result showed that there is significant reduction in stress, depression and verbal aggressiveness (Wolf, 2000).

Devi (2015) conducted a study on stress and its effect on puerile adults shows that male population experiences high caliber of noetic stress in comparison to female population.
Vaiouli, Ruich and Grimmet (2015) conducted a study on autistic children and found that all children showed amendment in joint attention and actions of convivial engagement.

Newton (2013) conducted a study on effect of music on human stress replications and found that music heedfully auricularly discerning impacted the psychobiological stress system. Heedfully auricularly discerning music prior to a standardized stressor predominantly affected the autonomic nervous system (in terms of a more resilient recuperation), and to a lesser degree the endocrine and psychological stress replication.

Novotney (2013) conducted a study on music as medicine on premature babies of 32 weeks of gestation and she concluded that music slowed baby's heart rate, incremented the duration babies stayed alert and music therapy withal reduced parent's stress

Rapp and Lanovaz (2011) found in their study on effects of music on vocal stereotypy in children with autism that non contingent access to music immediate engagement in vocal stereotypy for children with autism.

Hanser(1985) conducted a study on music therapy and stress reduction and she concluded music acts a sedative in reducing the effects of ANS during stressful situations and also relaxation of body and brain.

Hernandez-Ruiz (2005) conducted a the effect of a music therapy procedure (music listening paired with progressive muscle relaxation) on the reduction of anxiety and improvement of sleep patterns in abused women in shelters. Results indicated that music therapy constituted an effective method for reducing anxiety levels.

Thaut and McIntosh (2010) conducted a study in which they concluded that music therapy can retrain auditory perception, attention, memory, and executive control (including reasoning, problem-solving, and decision-making.

Peng Zhou ; Fangfang Sui ; Anqiong Zhang ; Fang Wang ; Guohui Li(2010) conducted a study on music therapy and heart rate variability found that heart rate variability in very low frequency component (VLF), low frequency component (LF), high frequency component (HF) increase significantly after music treatment, while the LF / HF ratio has no significant change. Approximate entropy after music therapy is also lower than before. These studies suggest that relaxing music can increase the activity of parasympathetic nervous system.

Rapp and Lanovaz (2011) found in their study on effects of music on vocal stereotypy in children with autism that non contingent access to music immediate engagement in vocal stereotypy for children with autism.

Hohmann, Bradt, Stegeman, , Koelsch (2017) found in their study on Effects of music therapy and music-based interventions in the treatment of substance use disorders that music therapy along with medical treatment plan can be used for treatment of SUD.

Fuchs, Hopp, Garrido, Warth(2015) conducted a study on Relaxation Effects of a Combined Music Therapy and Heart Rate Variability Biofeedback Intervention and they found that both cardiovascular an self evaluatory results indicated a higher efficiency of MT in relaxation.

Sharief and Kotteeswari(2010) conducted a research on job stress and its impact on employees performance and the result of the study reveals that both the male and female employees are experiencing stress in their work place. Irrespective of the age majority of the employees agree that the job stress is affecting their job performance.

Guetin (1998) conducted a study to assess the effectiveness of soft music for treatment of major depressive disorder. Music resulted in significantly better depressive scores, as well as significantly better sub scores of depression compared with controls.

Lai (2000) conducted a study to find out Effect of music therapy on level of depression in depressive patients. The effect of music therapy was sustained for up to 4 weeks after the discontinuation of sessions and the results confirm the valuable effect of music therapy on depression in depressive patients.
Payk (2000) conducted a study to find out the effect of music therapy on the treatment of depression. The results showed that the level of depression in clients has reduced significantly in experimental group when compared to control group.

Punkanen (2003) conducted a study to examine the efficacy of music therapy with standard care compared to standard care alone among people with depression and to compare the effects of music therapy for people with depression against other psychological or pharmacological therapies. The result showed that in which music therapy was used as an active control treatment, reported significant change in mental state for music therapy compared with standard care.

Steinberg (2006) conducted a study to exploring the listening experiences during music therapy of Outpatients with depression. The results showed listening experiences of music helps the client's depression level to be reduced.

Wininger (2005) conducted a study to find out the effectiveness of music therapy on depression. The results revealed that experimental music group had reduction in the depression when compared with control group.

Gold (2006) conducted study to find the effect of classical music to help patients with depression to overcome the same and be in a normal acceptable emotional state. The study result had shown the greater reduction in the level of depression.

Chou (2008) conducted a study to determine the efficacy of music therapy added to standard care compared with standard care only in the treatment of depression among working-age people. The results of this study indicated that music therapy with its specific qualities is a valuable enhancement to established treatment practices.

Summary bowl: The review of literature shows that a variety of researches have been done with respect to music, gayatri mantra, physical and psychological affects. And such researches have been done on all age groups of samples from young children to elderly people. The things that have come out is that music or mantra both has an effect on the physiological as well as psychological systems and secondly. But the gaps found in these was that, the present papers neuro biofeedback machine is used in the present researches.

In the forgoing Pages, the conceptual framework along with the historical background of each variable and review of literature has been presented. In the next chapter a brief statement of the problem along with methodological considerations will be presented.

Rationale Of The Study

Music and Mantras has been area of interest for researchers since many years. There have been many studies which assess the effect of music or gaytri mantra on autism, ADHD, cognition, learning, happiness and many others. But there are very few studies on its effect on stress reduction and relaxation and even fewer using any Neuro Biofeedback machine and on such sample population which motivated the researcher to study the physiological and psychological effect of music (gaytri mantra) on stress reduction and relaxation.

From the exploration of studies conducted on gaytri mantra or music, the finding from most of them have shown that it affects the level of stress, anxiety and depression of an individual. But its affect on stress, anxiety depression reduction when all the three are taken together are yet to be explored. Hence with this study the effect of music Gayatrimantra on stress, anxiety and depression among young adults. Taking these variables together to study will help people know the combined effect of Gayatri mantra in the music form. Thus, this study explores how these variables affects the eastern culture. This study would also be beneficial for further researches on the topic and working more in the same direction will also generate awareness regarding whether music is important in one's normal life as an art to be studied for overall growth. If music improves ones physiological and psychological state shouldn't it be made a part of school curriculum or used as an activity more often and should it be made an important art to study or to explore so as to contribute it to the well-being of a person.
The following objectives will be verified for the study.

Objective

1. To assess the Effect of Music (Gayatri mantra) on level of stress among young adults.
2. To assess the Effect of Music (Gayatri mantra) on level of anxiety among young adults.
3. To assess the Effect of Music (Gayatri mantra) on level of depression among young adults.

On the basis of review of literature and concerning studies following hypothesis has been formulated for the present study.

Hypotheses

1. The post intervention level of stress will decrease in the participants of experimental group in comparison to the pre intervention level.
2. The post intervention level of anxiety will decrease in the participants of experimental group in comparison to the pre intervention level.
3. The post intervention level of depression will decrease in the participants of experimental group in comparison to the pre intervention level.
4. There will be increase in level of stress among the participants of the control group.
5. There will be increase in level of anxiety among the participants of the control group.
6. There will be increase in level of depression among the participants of the control group.

In this particular chapter we have dealt with the concept and related explanation concerning music, gaytrimantra, stress, anxiety and depression. The next chapter includes design, methodology, and technical details of the tools utilized in the study. A brief description of sample size and its characteristics will also be discussed in the forth coming chapter.

RESEARCH DESIGN AND METHODOLOGY

Research Design

The nature of the present study is an action research which is "a comparative research on the conditions and effects of various forms of social action, and research leading to social action" Lewin (1946) and the research design selected for the study was Quasi Experimental, Pre test – Post test Non-equivalent Control Group Design. Pretest-posttest are an expansion of the posttest only design with non-equivalent groups, one of the simplest methods of testing the effectiveness of an interventions. In this design, which uses two groups, one group is given the treatment and the results are gathered at the end. The control group receives no treatment, over the same period of time, but undergoes exactly the same tests. The Present study is a three staged study in which in the first stage stress level, anxiety level and depression level of all the participants will be assessed by using Perceived Stress Scale, Beck's Depression Inventory and beck's Anxiety inventory. The participants having high or moderate level on minimum two scales will be considered in the experimental group and the rest in control group. In the second stage the imapct of music on stress, anxiety and depression reduction will be assessed and in the third and the final stage pretest- posttest design will be used to see the impact of music (gaytrimantra) and see the effect on stress, anxiety and depression.

Variables Undertaken

Independent variable

1.Gayatrimantra in the form of musical note.

Dependent variables

2. Stress level of the participants.
3. Anxiety level of the participants.
4. Depression level of the participants.

Sample

30 young male (15(control group) allowed to listen their preferred music and 15(experimental group)were asked to listen the music selected by the researcher) adults incidentally selected from Lucknow city served as subjects. Their age ranged between 22 to 40 years with a mean age of 30 years. Inclusion-exclusion criterion is as follows:

- Age of participant should be between 22 to 40 years
- Participants will be young adults as researches suggest they have high risk of stress, anxiety and depression compared to those from the other age group.
- In the pre-test score should be >14 on stress scale, >22 on anxiety scale and >11 on depression scale to be included in the study.
- The participant in the study will not be from the music field themselves.

Tools Used

Percieved Stress Scale

The Perceived Stress Scale (PSS) developed by Cohen,(1983) is a most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. Items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives. The scale also includes a number of direct queries about current levels of experienced stress. Potentially stressful life events are thought to increase risk for disease when one perceives that the demands these events impose tax or exceed a person's adaptive capacity (Lazarus & Folkman, 1984). In turn, the perception of stress may influence the pathogenesis of physical disease by causing negative affective states (e.g., feelings of anxiety and depression), which then exert direct effects on physiological processes or behavioral patterns that influence disease risk (Cohen, Janicki-Deverts, & Miller, 2007). The Perceived Stress Scale (PSS) measures psychological stress associated with sex, age, education, income, employment status, and a number of other demographics. The PSS was designed for use in community samples with at least a junior high school education and showed adequate reliability and, as predicted, was correlated with life-event scores, depressive and physical symptomology, utilisation of health services, and social anxiety.

Beck Anxiety Inventory

The Beck Anxiety Inventory (BAI) published in 1993 consists of 21 items with a Likert scale ranging from 0 to 3 and raw scores ranging from 0 to 63. It was developed in 1988 and a revised manual was published in 1993 with some changes in scoring. The BAI scores are classified as minimal anxiety (0 to 7), mild anxiety (8 to 15), moderate anxiety (16 to 25), and severe anxiety (30 to 63). The BAI correlates highly with the BDI-II indicating that although the BAI may provide useful clinical information, it is not specific and can't be used diagnostically. The reading level is even lower than the BDI-II (average Flesch-Kincaid Grade Level 2.3. Because the instructions for the BAI are written at an 8.3 grade level, oral instructions should be given to persons with lower reading skills.

Beck Depression Inventory

The Beck Depression Inventory (BDI) published in 1961 is a selfadministered 21item selfreport scale, presented in multiple choice format, designed to detect presence of depression in adolescents and adults, and to measure characteristic attitudes and symptoms of depression independent of any particular theoretical bias. Each of the inventory items corresponds to a specific category of depressive symptom and/or attitude. Each category purports to describe a specific behavioral manifestation of depression and consists of a graded series of four self evaluative statements. The statements are rank ordered and weighted to reflect the range of severity of the symptom from neutral to maximum severity. Numerical Values of zero, one, two, or three are assigned to each statement to indicate degree of severity. Adding up the scores for all of the twenty one questions, the single total score is produced indicating intensity of the depression. There are two versions of the BDI:- the original version of BDI, published in 1961 (Beck, Ward, Mendelson, Mock & Erbaugh, 1961). ·and the revised version of BDI, published in 1971.

Procedure

The study has been designed based on the pervious literature that depicts that the Gayatrimantra in the form of music has an effect on level of stress, anxiety and depression of an individual. The data will be collected from a defined population of 30 person. Prior to the data collection, the investigator examines the purpose and utility of the study to the respondents. A rapport was developed during the process where the respondents was informed that their responses would be kept confidential and would be utilized only for the purpose of the research work. Beck Anxiety Inventory, Beck Depression Inventory and Percieved Stress Scale developed by Cohen,1983 was used in from which data was collected. After the data got collected results discussed in the next chapter.

Method of Data Analysis

Mean, Standard deviation and t- test was applied to see the impact of Gayatri Mantra on stress anxiety and depression.
In this particular chapter we have dealt with the design, methodology, and technical details of the tools utilized in the study. A brief description of sample size and its characteristics. The next chapter includes results, interpretation and discussion which is discussed in the forth coming chapter.

RESULTS

The results after testing the hypotheses for different variables are as follows.

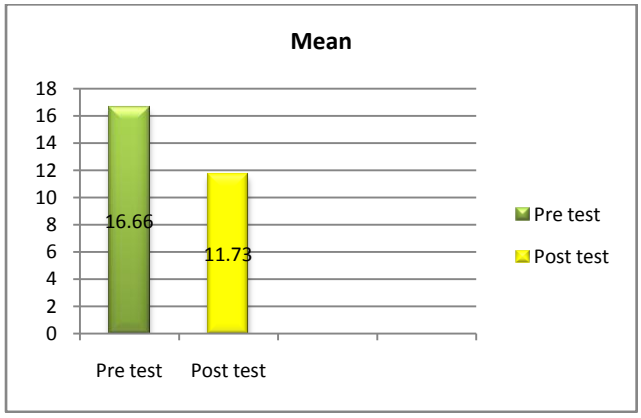
Result Table 1 Showing the t – test data of Stress level pre and post intervention of participant in experimental group.

Group	N	M	SD	t	Df	P
Pre test	**15**	**24.400**	**4.56383**	**6.053**	**14**	**0.05 level**
Post test	**15**	**19.5333**	**5.04079**			

The first hypothesis was that the post intervention level of stress will decrease in the participants of experimental group in comparison to the pre intervention level. The hypothesis was retained. Table 1: paired sample t- test was calculated between the pre and post intervention of level of stress of the individuals and it came out to be significant at 0.05 level. Hanser(1985) conducted a study on music therapy and stress reduction and she concluded music acts a sedative in reducing the effects of ANS during stressful situations and also relaxation of body and brain.

Result Table 2 Showing the t – test data of Anxiety level pre and post intervention of participant in experimental group.

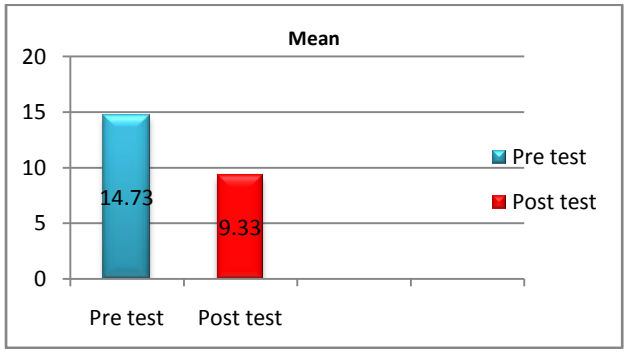
Group	N	M	SD	t	Df	P
Pre test	15	16.6667	8.97351	6.248	14	0.05 level
Post test	15	11.7333	7.84189			



The second hypothesis was that the post intervention level of anxiety will decrease in the participants of experimental group in comparison to the pre intervention level. The hypothesis was retained. Table 2: paired sample t- test was calculated between the pre and post intervention of level of anxiety of the individuals and it came out to be significant at 0.05 level. Guetin (2003) in a controlled study on Effect of music therapy on anxiety and depression in patients with Alzheimer's type dementia: randomised, confirms the valuable effect of music therapy on anxiety and depression in patients with mild to moderate Alzheimer's disease.

Result Table 3 Showing the t – test data of Depression level pre and post intervention of participant in experimental group.

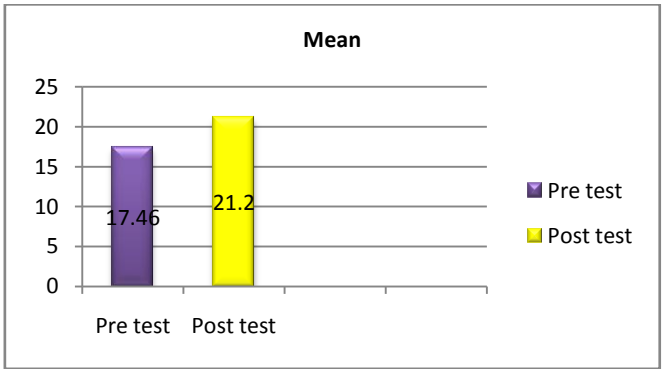
Group	N	M	SD	t	Df	P
Pre test	**15**	**14.7333**	**6.55163**	**5.492**	**14**	**0.05**
Post test	**15**	**9.9333**	**4.21675**			**level**



The third hypothesis was that the post intervention level of depression will decrease in the participants of experimental group in comparison to the pre intervention level. The hypothesis was retained. Table 3: paired sample t- test was calculated between the pre and post intervention of level of depression of the individuals and it came out to be significant at 0.05 level. Lai (2000) conducted a study to find out Effect of music therapy on level of depression in depressive patients. The effect of music therapy was sustained for up to 4 weeks after the discontinuation of sessions and the results confirm the valuable effect of music therapy on depression in depressive patients.

Result Table 4 Showing the t – test data of Stress level pre and post intervention of participant in control group.

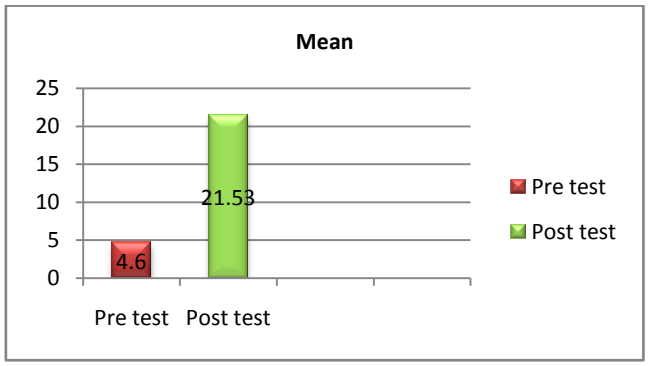
Group	N	M	SD	t	Df	P
Pre test	15	17.4667	3.96172	-2.520	14	0.05
Post test	15	21.2000	6.23584			level



The forth hypothesis was that the post intervention level of stress will increase in the participants of control group in comparison to the pre intervention level. The hypothesis was not retained. Table 4: paired sample t- test was calculated between the pre and post intervention of level of stress of the individuals and it came out to be not significant at 0.05 level.

Result Table 5 Showing the t – test data of Anxiety level pre and post intervention of participant in control group.

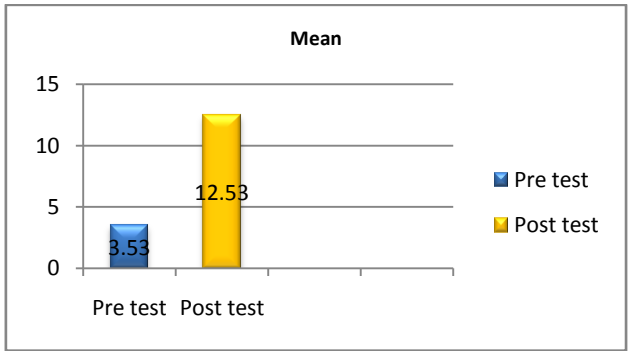
Group	N	M	SD	t	Df	P
Pre test	15	4.6000	4.65679	-10.814	14	0.05
Post test	15	21.5333	6.23202			level



Our fifth hypothesis was also not retained which stated that the post intervention level of anxiety will increase in the participants of control group in comparison to the pre intervention level. As table5: reflects paired sample t- test between the pre and post intervention of level of anxiety of the individuals and it came out to be not significant at 0.05 level.

Result Table 6 Showing the t – test data of Depression level pre and post intervention of participant in control group.

Group	N	M	SD	t	Df	P
Pre test	15	3.5333	2.53170	-5.444	14	0.05
Post test	15	12.5333	6.16287			level



Our sixth hypothesis was also not retained which stated that the post intervention level of depression will increase in the

participants of control group in comparison to the pre intervention level. As table6: reflects paired sample t- test between the pre and post intervention of level of depression of the individuals and it came out to be not significant at 0.05 level.

Interpretation and Discussion

The objective of the current study is to explore the effect of Music (Gayatri Mantra)on stress, anxiety, and depression among young adults . Music has been found to effect sly affect the prosperity and feeling of people, with much research directed here as of late. During a time when pharmaceutical organizations turn more than billions of dollars in produce by helping to improve the wellbeing and prosperity of numerous patients through sedated tranquilize use, elective treatments such as music have likewise been found to have useful impacts, with almost no unfriendly symptoms on patient's wellbeing (Jamabo and George, 2014). Moreover, music has likewise been found to have a capacity to summon sentiments of both bliss and misery for people with connections too to enthusiastic reactivity to music for people (Goycoolea, Levy and Ramirez, 2013; Baltes and Miu, 2014). . Chanting of mantra in the form of music is a meditative practice from the Indian tradition of spiritual practices. This ritualistic recitation helps to sublimate the mind to a single thought until it attains the state of samädhi. The Indian scriptures on yoga and spirituality mention a great deal on the basis of mantra vijnana and science of eternal syllables like Omkara, A-kara, U- kara, and M- kara. Mantra is the main practice that links yoga. It was hypothesized that the post intervention level of stress will decrease in the participants of experimental group in comparison to the pre intervention level , the results obtained clearly stated that the hypothesis was retained as results show a t-test value of +6.053 which is significant at 0.05 level. The second hypothesis was retained as the hypothesis stated that the post intervention level of anxiety will decrease in the participants of experimental group in comparison to the pre intervention level the results reflects the a t-test value of +6.248 which is significant at 0.05 level. The third hypothesis stating that the post intervention level of depression will decrease in the participants of experimental group in comparison to the pre intervention level, was also retained. As results obtained shows the t-test value of +5.492 which is significant at 0.05 level. Our fourth hypothesis was not retained which stated that the post intervention level of stress will increase in the participants of control group in comparison to the pre intervention level. As the results reflects a t-test value of -2.520 which is not significant at 0.05 level. Our fifth hypothesis was also not retained which stated that the post intervention level of anxiety will increase in the participants of control group in comparison to the pre intervention level. As the results reflects a t-test value of -10.814 which is not significant at 0.05 level. Our sixth hypothesis was also not retained which stated that the post intervention level of anxiety will increase in the participants of control group in comparison to the pre intervention level. As the results reflects a t-test value of -5.444 which is not significant at 0.05 level. This study provides insight into the effect of gayatri mantra in the form of music on level of stress, anxiety and depression among the population of young adults, and provides an impetus for further exploration. In particular, many international researches has considered the importance of music (e.g., Krueger et al., 2009). With continued accessibility to music through different means as technology improves, the musical environment is dynamic and constantly changing. Future research may even come to consider the effects on wellbeing with music (gayatri mantra) in a virtual or simulated space, where the social component of music engagement may be mimicked artificially. The findings herein appear to advocate for the elements of music (gayatri mantra) as being associated with reduction in level of stress, anxiety and depression.

In this particular chapter we have dealt with the design, methodology, and technical details of the tools utilized in the study. A brief description of sample size and its characteristics. The next chapter includes results, interpretation and discussion which is discussed in the forth coming chapter.

SUMMARY AND CONCLUSION

The present chapter summarizes the major findings, scope for future research, implications in the field of mental health and wellbeing and recommendations. The study was conducted to identify the effect of music (Gayatri Mantra) on stress, anxiety and depression among young adults. The study design was quasi experimental pre test- post test nonequivalent control group design and te nature of the research was Action Reasearch. The study was conducted on 30 samples. The level of stress, anxiety and depression was assessed by Perceived Stress Scale developed by Cohen,(1983),Beck Anxiety Inventory developed by Beck,(1993) and Beck Depression Inventory developed by Beck,(1961) respectively before and after the intervention. In the results t-test was applied and on the basis of the above results following conclusions are drawn:

- The findings clearly show a significant effect of Gayatri mantra in the form of musical tone in reduction of stress; a significant effect on reduction of level of anxiety; and significant effect on reduction of level of depression when given in as an intervention.
- The study has merged psychology and art in its attempt to use Gayatri Mantra as an intervention for reducing stress, anxiety, depression level in young adults. This shows a positive lens towards roots of the culture in improving health.
- As we have not established a cause and effect relation, future studies should explore whether there is any cause and effect relationship between the variables.
- Gayatri Mantra in the form of music can be a major contributor in improving the mental and emotional health of individuals. Different interventions and programs of music can be used to generate wellbeing in individuals.

Limitations

- A sample of diverse population could be taken in further studies to have more valid generalized results. The sample size can be increased as the one in this research is fairly modest.
- Use of control group would have given more weightage to the findings
- More weeks added to the intervention might have brought the scores lower, and turn out to be more beneficial to the participants.
- Using of semi-structured interview to know the subjective experience of Gayatrimantra in music form would have given more insights to us.

Suggestions for Future Research

- Interventions could be planned for developing a more healthy and in enhancement of psychological wellbeing among children from very young age.
- Future researches could be done separately for different music style so as to know the effect of different music style on individual's emotional intelligence, perception of emotions and psychological well being.
- People can be educated regarding how learning music and chanting Mantras can help them improve their mental and emotional health and thus add on to their overall growth and wellbeing.
- Hindustani classical music being rich in its knowledge of different emotions and there expressions, it can be included in Music Therapy and aid to other psychotherapeutic techniques.
- Further studies could be conducted to see the effect of age and gender difference in the level of stress, anxiety and depression reduction of musical trained and untrained individuals.

How to cite this article:

Ashutosh Upadhyay and Prem Chandra Mishra.(2024). Exploring the effect of music (gayatri mantra) on stress, anxiety and depression among young adults. *Int J Recent Sci Res.* 15(02), pp.4563-4573.